

SECOND QUARTER 2011

REGION FOCUS

THE FEDERAL RESERVE BANK OF RICHMOND



REFORMING HOUSING FINANCE POLICY

Should America Look Abroad for Insight?

REGION FOCUS

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Economic Growth: Two Possible Paths

While the recession of 2007-2009 has been officially over for roughly two years, the American economy has yet to achieve robust economic growth. By historical standards, this is relatively uncommon. Typically following a recession, the economy rebounds strongly, growing more rapidly than the long-run trend for a few years, and then settles back to its more traditional growth path. As a result, on average, living standards return to, or at least near, the level they would have been had no recession occurred. Occasionally this process has taken a bit longer than one might have expected. For instance, following the recessions of 1990-1991 and 2001, it was a while before growth exceeded its long-run average of 3 percent. But it did eventually happen. And we may see a similar growth curve this time as well.

Many forecasters believe this will happen, and there are a number of reasons to suggest they may be right. Business investment, for instance, has been strong and is likely to stay that way. This could improve productivity, especially in the manufacture of capital goods, which are among our key exports to emerging economies such as China, India, and Brazil. Persistent export demand from those countries could aid the U.S. economy for many years.

In addition, one of the weakest areas of the recovery, consumer spending, has room for improvement. Households took a significant hit in net wealth — about \$15 trillion — during the recession. Not surprisingly, people tightened their belts and reined in their expenditures. But recently, households, on average, have been able to increase their savings, pay down debt, and repair their balance sheets. Had energy prices not risen sharply earlier this year, I believe that households would have gradually increased their spending. It appears that those prices may have peaked. If that is the case — and the energy sector remains stable — we could see people feel more comfortable making purchases. This would be significant since consumer spending accounts for 70 percent of GDP.

That said, there is another possible path the economy might take. It may be less likely than the one I just outlined, but it does seem plausible. We may not see that faster, catch-up level of growth that has followed most recessions. Instead, we may simply settle into a growth rate of 3 percent. In short, we may not gain back the ground we lost during the recession.

There are many reasons why this scenario might occur, among them changes in public policy. New tax and regulatory policies — including both the recent health care and financial reform bills — could have significant persistent effects on output and consumption. Moreover, there remains considerable policy uncertainty surrounding such

issues — for instance, how fiscal balance will be achieved over the long run.

Nobel Prize-winning economist Robert Lucas, among others, has argued that the United States may be headed toward an overall policy regime similar to that of many other developed countries, especially those of continental Europe. On balance, these countries



have more regulated labor markets, higher tax rates, and larger social safety net programs. While they tend to have roughly the same average rate of growth as the United States, they generally employ less labor and produce less output per capita. Although these countries are rich by global standards, they typically have been less economically dynamic and are poorer than the United States.

Given that we can't be sure which recovery path the U.S. economy will take, what should the Federal Reserve do? My colleagues and I will have to pay careful attention to events, which may call for a relatively nuanced approach. But overall I think the direction we should take is roughly the same in either case. Monetary policy is highly accommodative right now. While inflation trends are currently well-contained at around 2 percent, we need to be alert to the risk that the monetary stimulus now in place might set off an inflationary surge. More broadly, it is important that people recognize that, as Chairman Bernanke recently noted, monetary policy is not a panacea. Monetary policy determines the inflation rate over time, and has only a transitory effect on real economic growth. Further monetary stimulus is unlikely to alleviate the impediments to more rapid growth, but could raise inflation to undesirably high levels.

The U.S. economy is remarkably resilient. But as we recover from the most significant recession since the Great Depression, we must face the possibility that we may never fully regain what was lost during the downturn, especially if policymakers do not squarely address those issues that have long loomed over the U.S. economy but can no longer be ignored.

RF

A handwritten signature in black ink, appearing to read 'JML', written over a white background.

JEFFREY M. LACKER
PRESIDENT
FEDERAL RESERVE BANK OF RICHMOND

Buzzer Beaters

Does a Big Sports Win Increase the Number of College Applicants?

Doug Flutie threw perhaps the most famous pass in college football in 1984: a 48-yard “Hail Mary” with just six seconds on the clock that gave Boston College a surprise win over the University of Miami in the Orange Bowl.

Today, the pass is talked about as much in college admissions offices as in sports bars. Applications to BC rose substantially the next year, and the “Flutie effect” has come to describe the boost that schools with big wins anticipate.

This year, two Richmond schools may experience the Flutie effect. Virginia Commonwealth University upset the top-seeded University of Kansas to play in the Final Four of the NCAA basketball tournament. The University of Richmond made it as far as the Sweet 16, where, coincidentally, they were beaten by Kansas. The wins generated tremendous national publicity for two

schools that most sports pundits and fans had never heard of. “We’re a small place, and we were featured on ESPN and in *Sports Illustrated*. You can’t buy that kind of marketing,” says Gil Villanueva, dean of admission at UR.

Evidence for the Flutie effect is mostly anecdotal, but economists have tried to determine if it’s real. A 2009 study in the *Southern Economic Journal* found that a successful football or basketball season can increase the number of applicants by between 2 percent and 8 percent on average, and by as much as 14 percent for schools in basketball’s Sweet 16. The study was conducted by Devin Pope of the University of Pennsylvania’s Wharton School and Jaren Pope of Virginia Tech. Earlier studies also found evidence that having successful basketball and football teams led to higher application rates, although they looked at historical success rather than the effect of single season.

The schools themselves aren’t convinced that the Flutie effect is real. “It was a nice exclamation point on some other factors,” says Reid Oslin, currently the associate director of public affairs at Boston College. Oslin was the school’s sports information director in 1984 and was on the field for the famous pass. “But a number of things were coming together at that point in history,” including new dorms and academic improvements. Plus, the number of applications has continued to increase every year since then — hitting a record 30,000 in 2010 — so it’s hard to say how much credit is due to one famous pass. College applications are increasing nationwide. At UR, they have increased 73 percent in the past five years, according to Villanueva.

It’s too soon to tell the extent of the Flutie effect for VCU and UR, since application deadlines had passed by the time the games were played. But the signs are positive. Athletic donations to VCU are 67 percent higher than they were the same time last year, and the number of donors has increased 44 percent, according to Anne Buckley, VCU’s director of communications and public relations. On a recent recruiting trip to California, UR’s Villanueva ran out of brochures. “That’s never happened before,” he says.

— JESSIE ROMERO



VCU students celebrate their team's success at a watch party in Richmond, Va.

PHOTOGRAPHY: VCU CREATIVE SERVICES

Appalachian Giant Buyout Would Create Third-Largest Met Coal Producer

Two Virginia coal producers, Alpha Natural Resources and Massey Energy Company, the country's third and fourth largest, have agreed to combine to create the world's third-largest producer of metallurgical (or "met") coal, used to make steel.

Both firms would keep their headquarters in Virginia. Massey is based in Richmond and Alpha in Abingdon. When combined, the company would own a third of the central Appalachian basin's coal production and reserves. Currently, strong demand is creating high prices for met coal. The company also expects to benefit from geographical and asset diversification that includes Alpha's assets in the Powder River Basin of Wyoming.

The deal would produce what analysts dub "an Appalachian mining giant," and combine complementary assets, which include more than 110 mines and combined coal reserves of about 5 billion tons.

Production in the Appalachian basin is expected to decline in the coming decades, however, because of challenging geology, more stringent regulation, and legacy liabilities that have driven the cost of production higher than that of western or Illinois Basin coal, according to Morningstar analyst Michael Tian.

Since a mine disaster in April 2010 killed 29 miners, Massey has posted losses for three straight quarters, due to lost productivity and infrastructure problems. Massey has \$1.63 billion in debt, according to Bloomberg data.

Alpha would pay \$7.1 billion in cash and stock for its former rival, making this the most expensive deal in the industry's history.

Some Massey stockholders are disputing the terms of the buyout and have filed lawsuits in federal court to block it. The lawsuits were still pending at press time.

— BECKY JOHNSEN

Dreamliner Nightmare NLRB Challenges Boeing's Decision to Build 787s in SC

The National Labor Relations Board (NLRB) filed a complaint in April against The Boeing Company alleging that the aerospace manufacturer engaged in unfair labor practices when it announced plans to build a 787 Dreamliner assembly plant in North Charleston, S.C.

Boeing expects the billion-dollar-plus plant to begin producing 787s, its next generation of airliners, in July. However, the NLRB's acting general counsel, Lafe Solomon, is seeking an NLRB order requiring Boeing to assemble those jets at its existing facilities in the Puget Sound area of Washington.

For nearly 100 years, with few exceptions, Boeing has assembled its commercial aircraft in Puget Sound. And since 1975, the International Association of Machinists and Aerospace Workers (IAM) has represented the company's Puget Sound production and maintenance workers, who went out on strike in 1977, 1989, 1995, 2005, and 2008. As of mid-May, the company's new South Carolina plant employed 1,000 workers, none represented by a union.

"We engaged in serious discussions with the union to see if we could put this additional work in Puget Sound, but we could not do that given the demands the union was making," says Tim Neale, a company spokesman. Instead, the company announced on Oct. 28, 2009, that it would build a plant in North Charleston.

Boeing CEO James McNerney explained the decision during the company's quarterly conference call that day.



Boeing produces 787s at its final assembly plant in Puget Sound.

"Diversifying our labor pool and labor relationship has some benefits," he said. "I think the union (IAM) and the company have had trouble figuring it out between themselves over the last few contract discussions. And I've got to figure out a way to reduce that risk to the company. ... The modest inefficiencies, for example, associated with a move to Charleston, are certainly more than overcome by strikes happening every three or four years in Puget Sound."

The NLRB cited portions of that statement and quotes from other Boeing executives as evidence that the company was building the 787 plant in South Carolina to retaliate

against workers for past strikes and to discourage them from striking in the future.

“The investigation found that Boeing officials communicated the unlawful motivation in multiple statements to employees and the media,” according to an NLRB fact sheet. “For example, a senior Boeing official said in a videotaped interview with the *Seattle Times* newspaper: ‘The overriding factor (in transferring the line) was not the business climate. And it was not the wages we’re paying today. It was that we cannot afford to have a work stoppage, you know, every three years.’”

Boeing acknowledged those statements (minus the parenthetical wording inserted by the NLRB), but the company denied that its decision to build a plant in North Charleston was retaliatory or coercive. Boeing emphasized that the South Carolina plant is an expansion, driven by strong global demand for 787s, not a “transfer” of existing manufacturing capacity as stated in the NLRB complaint.

“No member of the International Association of Machinists’ union (IAM) in Puget Sound has lost his or her job, or otherwise suffered any adverse employment action as a result of the placement of this new work in the State of South Carolina,” wrote J. Michael Luttig, Boeing’s general counsel, in a letter to Solomon.

The company asserted that its decision to expand in South Carolina was based on many factors, including a favorable business climate, significant financial incentives from the state, and geographic diversity for its commercial airline operations. “Boeing would have made the same decisions,” the company said, “even if it had not taken into consideration the damaging impact of future

strikes on the production of the 787s.”

Basically the company is diversifying, says Barry Hirsch, a labor economist at the Andrew Young School of Policy Studies at Georgia State University. “And that’s probably a good economic decision for Boeing in the long run, even independent of the strike issue.” But the long history of poor labor relations between Boeing and its Puget Sound workers is also an important economic factor, he notes.

“Part of the cost of workers going on strike is the risk that they will lose future employment,” Hirsch says. “Firms might go elsewhere. That’s why strikes are so rare. ... Here, where you have had such an unusual history, how could the company ignore that history?”

Even if the NLRB and the federal courts rule against Boeing, the case is unlikely to set a precedent that would significantly constrain firms’ ability to relocate for economic reasons. “Certainly the law allows that,” Hirsch says. “The legal question here is: Were the statements made by Boeing strong enough to have a chilling effect on protected union actions?”

Technically, the statements may have violated the National Labor Relations Act, says Samuel Estreicher, a professor at New York University’s Center for Labor and Employment Law. “But in the context of a longstanding collective-bargaining relationship, employers should not have to speak in code of their concerns about recurrent strikes. Acting General Counsel Lafe Solomon has in general done a very good job in focusing the agency on protecting workers’ right to organize, [but] this is not a good use of the agency’s resources.” — KARL RHODES

Move Over, George Baltimore Now Brings Home ‘BNotes’

If you visit the Baltimore neighborhood of Hampden, you might notice that some of the residents do business a little differently there. They have their own currency, sporting the faces of famous Baltimoreans instead of the usual presidential visages. Thanks to a new system developed by the Baltimore Green Currency Association, locals can use the “BNote” alongside dollars at more than 60 neighborhood retailers. Participating businesses include Fell’s Point Surf Shop, Little Shop of Hardware, and Avenue Antiques.

The BNote is the brainchild of Michael Tew and Jeff Dicken, two area residents. At a local currency interest



Residents of Hampden in Baltimore exchange their dollars for BNotes at the Localize It! Festival in early April. Total circulation at the end of the first day stood at BN2470.

PHOTOGRAPH: JEFF DICKENS, BALTIMORE GREEN CURRENCY ASSOCIATION

group meeting in mid-2009, they met and quickly developed their theories into a plan. They were joined by a group of volunteers, and founded the Baltimore Green Currency Association in spring 2010; the BNote was launched in April 2011. The organization created this currency in an effort to strengthen local businesses and create jobs.

The BNote is currently available in \$1 and \$5 notes. A 10 percent discount encourages users to convert dollars into BNotes; that is, \$10 will buy \$11 in BNotes. The creators decided to start small, restricting the currency to Hampden. Located in the heart of Baltimore, the close-knit community is known for its support of small business. If the BNote pilot succeeds, the association wants to recruit businesses across the city.

The BNote joins dozens of local currencies across the

country. Some, like Massachusetts' BerkShares, are fully integrated into communities, with more than 500,000 in circulation. In the Fifth District, Maryland and North Carolina have several local currencies.

Some currencies face legislative obstacles, however. Virginia is among the states that prevent the creation of local currencies. According to Virginia law, no individual or entity, unless authorized by law, shall issue any note, bill, scrip, or other paper or thing with intent that the same be circulated as currency. In Roanoke, this law has prevented the launch of the "Nokie."

The Greensboro Currency Project is in the works in North Carolina. If all goes as planned, Greensboro residents will be circulating local currency later this year.

— BECKY JOHNSEN

Layoffs Get Pricier SC Raises Jobless Insurance Rates

South Carolina revamped its unemployment system in 2010, and now the bills are coming due for employers. Firms face substantially higher rates, not only to help pay off about \$272 million in federal loans that have kept benefits flowing but also to replenish the trust fund. The fund has been depleted by years of rates that were inadequate to fund claims and also by permissive eligibility, among other issues. Between the fund deficit and the federal loans, the state owes about \$1.8 billion.

Employers with the most claims under the new system could pay as much as \$1,128 per worker. Those with no unemployment claims will pay about \$10 per employee. (New firms will be assessed a mid-tier rate.)

"We hadn't provided the proper incentives for employers to double-check things in the past," says Erica Von Nessen, an economist and the assistant executive director of unemployment for the South Carolina Department of Employment and Workforce. "If there were errors made and employers didn't catch or appeal decisions or respond to our agencies with requests for information — there really wasn't a high cost to them because the maximum they'd pay was \$427 (per employee) for the whole year."

Overall, the new system is fair, says J.J. Darby, state director of the National Federation of Independent Business, representing nearly 5,000 small businesses in South Carolina. The group was involved in crafting the legislation. "We wanted to make sure we didn't penalize those that didn't use the system and that we didn't reward those that used the system more than others."

The new rate structure hits seasonal businesses and temporary staffing companies especially hard. Staffing companies pay unemployment insurance for client firms, and seasonal employees can file unemployment claims in the off-season. The S.C. Legislature recently enacted a law limiting unemployment benefits for people in seasonal occupations.

David McMillan owns Drunken Jack's, a Murrells Inlet seafood restaurant on the coast. The new rates cost him an additional \$2,000 per week, so McMillan has put hiring and employee raises on hold for now. "A lot of people are going to take more liberties to hire under the table," he predicts. Seasonal businesses also are hiring more Eastern European student visa workers, he says, who return to their home countries after Labor Day without applying for unemployment. McMillan's unemployment insurance is now 11.2 percent of the first \$10,000 each employee earns, an increase of 6 percent.

The former threshold of \$7,000 had not been increased since 1983, not even for inflation, Von Nessen notes. This taxable wage base is scheduled to rise incrementally to \$14,000 by 2015. The 2011 national average is more than \$15,000.

States' reserve funds are at historic lows, according to a 2010 report by the Government Accountability Office. The U.S. Department of Labor reports that 29 states have borrowed from the federal government to pay claims worth about \$41 billion.

— BETTY JOYCE NASH

Sifting for SIFIs

BY DAVID A. PRICE

Federal regulators
face challenges
in identifying
“systemically
important”
financial
institutions

No one, it seems, wants a sequel to TARP — the \$700 billion Troubled Asset Relief Program carried out by the federal government starting in the fall of 2008 to rescue large financial institutions. Although the program mitigated the effects of the financial crisis as intended, it also raised serious concerns about the fairness and prudence of bailing out private institutions to spare them the consequences of their own risk-taking. One of the ways Congress has sought to prevent further bailouts is by requiring federal regulators to exercise greater oversight of systemically important financial institutions, or SIFIs: nonbank financial institutions whose failure “could pose a threat to the financial stability of the United States.”

Responsibility for identifying SIFIs falls on the Financial Stability Oversight Council (FSOC), created by the 2010 Dodd-Frank Act. The Council — made up primarily of the heads of federal financial regulatory agencies, including Fed chairman Ben Bernanke — is now determining how it will sort SIFIs from other institutions. Depending on the criteria that FSOC adopts, tighter federal standards could apply to major mortgage companies, insurance companies, private equity firms, hedge funds, mutual funds, and captive finance companies. (In addition, the Dodd-Frank Act mandates that the largest bank holding companies, those with \$50 billion or more in assets, are automatically subject to the tighter standards.)

Bernanke noted in testimony before the House Committee on Financial Services in March that there are different views within the Council about how widely the SIFI net should be cast. “The Federal Reserve has indicated that we think that a relative handful of firms will be

so designated,” he said. “We don’t want to overextend this definition. That being said, we want to be sure to include every firm that would be a serious threat to systemic stability in case of its failure.”

Is it Better to Be a SIFI?

The precise implications of being designated as a SIFI are not known yet because the new regulatory regime has not yet been defined. The Dodd-Frank Act directs the Fed to supervise SIFIs; among the measures that Congress authorized the Fed to impose are liquidity requirements, enhanced public disclosure requirements, and short-term debt limits. At the center of the new regime, however, are likely to be new capital requirements. Capital held by financial institutions serves as a buffer against losses and also creates incentives for an institution not to engage in excessive risk-taking. At the same time, many observers worry that capital requirements can slow overall economic activity by curbing the amount of lending that an institution can do.

In a speech on June 3, Federal Reserve Board member Daniel K. Tarullo stated that among various approaches to setting capital requirements for SIFIs, the approach that “has had the most influence on our staff’s analysis” would yield a sizable boost in minimum capital. The increase would range from about 20 percent to more than 100 percent compared with the minimum capital standards agreed upon by bank regulators worldwide in the 2010 Basel III framework. In turn, the standards of Basel III, which have not yet been implemented, represent significant increases over those of Basel III’s predecessor, the Basel II framework of 2004. To avoid an undue macroeconomic effect from reduced

lending, Tarullo said, “we contemplate a fairly generous transition period to the SIFI capital regime.”

On the plus side, SIFI designation may confer benefits on a company by reducing its cost of capital. Creditors may believe that enhanced supervision lowers an institution’s credit risk. In addition, creditors may assume they will receive better protection if a SIFI fails than if a non-SIFI fails. The Dodd-Frank Act provides that systemically important institutions can be subject to an “orderly liquidation” process to be carried out by the FDIC if they are in default or are in danger of defaulting. The extent of this benefit to creditors, if any, is not clear at this point, however.

“The law says that, in general, creditors are not to be treated any better than they would be treated in bankruptcy,” says Richmond Fed economist John Walter. “On the other hand, the law also says that the FDIC is supposed to protect against systemic risk, and if you’re going to protect against systemic risk, it’s hard to imagine doing that without treating some creditors better than they would be treated in bankruptcy. Indeed, the law allows some creditors, those providing funding necessary to continue essential operations, to be paid more than they would likely get in bankruptcy.”

So far, institutions appear to believe that they would be worse off as SIFIs. In public comments filed with FSOC and in public statements, large nonbanks and their trade associations have argued that they should not be considered systemically important. “They might perceive that higher capital standards and regulations of what they can and can’t do will cost them more than any benefit they might receive in terms of lower interest rates,” Walter says.

The institutions’ concerns about the regulatory regime for SIFIs may be heightened by a fear that the as-yet-unwritten rules will turn out to be overly restrictive, according to economist Robert Litan of the Brookings Institution. “In the wake of the crisis, a lot of private sector people are afraid of overreaction by regulators,” Litan says. “There has been a significant increase in risk-aversion in the regulatory community, for obvious reasons.”

Designation Transparency and Designation Parity

FSOC must resolve a plethora of issues in determining its process for designating firms. Among them is “designation transparency” — that is, whether to make its process confidential and whether to keep designations confidential once they have been decided. The Financial Services Roundtable, a trade group of large financial institutions, has requested in public comments that the consideration process remain confidential to prevent adverse reactions by investors. The Richmond Fed, in its November 5, 2010, public comment letter on the issue, urged FSOC to maintain transparency and eliminate guesswork by making public both the names of the institutions it evaluates for SIFI status and the names of those it actually designates. Only if markets know which firms are receiving enhanced

Who’s Systemically Important?

The Dodd-Frank Act requires the Financial Stability Oversight Council (FSOC) to designate a nonbank financial company as systemically important — and therefore subject to regulation by the Fed — “if the Council determines that material financial distress at the U.S. nonbank financial company, or the nature, scope, size, scale, concentration, interconnectedness, or mix of the activities of the U.S. nonbank financial company, could pose a threat to the financial stability of the United States.”

The statute sets out a lengthy list of factors that FSOC must consider in deciding whether a company is systemically important:

- A** the extent of the leverage of the company;
- B** the extent and nature of the off-balance-sheet exposures of the company;
- C** the extent and nature of the transactions and relationships of the company with other significant nonbank financial companies and significant bank holding companies;
- D** the importance of the company as a source of credit for households, businesses, and State and local governments and as a source of liquidity for the United States financial system;
- E** the importance of the company as a source of credit for low-income, minority, or underserved communities, and the impact that the failure of such company would have on the availability of credit in such communities;
- F** the extent to which assets are managed rather than owned by the company, and the extent to which ownership of assets under management is diffuse;
- G** the nature, scope, size, scale, concentration, interconnectedness, and mix of the activities of the company;
- H** the degree to which the company is already regulated by 1 or more primary financial regulatory agencies;
- I** the amount and nature of the financial assets of the company;
- J** the amount and types of the liabilities of the company, including the degree of reliance on short-term funding; and
- K** any other risk-related factors that the Council deems appropriate.

SOURCE: Dodd-Frank Wall Street Reform and Consumer Protection Act, sec. 113(a)

supervision, and which firms are not, can markets factor in the additional risk of the latter.

In practice, while it may be possible to conceal the consideration process from public view, the actual designation of a firm would be unlikely to remain secret. As James Thomson of the Cleveland Fed notes in an August 2009 paper, markets would probably be able to infer which firms are on the SIFI list by looking at differences in capital structure, balance sheet entries and footnotes, and intensity of regulatory scrutiny.

Another issue is “designation parity,” which arises from the structure of the Dodd-Frank Act: Congress created one process for designating firms as systemically important for purposes of being subject to higher regulatory standards and another for determining whether a firm is systemically important for purposes of being eligible for orderly liquidation. The Act sets out a complex procedure, involving multiple agencies, for deciding whether a firm should be put into the orderly liquidation process. Even though FSOC has deemed a firm not to be systemically important, the Act allows the federal government to treat

it as systemically important anyway if it starts to fail.

This potential for inconsistency has a significant practical implication: It may lead to moral hazard by creating ambiguity as to the availability of orderly liquidation. If FSOC does not subject an institution to enhanced supervision, but creditors believe that they may still get protection unavailable in a normal bankruptcy, then the institution may take excessive risks. It will benefit from a reduced cost of capital even though its risk-taking is disciplined neither by regulation nor by creditors' fear of bankruptcy.

For that reason, the Richmond Fed recommended to FSOC that it pursue parity between its designation of SIFIs and the designations in the orderly liquidation process. The Richmond Fed argued that a credible commitment to parity in designations would avoid the market distortions and excessive risk-taking that would otherwise occur. (Although there are two distinct processes, the agencies involved generally overlap.)

Finding the Right Criteria

Apart from issues of process, there is also, of course, the question of how FSOC should determine which firms are systemically important. Asset size alone is not necessarily enough to create systemic risk; for example, large firms that hold only safe assets such as Treasury bills are unlikely to threaten the stability of the financial system. Observers generally agree that systemic risk comes not just from a firm's scale, but from its scale plus its leverage and its degree of interconnection with other firms. Highly leveraged firms, by definition, have only a thin layer of capital with which to absorb losses. Interconnection means the extent to which firms' risks are correlated with one another's: whether through formal exposures (such as credit or derivatives contracts) or through *de facto* exposures to similar market risks or operational risks. Asset size, leverage, and interconnection are among the numerous criteria that the statute requires FSOC to consider. (See box.)

A recent Richmond Fed *Economic Brief* ("Identifying Systemically Important Financial Institutions") argued that the criteria for determining SIFI status should give significant weight to an institution's degree of maturity mismatch — that is, whether an institution has long-term assets matched with liabilities that are subject to short-term redemption. The classic case is a bank that funds

mortgages (long-term assets) with demand deposits (short-term liabilities). In the absence of deposit insurance, if depositors become nervous, there may be a stampede to the door, since only the first depositors to demand their money are sure to get 100 cents on the dollar. The same may occur with nonbanks funded largely by short-term debt: If the institution cannot roll over its debt, it may be forced to engage in fire sales of its assets, which in turn may lead to system-wide problems.

Another issue FSOC will confront is whether to set a higher standard for designating nonbanks that are in certain categories. For example, some large nonbanks already have primary regulators — such as insurance carriers that are regulated for solvency by state insurance commissioners and mutual funds that are regulated by the Securities and Exchange Commission. FSOC could elect to defer to those regulators to some degree. FSOC could also choose to treat mutual funds differently from other nonbanks on the basis that losses from mutual funds are borne by the funds' accountholders rather than the mutual fund companies themselves; in effect, they are 100 percent equity funded. These factors arguably render the funds less likely to create systemic losses.

Complicating the picture for money-market mutual funds in particular is that the Treasury Department did come to the rescue of money-market funds during the recent financial crisis with a guarantee to avoid a run on those funds. Treasury stepped in on September 19, 2008, after one money-market fund, the Reserve Primary Fund, "broke the buck" (its shares fell to 97 cents). Mutual funds and investment companies other than money-market funds do not promise a stable net asset value, however.

To some extent, the size of the net used by federal regulators to select financial institutions for greater regulation is likely to reflect not only technical issues, but also differences of opinion about the effects of regulation — its costs and its ability to prevent future crises.

"Your attitude toward risk and your confidence in government regulation are going to influence where you draw the line," says Litan of Brookings. "There is no technocratic way out. People are trying to measure with great precision how much systemic risk institutions pose. I think these are interesting academic exercises, but the decisions are not going to be based on technocratic criteria. They are going to be based on these larger philosophical worldviews that people have."

RF

READINGS

Elliott, Douglas J., and Robert E. Litan, "Identifying and Regulating Systemically Important Financial Institutions: The Risks of Under and Over Identification and Regulation." Brookings Institution Policy Brief, January 16, 2011.

Malysheva, Nadezhda, and John R. Walter, "How Large Has the Federal Financial Safety Net Become?" Federal Reserve Bank of Richmond *Economic Quarterly*, 2010, vol. 96, no. 3, pp. 273-290.

Price, David A., and John R. Walter, "Identifying Systemically Important Financial Institutions." Federal Reserve Bank of Richmond *Economic Brief* 11-04, April 2011.

Thomson, James B. "On Systematically Important Financial Institutions and Progressive Systemic Mitigation." Federal Reserve Bank of Cleveland Policy Discussion Paper no. 27, August 2009.

Regulators Pursue Caps on Debit Card ‘Swipe’ Fees

BY RENEE HALTOM

Most consumers are blissfully unaware of the complex web of agreements, infrastructure, and communications it takes to complete a single debit or credit card transaction. Merchants and card companies have been feeling less blissful as they have sparred over the fees associated with transactions. Debit card swipe fees have been the latest subject of conflict.

When you swipe your debit card at the grocery checkout, the retailer sends word of the payment to its bank via the swipe machine. The retailer's bank then contacts your bank to make sure you have sufficient funds. The banks don't communicate directly, however. They go through an outside network that processes debit transactions, facilitates approval, and settles balances between banks. (The four largest PIN debit card networks are Star, Pulse, Interlink, and Maestro; the latter two are owned by Visa and MasterCard, respectively. Debit transactions authorized via signature are operated by Visa, MasterCard, and Discover.)

Fees are charged at each step to cover the costs of processing the transaction. The “swipe” or “interchange” fee — set by the card network, paid from the merchant's bank, and pocketed by your card-issuing bank — is the largest of the fees, and has been rising over time. To collect the fee, your bank skims a portion from the amount that is debited from your account to pay the merchant. (Most credit card transactions work similarly, but recent regulatory scrutiny has focused on debit cards.)

Merchants generally don't alter their prices based on payment type. That means merchants effectively can receive different amounts of revenue for the same good based on whether it was purchased with a debit card, a credit card, or nonelectronic means like cash or check. The Retail Industry Leaders Association argues that card networks exert monopoly power to extract unduly high fees and then use those fees to bolster marketing efforts and offer card rewards to draw higher-income consumers. The National Retail Federation argues that interchange fees result in higher overall prices for goods, estimating they cost the average U.S. household \$427 each year.

The average debit card interchange fee was 44 cents per transaction in 2009, according to the Federal Reserve Board of Governors. With 38 billion debit card payments in 2009, the revenue adds up. Interchange revenue received by Visa and MasterCard — together more than 80 percent of the purchase volume when counting both debit and credit payments — was somewhere between \$35 billion and \$45 billion in 2007, perhaps double the level of 2002, according to a study by Fed economists.

Fee revenue has gone up in part because debit cards are used more often than ever before. But fee rates have also

gone up, though the exact amount is difficult to measure (fee schedules were kept private until recently, and fees vary by merchant type). The July 2010 Dodd-Frank financial reform legislation required the Fed to set limits on debit card interchange fees at a level that is “reasonable and proportional” to the costs card issuers face to process each transaction.

Economists say there may be an efficiency case for fees being higher than direct costs. Card transactions are a two-sided market: Both the consumer and merchant must come to the table for a transaction to take place. For that to happen voluntarily, both parties must experience a net benefit from participating in a debit transaction. If the total benefits to all parties outweigh losses — even if those benefits are concentrated on one side of the market — the transaction would improve welfare for society as a whole.

The network can, in theory, use interchange fees to balance demand between the two sides of the market. Transferring economic rents from some parties to others can induce economically efficient transactions. Interchange fee revenue is often used to fund rewards and discounts that entice consumers to pay with debit cards.

That's one rationale banker groups cite to defend interchange fees. Banks would compensate for caps by abolishing free checking, increasing fees, and cutting rewards programs, the American Bankers Association says. The industry group argues that could lead to fewer consumers carrying cards, potentially hurting merchants, too, through decreased sales.

Even if there is a potential economic justification for higher interchange fees, the efficient setting of fee rates is an open question. It would be difficult to accurately estimate how consumers and merchants value card services — given millions of different merchants and consumers — in order to identify the efficient fee level.

The Dodd-Frank legislation required the Fed to take a stand on that issue. The Board of Governors announced a final rule in June 2011 that included a debit interchange fee cap equal to the sum of 21 cents per transaction and 0.05 percent of the transaction value — roughly half what fees historically have been. The new standards include several other nuances relating to fees and will go into effect in October 2011.

The decision didn't come easy. An initial draft of the rule, submitted in December 2010, generated more than 11,000 comment letters from the industry and the public. Fed Chairman Ben Bernanke said with the June release that implementing the interchange fee caps had been one of the most difficult Dodd-Frank regulatory reform provisions the Fed had undertaken to date.

RF

Division of Labor

BY REBECCA JOHNSEN

Imagine a world without businesses: no supermarkets, auto repair shops, dry cleaners, or manufacturers. Imagine there are no occupations: no teachers, bricklayers, or farmers. If you want food, you must grow it; if you need a house, you must build it. You must be completely self-sufficient to survive. In such a world, you would be so busy taking care of life's basic necessities that you would have little time for anything else.

The idea of subsistence living is foreign to most of us; in virtually all communities, each person specializes in certain skills and uses money to exchange goods and services. This system, known as the division of labor, is something that we take for granted every day.

Although this concept had been discussed since the time of Plato, two 18th century Scottish philosophers, David Hume and Adam Smith, did much to promote it among economists. In Hume's *A Treatise of Human Nature* (1739), he notes that when an individual relies upon only his own labor, "his force is too small to execute any considerable work ... [and] he never attains perfection in any particular art." Hume asserts that the division of labor is society's remedy for this: "By the conjunction of forces, our power is augmented: By the partition of employments, our ability increases."

Adam Smith echoed this idea about four decades later in *The Wealth of Nations*. Smith began his text with a chapter on the division of labor, forever popularizing the concept. Smith's famous example is the division of labor in a pin-making factory. In a factory of 10 workers where each manufactured pins from beginning to end, Smith surmises that each worker could produce at most a few pins a day. He contrasts this with his observations of a factory of the same size where the process was divided into 18 steps, and each man was responsible for one to three steps. Even though none of the workers was especially skilled, the factory produced almost 50,000 pins daily.

Two centuries later, the contribution of the division of labor to economic efficiency is largely undisputed. The concept was central to the development of the assembly line, which revolutionized the way goods are produced. The division of labor ultimately benefits both producers and consumers; this can be seen in a number of common transactions. For example, a software engineer, needing a new place to live, can go to a company to build a single-family home. That company assigns many workers to the job, including framers, roofers, painters, electricians,

plumbers, and landscapers. This way, building the whole home takes just a few months. If the software engineer were solely responsible for building his home, it would likely take him months to build just the frame of the house. The engineer's time has a higher value if he uses it to create software.

The division of labor also occurs at the national level, in a sense, as countries develop advantages with regard to certain goods or services. Consider the trading partnership between the United States, the world's largest exporter of corn, and Japan, a leader in electronics. The United States has about 80 million acres devoted to corn production alone, comparable to Japan's entire surface area. Due to Japan's topography, less than 12 percent of its land is arable. Thus, the United States accounts for almost 60 percent of world corn exports, and Japan is its top customer. Conversely, Japan dominates the global market in electronics. In the electronics industry, three of the top five leaders in sales are Japanese companies. And Americans account for the bulk of these sales; brands like Sony, Panasonic, and Toshiba are in almost every American home.

There are clear economic benefits to the division of labor. If Japan had to grow its own corn and the United States had to produce all of its electronics, both countries would be less productive and would have lower quality goods.

Although the economic benefit of the division of labor is mostly unquestioned, two prominent 19th century scholars objected to the system. American author Henry David Thoreau was an advocate of subsistence living, and he isolated himself in his woodland cabin for more than two years. In his classic book *Walden*, he criticized the concept of the division of labor, calling it "a principle which should never be followed but with circumspection." He declared that the division of labor denied humans the pleasures of experimenting with different kinds of work.

Across the Atlantic Ocean, German philosopher Karl Marx had more dire concerns. Marx condemned the division of labor as a mechanism that "impoverishes the worker and reduces him to a machine." He perceived that overspecialization would lead to less enthusiastic workers and poorer quality work. Marx dedicated himself to urging individual workers to seek their own interests in the face of opposing and "pernicious" economic forces.

Only a small share of the public, however, has found such objections compelling — at least in practice. For example, the next time you enjoy a product or service, you will probably have a lot of people to thank for it. **RF**



RESEARCH SPOTLIGHT

Assessing State Business Climates

BY TIM SABLIK

Attracting businesses has always been of interest to state governments, but in the wake of budget hardships and the recessionary slowdown it has taken on even greater importance. Recent decades have seen the rise of a growing number of indexes, ranking states in terms of how favorable they are toward business growth along a number of dimensions. The problem is that all states have favorable (or unfavorable) business climates; it just depends on where you look. For example, California ranks 4th on two indexes that look primarily at business incubation and growth of the digital economy, but 47th on two others that measure the cost of doing business and regulatory burden. In fact, looking at 11 different business climate indexes, 49 states rank in the top 20 in at least one index, and all 50 states rank in the bottom half in at least one other.

In a recent working paper from the National Bureau of Economic Research, Jed Kolko and Marisol Cuellar Mejia of the Public Policy Institute of California and David Neumark of the University of California at Irvine analyze some of the most widely referenced business climate indexes to determine which aspects of business growth they accurately predict. The authors build on the work of Peter Fisher of the University of Iowa, who in 2005 wrote a critique of business climate indexes published by the Economic Policy Institute. He argued that “none of [the indexes] do a very good job of measuring what it is they claim to measure, and they do not, for the most part, set out to measure the right things to begin with.” Kolko, Cuellar Mejia, and Neumark expand on this analysis, looking at a greater number of indexes and controlling for nonpolicy factors in each state to determine which policy decisions, if any, have the most significant influence on economic growth at the state level.

Through testing, the authors grouped 11 widely referenced indexes into two main clusters: those that measured productivity and quality of life factors and those that measured taxes and costs. They also used data on weather patterns, population density, and existing industry composition for each state in order to create a series of nonpolicy control variables. They then tested the relationships between the factors measured by the indexes and the growth in employment, total wages, and gross state product (GSP) at the state level, and jobs at new businesses.

The authors then narrowed their analysis to the three indexes that demonstrated the most consistent relationships with economic growth — the State Business Tax

Climate Index (SBTC), the Economic Freedom Index (EFI), and the Economic Freedom Index of North America (EFINA) — and explored what proportion of economic growth is determined by the policy factors assessed by these indexes versus the proportion of growth determined by non-policy factors. They found that there is greater variation in employment growth due to nonpolicy factors in each state than due to business climate. This helps to explain why states like California, which scores very low on the tax and cost factors measured by those three indexes, can neverthe-

less continue to attract business growth because of its desirable weather patterns and its central role in industries such as entertainment and technology.

The authors divide the three indexes further by each policy category they measure to determine what drives the correlation with economic growth. The

SBTC index evaluated tax policies, and corporate income tax had the most significant relationship with both wage and GDP growth. In particular, factors such as the simplicity of the corporate tax code and how closely it aligned with federal taxation laws were positively related to growth.

In the EFI and EFINA, welfare spending was related to all measures of growth except wages, and size of government had an effect on employment and wage growth; that is, states that ranked higher on the indexes due to having smaller governments and fewer welfare expenses had higher measures of growth. The authors could not entirely rule out the possibility of the reverse causality: Slower economic climates could prompt greater welfare spending rather than the other way around. However, further testing and the fact that two indexes point to the same conclusion strengthen the authors’ belief that the first explanation is more likely.

In his work, Fisher suggested that while the media and general public might take interest in state business rankings, those studies “are ignored by the business people actually making the decisions.” As Kolko, Neumark, and Cuellar Mejia’s paper shows, there may be some reason for that: Most of the 11 indexes tested showed little connection with business growth. Furthermore, it seems that a state’s geographic location matters just as much or more than its policy structure. But for policymakers looking to exert some influence over their state’s business climate, this study offers a place to start. The authors write: “At a minimum, the evidence ... implies that concerns that high taxes and costs of doing business slow state economic growth need to be taken seriously.”

RF

“Public Policy, State Business Climates, and Economic Growth.” Jed Kolko, David Neumark, and Marisol Cuellar Mejia. National Bureau of Economic Research Working Paper No. 16968, April 2011.

FOREIGN HOUSING FINANCE

America's unique mortgage finance system is facing renovation. The approaches of other developed nations may provide some guidance for reform.

BY RENEE HALTOM

On a June afternoon in 1795, a devastating fire broke out in a navy fleet warehouse on the outskirts of Copenhagen, Denmark. The fire burned for two full days, wiping out the city's oldest homes and leaving 6,000 residents homeless. It also gave birth to the mortgage bond system the Danes still use today, spurred by the imperative to rebuild.

The German system is even older. Frederick the Great introduced *Pfandbrief* bonds in 1769, after the Seven Years' War, to treat the resulting credit crunch facing Prussian nobility. European mortgage markets today are modeled on this system.

The U.S. housing finance system is similarly steeped in tradition. The policy stance has been explicitly pro-homeownership at least since the Great Depression, when the government began insuring mortgages to restart housing markets.

It is common for developed-country governments to intervene in the provision of housing services. Many have state-owned rental properties for example, and most have housing programs targeted to lower-income families.

Nearly every industrialized country also encourages the direct ownership of homes through tax breaks and other policies — but none does so to the extent of the United States. “Compared to other developed countries, only a couple come even close,” says economist John Kiff, who in April 2011 published a comparative analysis with colleagues at the International Monetary Fund (IMF). “You’ve got interest-payment deductibility, nonrecourse [mortgages] in some states, special protections in bankruptcy courts,” among other things, he says. Then there’s the support of mortgage finance by Fannie Mae and Freddie Mac, the creatures of statute known as government-sponsored enterprises (GSEs). “Everything you could possibly name for supporting homeownership for everybody regardless of whether they can afford it, it’s all in place in the U.S.”

Given that the United States pours relatively more public resources into promoting homeownership, one might

expect an obvious reflection in homeownership rates. This is not quite the case. At about 67 percent, the U.S. homeownership rate — defined as the ratio of occupied housing units that are owned by the resident — falls squarely in the middle of the pack among developed nations, although it should be noted that many factors affect homeownership, from rental policies to zoning regulations to intangibles such as culture.

By some measures, we actually perform worse. The United States experienced a greater percentage of mortgage defaults during the recent global housing market decline than any other developed nation, despite some occurrences of larger housing booms and busts elsewhere. About 8 percent of U.S. mortgages were in default at the end of 2010, down from almost 10 percent a year earlier. Countries differ in what legally count as mortgage defaults, or “arrears,” but according to local definitions, almost 6 percent of Irish mortgages were 90 or more days in arrears in late 2010. Spain and the United Kingdom trailed at about 3 percent and 2 percent of mortgages, respectively, and defaults in most other developed countries hovered below 1 percent.

Whatever benefits the government’s support of homeownership has bought for the United States, its costs are evident. The government has injected more than \$150 billion so far toward rescuing housing agencies Fannie Mae and Freddie Mac, whose support of the mortgage market resulted in record losses. U.S. housing policies heavily encourage consumers to build housing debt (as opposed to equity), which some data suggest may have helped to turn the unprecedented housing decline of the late 2000s into the major recession that followed (see sidebar on policies that encourage housing debt).

The need for reform is now a consensus, as illustrated by sweeping proposals offered by the U.S. Treasury and the Department for Housing and Urban Development (HUD) in February 2011. The focus of reform has been on creating a stronger role for private markets in mortgage lending, thereby reducing the GSEs’ footprint on mortgage markets.

While policymakers continue to debate the content and magnitude of reform, the housing policies of other industrial democracies provide insight into possible alternatives U.S. policymakers might consider.

Originate to Hold

If there's a single trend across developed countries in housing finance, it is revolutionary change over the last 30 years. As recently as the 1980s, mortgage finance was typically provided by specialized lenders and sometimes government-run institutions. Mortgage finance was cut off from the rest of the economy, write real estate economists Richard Green and Susan Wachter of the University of Southern California and the University of Pennsylvania, respectively, in a 2007 paper.

Contrast that with today: Mortgage markets are internationally linked through financial markets. Through deregulation, low global interest rates, and financial innovation, market-oriented commercial banks gradually replaced heavily regulated, state-owned, and government-rationed mortgage lenders after the 1980s. Stronger links between mortgage lending and capital markets enabled private lenders to meet the demand for mortgages, which was previously possible only with direct or indirect government subsidies. The result has been an explosion of mortgage growth in developed countries, an across-the-board surge in housing demand, and growth of house prices in the developed world, Green and Wachter write.

The links to capital markets take strikingly different forms in each country. The United States is among the best connected, relying primarily on securitization to fund mortgage lending. Here, lenders sell roughly 60 percent of all residential mortgages on the secondary market to raise funds for the next round of lending. A key perk of securitization is that the risks of lending — from interest rate fluctuations to borrower default — are passed on to savvy investors able, in theory, to assess and hedge accordingly.

This differs starkly from every other developed country. Only a handful have meaningful amounts of mortgage securitization; it made up about 30 percent of total mortgage debt in 2008 for the U.K., Canada, the Netherlands, and Ireland, among a few others. In fact, from Australia to Canada to most of Europe, lenders — typically commercial banks or specialized mortgage institutions — hold the majority of mortgages on their books and raise funds by other means. Most often that's through plain old bank deposits.

A big reason for the difference in the United States is the unique role played by the GSEs. Fannie Mae and Freddie Mac have existed as private entities since 1968 and 1970, respectively, to make mortgage credit cheaper and more available to homebuyers by buying up mortgages on the secondary market. They hang on to some of those mortgages as investments, and sell the rest to investors by packaging them into mortgage-backed securities (MBS), on which they pro-

Nearly every industrialized country subsidizes homeownership, but none to the extent of the United States.
“Compared to other developed countries, only a couple come even close,”
says IMF economist John Kiff.

vide investors a payment guarantee for capital and interest.

The GSEs' impact on the U.S. mortgage market is enormous. At their precrisis peak in 2003, they were purchasing half of all new mortgages and owned or guaranteed more than 50 percent of all single-family residential mortgage debt. Their liabilities reached \$5.5 trillion in 2008, nearly equal to the total amount of U.S. government debt held by the public that year. In theory, their activities push mortgage rates lower, though empirical studies disagree on the extent to which that occurred.

By ensuring a rich demand for mortgages on the secondary market, the GSEs have made securitization a cheap funding source for U.S. mortgage lenders. It has been made even cheaper by the fact that markets have for decades assumed Fannie Mae and Freddie Mac to be implicitly backed by the U.S. government, and so have historically been willing to lend to them more cheaply. (This assumption was proven correct when GSEs' bondholders were protected from loss by the government in 2008 after the GSEs absorbed record mortgage default losses.) Some of the funding advantage provided by implicit government protection has been passed on to homebuyers, though Federal Reserve Board economist Wayne Passmore estimates that as much as half tended to be retained by GSE shareholders.

No other country has anything approaching the magnitude of what Fannie Mae and Freddie Mac do in the United States, according to Michael Lea, an expert on international housing markets at San Diego State University. “If we didn't have those entities issuing guarantees, then I think our markets would look more like other nations in terms of maybe only 20 percent of loans funded through securitization and the rest being held by banks.”

Growing Intrigue with Covered Bonds

To increase funding supply beyond deposits, many European mortgage lenders have turned to selling covered bonds. These are bonds backed by a pool of high-quality assets such as mortgages. They perform the same basic function as securitization — connecting mortgage markets with capital markets — but lenders in a covered bond system hold the mortgages on their books. European governments generally do not offer payment guarantees on mortgage covered bonds, though the European Central Bank, like the Federal Reserve and other central banks around the world, injected liquidity to support covered bond markets during the global financial crisis to the tune of €60 billion (about \$85 billion using current conversion rates). The Fed, in comparison,

injected \$1.25 trillion in liquidity to mortgage markets during the crisis.

Covered bonds date back to Germany's 200-year old *Pfandbrief* system. By the late 19th century, almost every European country had an active covered bond system. Their dominance waned for a time as deposits became more important and the influence of communism in Europe ushered out ties with capital market instruments. Germany revived the instrument in the mid-1990s.

Though deposits rule as a mortgage funding source in most developed countries besides the United States, covered bonds are a signature component of European mortgage markets. More than 300 institutions in over 30 countries issued €2.2 trillion (\$3.1 trillion) of covered bonds in 2010, mostly in Europe. There, covered bonds are 40 percent of the size of the sovereign bond market, and they fund 20 percent of residential mortgages in the European Union. In Spain they fund nearly half of mortgage debt, and in Denmark nearly all of it.

A key feature of covered bond systems is a law passed in each country providing strict guidelines for the mortgages eligible to be part of the "cover pool." Strict capital requirements apply, and the mortgages generally are very safe, with

loan-to-value (LTV) ratios rarely above 80 percent, and in some countries as low as 60 percent. Borrowers either put more money down, or obtain a high LTV second mortgage to help with the down payment.

A couple of countries, like Germany and Spain, allow state-owned banks to issue covered bonds. However, the European Union has strong guidelines on use of state guarantees to ensure a level playing field across Europe, Lea says. Aside from government liquidity provided during the financial crisis, "I would argue that there's really not any role of the government supporting the covered bond market."

Denmark's covered bond model stands apart from the rest of Europe. There, tightly regulated mortgage lenders issue bonds one-for-one with mortgages: That is, the mortgage bonds outstanding always exactly equal the mortgage debt that backs them in size, cash flow, and maturity characteristics. Leverage in this setup is precisely zero.

The Danish system has another unusual feature: When rates rise — or, equivalently, the price of the mortgage bonds fall — homeowners can reduce their principal by buying the corresponding bond back from the market at the lower market price. This reduces their odds of negative equity if house prices fall, which may have kept Denmark's mortgage

What If We Encouraged Home Equity Instead?

From the GSEs to the popular mortgage interest tax deduction, the major theme of U.S. policies toward homeownership is that they encourage or directly subsidize the accumulation of housing debt. These policies may encourage homebuyers to get bigger homes than they otherwise would, as well as reduce the incentive for households to repay mortgage debt quickly. They also make it cheaper for households to borrow against their homes to consume.

By definition, any form of subsidy leaves the recipient better off. But a policy of encouraging debt leaves the nation as a whole more vulnerable to house price swings, as the recent boom and bust has taught us. Greater debt increases the likelihood of negative equity if house prices fall, which is one of the biggest predictors of foreclosure. Moreover, negative equity may hinder labor market adjustment since underwater homes are harder to sell (whether because of the financial loss they cause borrowers or because the process for "short selling" an underwater home has proven arduous). During the recent bust, U.S. counties and developed nations that experienced greater increases in household leverage during the boom experienced larger house price declines and more severe effects from the recession, San Francisco Fed economists Reuven Glick and Kevin Lansing pointed out in a 2010 analysis.

Alternatively, there are ways to subsidize equity by rewarding savings. Germany and France are known for contractual savings programs called *Bauspar* and *Epargne Logement*, respectively. Savers receive a bonus based on the amount saved in each year, but the funds can be withdrawn

only after a minimum number of years, often five. In the meantime, funds are held by specialized institutions (e.g. *Bausparkassen*) and invested in low-rate housing loans or government debt. When the preset time period is reached, the saver is awarded a low-rate loan that often must be used for housing.

The majority of the adult population in Germany held contracts with *Bausparkassen* at the program's 1980s peak. France's program launched in the 1970s. Such programs have the potential to increase savings, and borrowers with the most discipline to save (and, potentially, to maintain a mortgage) self-select into them.

To the extent that U.S. policies making housing debt attractive have increased homeownership, propped up house prices, or suppressed mortgage rates — though economists are uncertain about the magnitudes of those effects — a reversal may be in store if the policies are unwound.

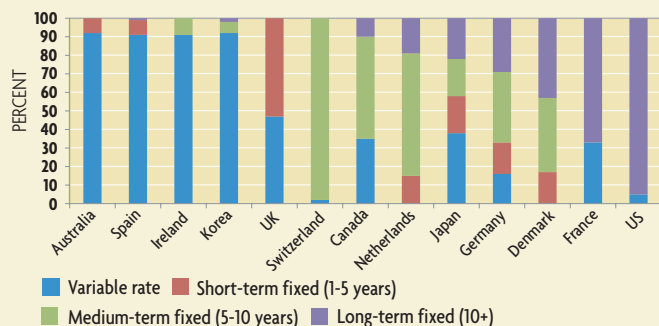
And pivoting our strategy toward equity-building would constitute a cultural shift. America's attitude toward homeownership and debt caused a bit of culture shock when Canada-born IMF economist John Kiff relocated to the United States. "People were telling me, 'John, when you buy a house in the U.S. you buy as much as you possibly can.' Here everything is basically focused on the idea that leverage is good and you go right to the hilt. Whereas in Canada it's the other way around: Your goal in life is to retire at something like 60 years old with absolutely no debt."

— RENEE HALTOM

How Housing Differs

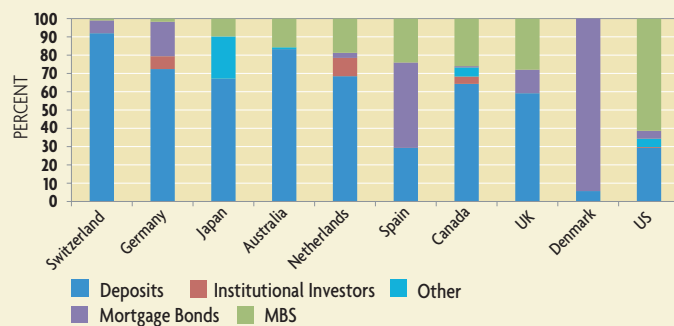
Developed nations differ in mortgage funding, product, and performance

Mortgage Product Offerings (Loans Made in 2009)



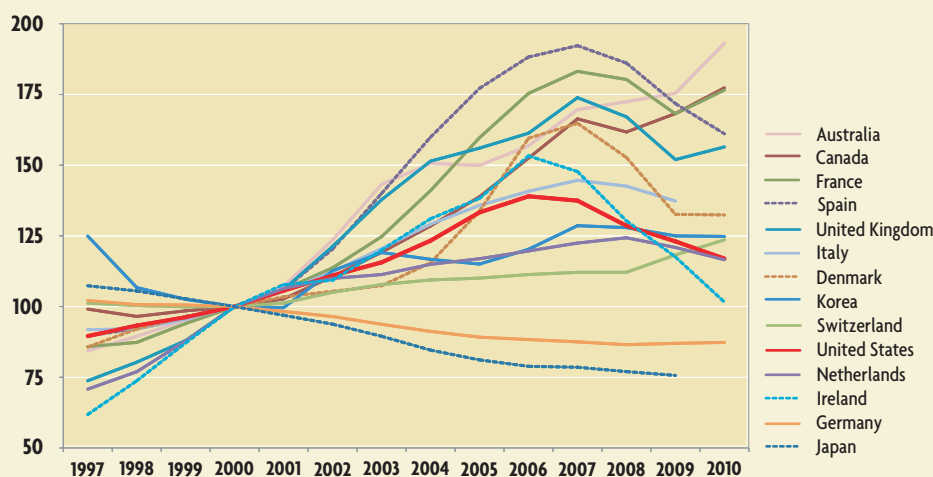
SOURCE: Data provided by Michael Lea, originally appears in Lea 2010(a).

Mortgage Market Funding Sources



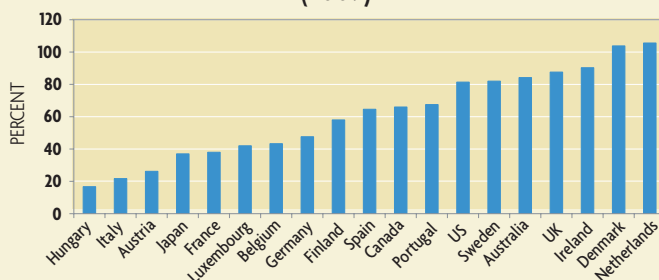
SOURCE: Data provided by Michael Lea, originally appears in Lea 2010(a). Data for 2008 except Netherlands (2006) and Spain (2009).

Real House Price Appreciation in Selected Developed Nations (2000 = 100)



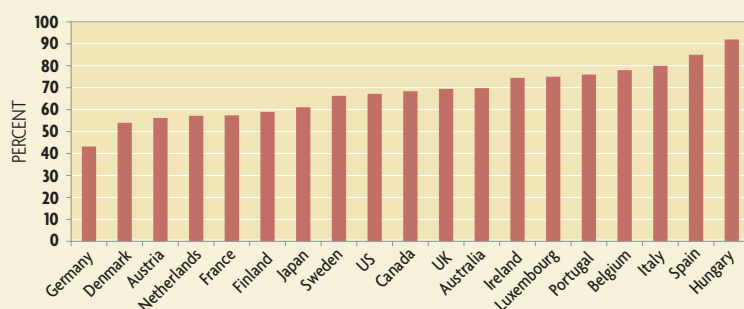
SOURCE: Author's calculations based on OECD data from the May 2011 Economic Outlook (annex table 59). Nations that experienced greater house price declines than the United States from their respective peaks plotted with dotted lines. Data for Japan and Italy end in 2009.

Total Residential Mortgage Debt as Percent of GDP (2009)



SOURCE: European Mortgage Federation, Housing Finance Information Network, Housing Finance Network, International Union for Housing Finance, Kiff (2010). Australia data for 2008, Japan for 2010.

Homeownership Rate (Latest Data Available)



SOURCE: European Mortgage Federation, International Union for Housing Finance. Data for 2008 except Denmark, Austria, U.S., Ireland (2009); France, U.K., Canada, and Belgium (2007); Australia and Portugal (2006); Hungary (2003); and Germany and Italy (2002).

default rates relatively low. Only a few times in the bond system's 200-year history have payments to Danish mortgage bond investors ever been delayed, and that hasn't happened since the 1930s, according to BRFKredit, one of the Danish lenders.

As an alternative to securitization, many commentators suggest covered bonds could be a promising model for the United States. Lawmakers on both sides of the aisle have sponsored legislation that would lay the initial covered bond infrastructure, and Treasury and HUD officials have voiced support for potentially developing a U.S. market in covered bonds.

The appeal to many of these parties is that the lender hangs on to the mortgage, aligning incentives and making strict lending standards an intrinsic feature of the system. Investors usually enforce safe lending in a securitized system, but that discipline appears to have been weakened during the boom, reasons for which may have been the widespread expectation that the federal government would not allow GSEs to fail and that house prices would keep rising.

But covered bonds would come at a cost if adopted in the United States, writes IMF economist Jay Surti in a December 2010 analysis. Because they require greater lender capital and stricter lending standards, covered bonds could make mortgages more expensive, all else equal. And, he writes, the ability of a covered bond system to compete with GSE subsidies hinges largely on the extent to which the GSEs' influence on mortgage markets is reduced.

The Other GSEs

Canada and Japan also have major government-sponsored housing finance agencies, but their impact on mortgage markets is somewhat different. (The Netherlands and South Korea also have similar agencies, but they affect a very small proportion of the mortgage market.)

The Canada Mortgage and Housing Corporation (CMHC) was created after World War II to implement the nation's housing programs. It combines elements of the United States' major housing agencies: The CMHC both insures mortgages and guarantees securities backed by government-insured mortgages in functions that are analogous to the Federal Housing Administration and Ginnie Mae, respectively. The CMHC is fully owned by the government and its backing is explicit.

Since 1967, Canadian banks have been prohibited from extending highly leveraged mortgages (currently defined as LTV above 80 percent) unless the mortgage is insured to protect lenders against borrower default. Roughly two-thirds of Canadian mortgages are insured, and half the market was insured by the CMHC as of late 2009, Kiff estimates. The CMHC also guarantees 90 percent of private insurer losses. (In turn, those insurers must contribute to a guarantee fund and set aside loan loss reserves.)

Until 2007, the Japan Housing Finance (JHF) agency was a housing bank that originated fixed-rate mortgages funded by subsidies and by borrowing from the government. The

agency ran into financial trouble after a stretch of low-interest rates brought on a refinancing wave in 1995. The government removed the agency, then known as the Government Housing Loan Corporation, from the direct mortgage lending business. To support the fixed-rate mortgage (FRM) market, the government renamed the agency and gave it implicit backing to securitize privately originated FRMs, much like the GSEs do in the United States. But despite its similar structure to the American GSEs, the JHF was always intended to provide only what private markets couldn't, according to an analysis by the European Mortgage Federation.

Therefore, the effect of the Japanese mortgage agency on the mortgage market depends on the popularity of the FRM. Due to a deflationary, low-interest rate environment since the early 1990s, Japanese borrowers have become more accustomed to adjustable-rate mortgages (ARMs). That and the loss of official subsidies have meant that the JHF's influence has never quite reached that of its predecessor.

There are several key differences between these agencies and the American GSEs. The securitized mortgage market is not as important in Canada and Japan. Deposits are a cheap funding source in both countries, Kiff says. The Japanese are known for being aggressive savers, and in Canada so many mortgages are government-insured that lenders can hold them with minimal capital requirements. In both countries, "there's not much incentive for them to turn around and securitize those things."

Second, their guarantee and insurance activities aren't targeted to meet social objectives. In the early 1990s, Fannie and Freddie were given a formal mandate to support affordable housing for low-income households. In 2008, 56 percent of the mortgages they purchased were required to be granted to low-income families, up from 30 percent in 1993, according to the IMF study by Kiff and his colleagues. By contrast, the insurance and guarantee activities of the CMHC and JHF aren't subject to explicit affordable housing mandates, and they aren't targeted to relatively small mortgages.

This may relate to the third key difference: The Canadian and Japanese agencies don't purchase mortgages for their own portfolios. The GSEs may have taken on additional risk that way, perhaps to meet their affordable housing mandate, to increase their market share, or because their funding advantage made holding mortgages profitable for them — reflecting what the Treasury, HUD, European Mortgage Federation, and a variety of academics describe as an inherent conflict presented by their public-private structure.

An Outlier in Many Ways

The United States finds itself on the far end of the spectrum in many aspects of housing. At the funding level, the United States has the most government support of owner-occupied housing finance and is the heaviest user of securitization. Many countries subsidize homeownership through tax incentives like the popular mortgage interest tax deduction.

According to Lea's research, only the United States allows nearly full deductibility without taxing imputed rent — the rent homeowners effectively pay themselves when they live in their residences. Imputed rent is received in the form of housing services rather than cash, but economists argue that it is income nonetheless. Not taxing it gives owner-occupied homeownership an edge over other forms of investment such as owning a rental property or forgoing residential ownership altogether in favor of financial investment.

Lending standards deteriorated most in this country, an analysis by Luci Ellis at the Bank of International

Settlements suggests. During the boom, fewer U.S. borrowers were required to document income and assets, and lenders offered ARMs with “teaser” rates that adjusted sharply upward. The volume of second mortgages exploded, and highly leveraged mortgages became more common, as did loans for which the borrower had to repay only interest each month. Opinions abound on the extent to which various housing policies may have encouraged deteriorating lending standards but, according to Ellis, each of the above underwriting characteristics existed to greater degrees in the United States than in any other developed country.

The Fate of the 30-Year FRM

When it comes to mortgage markets, one of the many features that set the United States apart from other developed countries is its reliance on the prepayable 30-year fixed-rate mortgage (FRM). This type of financing has constituted more than 90 percent of new U.S. mortgages in recent years. The heavy use of securitization enables American lenders to offer longer-term FRMs without being locked into an illiquid asset saddled with interest rate risk.

Therefore, it is hard to debate how to wind down the support of troubled GSEs Fannie Mae and Freddie Mac, which provide strong support to securitization markets, without also considering whether lenders could still offer the 30-year FRM as affordably as they have in the past.

There are benefits and costs to the long-term FRM. It is consumer-friendly, providing payment certainty by shielding borrowers from interest rate risk. American FRMs are unique in the world in that they usually come with the options to prepay and refinance; many U.S. states ban prepayment penalties and the GSEs historically have refused to enforce them on the mortgages they purchase. The FRM may also promote stability. Research by the International Monetary Fund and others has found that in countries where adjustable-rate mortgages (ARMs) dominate, the economy as a whole is more sensitive to short-term interest rate swings.

But FRMs don't erase interest rate risk; they pass it on to investors. The longer the term of the loan, the more risk the investor faces. Investors are better equipped than households to manage that risk. However, the average life of a mortgage is only about five years so having fixed-rate periods as long as 30 years needlessly increases the cost of the loan for the average borrower, argue economists Michael Lea and Anthony Sanders of San Diego State University and George Mason University, respectively, in a recent analysis of the long-term FRM.

The long-term FRM is a construct of policy. Before the Depression, the United States relied on shorter-term fixed-rate loans that the borrower had to repay or refinance at the end of the period. To restart housing markets during the Depression, the federal government modified nonperforming loans and sold them back to banks as 20-year FRMs, a

more realistic payoff horizon in the falling-price environment. Federal insurance of mortgages, especially the long-term FRM, became a permanent fixture of the housing market. Until the 1980s, the government would insure only FRMs.

Interest rate risk wasn't an issue for lenders until the yield curve — the difference between long-term and short-term interest rates — sloped negative in the mid-1960s, and lenders became strained. One reason the GSEs were created was to establish a secondary mortgage market that would promote liquidity of mortgage holdings and therefore help lenders manage interest rate risk. These were mutually reinforcing trends: The more FRMs that lenders originated, the more liquid mortgage-backed securities markets became, which increased their attractiveness to investors and in turn increased the number of FRMs that could be originated. The ARM share of new U.S. mortgages tends to reach as high as 40 percent when markets expect interest rates to drop — hitting almost 70 percent at one point in the mid-1990s, according to a New York Fed staff analysis — but the long-term FRM is almost always the dominant product in the United States.

Without the GSEs to promote securitization and shoulder some of the risk, long-term FRMs will become more expensive relative to shorter-term fixed-rate or variable-rate alternatives, the U.S. Treasury and the Department of Housing and Urban Development said in their February 2011 proposal for winding down support of the GSEs. Policymakers are considering reform precisely because mortgage support through the GSEs has turned out to be costly. The costs of the government support they require will have to be weighed against the benefits of the long-term FRM.

Some fear the 30-year FRM would go away entirely, but Lea and Sanders argue FRMs would still be offered because of private-label securitization and any new funding systems that crop up. Still, “the ARM market share would increase substantially without Fannie and Freddie subsidies,” Lea says.

Thus, if the support of the GSEs is reduced, the long-term FRM is likely to become a fading presence to some degree.

— RENEE HALTOM

Overall, the United States experienced the greatest proportion of subprime lending before the crisis at about 20 percent of new mortgages at the peak; the United Kingdom was second at about 8 percent.

Even our very definition of a high-risk loan tends to be more lax. “Subprime” in other countries might refer simply to a low-documentation loan, somewhat akin to Alt-A loans in the United States, which are riskier than prime but not as risky as subprime. American subprime mortgages were more prone to the layering of multiple high-risk factors. In some countries, Kiff says, “what’s called a subprime or high-risk mortgage would be laughable from an American’s point of view.” Perhaps not surprisingly, the United States’ poor mortgage performance relative to the rest of the world is concentrated in riskier loans.

Additionally, mortgage default is a costlier option for borrowers abroad due to recourse, which allows the lender to go after the borrower’s other assets in the event of default. Recourse is prominent in every developed country except the United States. About a dozen states are nonrecourse, but even in recourse states the laws often are so onerous for lenders that they are rarely applied, according to a 2009 paper by Richmond Fed economist Marianna Kudlyak and Andra Ghent at the City University of New York. Many people point to recourse and strict underwriting standards as having kept defaults low in other countries.

The types of mortgages offered here are another extreme. Funding sources have a lot to do with that. When mortgage markets are tightly connected to capital markets, a longer fixed-rate period is possible since lenders can offload the associated risks. Case in point: The United States is the heaviest user of securitization, and more than 90 percent of the mortgages issued here in 2009 were the 30-year fixed-rate variety (though this share varies with market

interest rates). No other developed country except Denmark offers the prepayable long-term FRM in large numbers, and the share there was less than half that year.

If lenders don’t shift risks away, they are more likely to protect themselves by sticking with shorter-term or adjustable-rate contracts. But “all developed countries have highly developed bond markets,” Lea adds, so each actually offers an array of mortgage products with different mixes of maturities, which he documents in a 2010 study of international mortgage products. It is a question of finding the cheapest funding source, he says, “along with the lender’s desire to diversify funding sources and extend liability maturities.”

Thus, one way that reform could most directly affect U.S. homebuyers is through the types of mortgage contracts that are offered (see sidebar on page 17) — but that depends largely on the shape reform takes. The most drastic option, suggested by Treasury and HUD, would eventually wind down Fannie Mae and Freddie Mac completely, which would potentially leave room for a new system to emerge — whether created by the government or by markets.

Unwinding some of the U.S. policy tradition in favor of homeownership could be painful in the short term. A sudden shift away from government subsidies through the GSEs could further drag out the housing recovery, which is why many officials and academics suggest a gradual transition to whatever new regime policymakers ultimately allow.

In the long term, a permanent shift away from government support could move homeownership out of reach for some households on the lower end of the income distribution. Nonetheless, most policymakers agree that reform is needed to make U.S. housing markets more stable in the long run, regardless of whether they draw upon the tools used by their foreign counterparts.

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READINGS

Ellis, Luci. “The Housing Meltdown: Why Did It Happen in the United States?” Bank for International Settlements Working Paper No. 259, September 2008.

Green, Richard, and Susan Wachter. “The Housing Finance Revolution,” paper presented at the Annual Federal Reserve Bank of Kansas City Economic Symposium in Jackson Hole, Wyo., Aug. 30–Sept. 1, 2007.

“Housing Finance and Financial Stability — Back to Basics?” IMF *Global Financial Stability Report*, April 2011.

“Hypostat 2009: A Review of Europe’s Mortgage and Housing Markets.” European Mortgage Federation, November 2010.

Kiff, John. “Canadian Residential Mortgage Markets: Boring But Effective?” IMF Working Paper No. WP/09/130, June 2009.

Lea, Michael. “International Comparison of Mortgage Product Offerings.” Research Institute for Housing America Special Report, September 2010.

Lea, Michael, and Anthony Sanders. “Do We Need the 30-Year Fixed-Rate Mortgage?” George Mason University Mercatus Center Working Paper No. 11-15, March 2011.

“Reforming America’s Housing Finance Market: A Report to Congress.” U.S. Department of the Treasury and U.S. Department of Housing and Urban Development, February 2011.

Surti, Jay. “Can Covered Bonds Resuscitate Residential Mortgage Finance in the United States?” IMF Working Paper No. WP/10/277, December 2010.

Targeted Charitable Giving

Good intentions, unintended consequences

BY BETTY JOYCE NASH

When news of a disaster dominates media, money pours into nonprofits that promise to aid those affected. Technology has enabled charities to raise significant contributions, especially small donations, through text messages and the Internet. These gifts typically peak in the months following disaster and recede as coverage diminishes. The relief effort for victims of the 2005 Gulf Coast hurricane brought in \$3.9 billion over the following six months; the 9/11 tragedy, \$2.4 billion; the 2004 Indian Ocean tsunami elicited \$1.7 billion; and the 2010 Haitian earthquake, \$1.4 billion, in 2009 dollars.

Funding can overwhelm nonprofits, especially in the first chaotic months when aid is uncoordinated, particularly in undeveloped countries. Yet nonprofits face many needs and don't want to turn away funds or donors. "The organizations may not want to cut off that spigot when people are in the giving mood," says Daniel Borochoff, founder and president of the American Institute of Philanthropy, a charity information service. He suggests people give an unrestricted amount following a disaster, and also donate to nonprofits that address continuing, intractable problems like hunger.

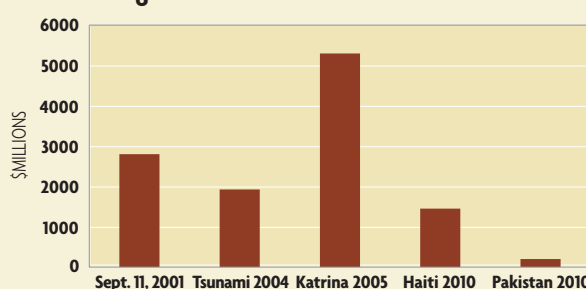
That's because restricted funds limit charities' flexibility, philanthropy professionals and economists say, and may lead to inefficiencies. Such donations legally obligate the nonprofit to spend as directed by the donor, even if contributions to the disaster exceed needs. The Red Cross was widely criticized after 9/11 when it considered using excess funds for other projects. As a result, many nonprofits today, including the Red Cross, publish "escape clauses," which are disclaimers that allow redirection of gifts if necessary.

In 2010, natural disasters affected roughly 300 million people worldwide; some made the news, some didn't. About 4,000 people in China, for instance, were reported killed or missing in floods, with very little international assistance provided or requested. Aid to the Caribbean nation of Haiti, nearer in geography and culture to the United States, reached \$1.4 billion in U.S. contributions, of which about 38 percent has been spent, according to Borochoff. Assorted "smaller" disasters every year affect millions worldwide.

Donors give faster and more generously to victims of particular events than to organizations working on chronic problems such as disaster preparation in less-developed countries or combating hunger or disease. University of Maryland economist Thomas Schelling has called this the "identifiable victim" effect. Looking at Internet donations to eight relief agencies after the Indian Ocean tsunami in 2004, economists Philip Brown of Colby College and Jessica Minty of the Boston research firm The Analysis Group found that, on average, daily donations increased by 13.2 percent with one extra minute of nightly news coverage; an additional 700-word *New York Times* or *Wall Street Journal* article raised donations by 18.2 percent of the daily average.

The recent earthquake and tsunami in Japan raises

Total Giving to Disaster Relief



SOURCE: The Center on Philanthropy at Indiana University

questions about whether developed nations are an efficient target for aid donations. Institutions in richer nations are stronger and better organized and able to cope with the aftermath of disaster, according to a paper by economist Matthew Kahn of the University of California at Los Angeles. The Japanese earthquake and tsunami brought pledges or donations of about \$184 million in less than a month. Yet Japan's economy is the world's third largest, with relatively effective disaster plans in place.

Japan allowed only 13 international organizations into the nation, according to Saundra Schimmelpfennig, a consultant and international aid worker. Because of Japan's caution, some nonprofits decided against responding to the Japanese crisis. But the decision backfired, and sparked angry emails and even accusations of racism in some cases. "Donors got upset," she says. "They wanted their money to go to Japan." If charities don't fundraise in the first months, it becomes hard to raise money later. But if they do fundraise, using a disaster as a vehicle, then donors want to see results. "That enormous pressure to spend causes problems."

Schimmelpfennig saw many such examples in Thailand, where she spent four years after the 2004 tsunami to help the government there coordinate nonprofits working in the region. An organization without prior expertise built boats for Thai fishermen. "They sank during the handover ceremony because they hadn't been caulked," she says.

Good work takes time and oversight. Case in point: After the 2004 tsunami wiped out some 230,000 people, the Red Cross got \$581 million; five years later, in 2009, the organization had \$68 million of that money still unspent.

The influx of money and supplies also may distort incentives and interfere with local markets. Food shipments to Haiti, for example, have probably fed many hungry people but have also hurt rice farmers outside of the earthquake zone because customers in Port-au-Prince, where farmers market the rice crop, can get rice for free. A cash transfer might enable people to buy rice from local farmers or keep a small business going. As soon as markets are up and running, some organizations now arrange cash transfers for disaster victims, according to Schimmelpfennig. "The sooner you can do that, the better off the economy is." **RF**

When South Carolina Met BMW

Behind the deal that brought a halo effect and Bavarian meatloaf to Spartanburg

BY BETTY JOYCE NASH

Early in 1996, workers at the BMW Manufacturing Co. plant near Spartanburg, S.C., were building the BMW Z3, a two-seater luxury sports car. But quality-control numbers were slightly off. Pressure mounted at the plant, just a year and a half old, to meet standards and make deadline.

"There was the sense that we Americans were being held to an unfair standard," says Bobby Hitt, a South Carolinian who retired in January after 18 years as BMW's head of corporate affairs. "We probably were. It was a new plant, and it was attracting a lot of attention from around the world."

Had BMW risked its image by planting its first full manufacturing facility outside Germany in the hills of South Carolina? Could the workforce meet German standards? Would the experience burnish — or tarnish — South Carolina's image?

The goose-bump moment arrived later that year at the Z3 launch. With about 1,000 employees gathered in the cafeteria, Hitt recalls BMW Chairman Bernd Pischetsrieder's words, after thanking employees: "'Now you have to do this every day — the whole world is watching.' You could have heard a pin drop."

Last April, the Spartanburg BMW plant rolled out 23,059 vehicles — three-quarters of them for export. (The BMW Group's U.S. sales went up by 10 percent in 2010 over 2009.) The plant's latest and biggest addition was announced in 2008, amid recession, and completed in late 2010: The company invested \$750 million and added 1,600 jobs to tool up for the next generation of crossover sport utility vehicles, which BMW calls sports "activity" vehicles.

But back in 1992, when the plant was announced, people wondered whether South Carolina's workforce could produce these prestige vehicles. Since the 1970s, the state's manufacturing base, largely composed of textiles, had been dominated by lower-skilled, low-wage work. Moreover, textile jobs were chasing even lower-wage regions abroad in the wake of falling trade barriers. As those jobs went away, income levels fell.

Foreign company operations were not new to South Carolina. The state already had 75 firms from Germany alone, but South Carolina workers had to prove they could make BMWs.

BMW, as it turns out, had something to prove too.

The Germans are Coming — Again

When BMW decided to make cars in the United States in 1988, its market share here had fallen. U.S. sales had declined

from a peak of nearly 100,000 in 1986 to about 53,000 in 1991, the year before the announcement. The dollar's decline against the Deutsche Mark had jacked up the cost of a \$16,000 BMW in the states to somewhere between \$20,000 and \$25,000. "By the time they announced the plant, they were in a terrible position," says Hitt, who was involved in early negotiations to woo BMW, and who is now the state's secretary of commerce.

Against this backdrop, too, loomed Volkswagen's 10 years in Pennsylvania. VW opened the first European car assembly plant in the United States in 1978 to build the Rabbit. The effort was plagued by mechanical problems and poor timing as the U.S. market returned to a preference for big cars. While the model had some good years, declining Rabbit sales prompted VW to close the plant in 1988, the same year BMW started seriously considering the states. Automotive economist George Hoffer of the University of Richmond observes, "BMW came here with the history of VW, a much bigger firm, having failed."

But the prospect of making cars here was tempting in view of the North American market size, growing protectionist sentiment, and the weak dollar. By the end of the 1980s, Nissan made trucks in Tennessee, and Toyota assembled vehicles in Kentucky.

The Japanese manufacturers, however, made low-cost vehicles that sold in high volumes. BMWs are not mass-market cars.

South Carolina started courting BMW in the late 1980s — then-Gov. Carroll Campbell cold-called the company in Germany five years before the 1992 announcement. And the early 1990s recession prompted state commerce officials to step up the incentives to bring jobs. The 1980s had begun, after all, with the Chrysler bailout and was closing with hefty deals elsewhere for not only the Japanese but also domestic manufacturing plants. BMW's package included 900 acres of farmland near Interstate 85 and the airport worth \$25 million; infrastructure and utilities; negotiated fees instead of property taxes; airport land and improvements; and worker training. The incentives were worth more than \$130 million, or roughly \$200 million in today's dollars.

A BMW spokesman says the company reviewed 250 sites worldwide before choosing Spartanburg County, in the South Carolina Upstate, an 11-county region in its northwest corner.

The state had the goods: BMW preferred the Eastern Standard Time zone because it allows real-time conversations between South Carolina and Germany. BMW liked the

state-funded, on-site training through the S.C. Technical College System, established in the 1960s to help tune up the workforce, says Jim Morris, former head of the system. Efficient transportation also appealed to the company: an international airport, Interstate 85, and direct rail transportation to the deepwater Port of Charleston.

BMW also was pleased by something South Carolina did not possess: an existing automotive culture. “BMW wanted to develop its workforce and routine in its own way,” Hitt says. And it probably didn’t hurt that union activity in the state is practically nonexistent. Foreign auto firms locate, in most cases, in right-to-work states.

Although BMW would be the state’s first automaker, South Carolina already had a small auto-parts cluster. Michelin had established its first tire plant in 1973; in 1988, Michelin had even moved its North American headquarters from New York to Greenville, S.C. Bosch began producing injection systems for diesel engines in South Carolina in 1974.

To draw attention to the brand, BMW planned a new vehicle launch. First, however, the plant cut its teeth on BMW’s most popular model, the 3 series sedan, the 318i, which it started producing in 1994. That way, the plant could tap the expertise of its Munich plant, which makes the same car.

After that warm-up, work commenced in 1995 on the Z3, a sports coupe. The plan worked. Publicity over the Z3 drove curious car lovers to dealerships where customers admired the Z3 but purchased the more practical sedan, BMW’s best seller. That sent sedan sales through the roof, Hitt says, and drove more production here and at the factory in Munich, proving that the U.S. factory would not take jobs from Germany.

Incentives commonly get the credit when a state wins a major plant, but in the case of BMW’s Spartanburg plant, they may not carry the weight most people think. “They were looking at us before we were looking at them because they needed an American presence,” says Harry Miley, an economic consultant in Columbia, S.C., who formerly worked in the commerce department and for the late Gov. Campbell.

Though BMW brought cachet and jobs to South Carolina because people now identify the state with the luxury product, foreign firms have populated the state for half a century. BMW rolled into South Carolina, metaphorically speaking, on steam generated by predecessor firms such as Michelin, Siemens, Bosch, BASF, and Adidas.

Precision Textile Machines

Fifty years ago, business leaders in the Upstate, South Carolina’s manufacturing hotspot, aggressively courted European firms. But back then they sought the makers, sellers, and fixers of the precision machines crucial to textile production. As textiles declined in the 1970s, state leaders scoured the world even harder for new investments. Today, more than 250 firms from 24 countries



X models at the BMW plant undergo final visual inspection before receiving components such as power trains, transmissions, engines, and front and rear axles.

have settled in the Upstate alone. More than 100 foreign corporations have even located their North American headquarters in the region.

BMW’s arrival accelerated the Upstate’s nascent culture change. About 2 percent of the BMW workforce in South Carolina relocates from outside the United States; on average, they stay two to three years, according to the company. (A team of Germans, Americans, and a South African currently manages the plant.) The typical number of expats is maybe 100 to 120, more at vehicle launch time.

The region reflects the influence of the foreign firms. Michelin started the bilingual French School in 1974 for expatriate families. The school educates about 70 students. German, Korean, and Japanese Saturday schools offer language and culture classes, as does a Chinese school. There’s great sushi. An Oktoberfest. Homemade pretzels, sausages, and other German staples at the Bavarian Pretzel Factory.

Pretzel Factory owners Linda and Gottfried Gschnitzer moved to Greenville three years ago. Gottfried worked for many years at BMW’s Munich plant. They came on vacation, went back to Germany, and made plans to move. “The weather was beautiful,” Linda says.

In 2010, they opened the restaurant. They also cater to BMW every day at lunch — popular entrees include Bavarian meatloaf, spaetzle, and goulash. “There are quite a few Americans who eat with us too,” she says. Sales have grown steadily at the restaurant, which has just agreed to sell bread to Whole Foods. The German customers, she says, love to speak German while they’re in the restaurant where the Gschnitzers also stream German radio.

The Upstate change has been dramatic, says Greenville native Whitney Walters. “If you’d have talked to me in 1978, I would have said, ‘I can’t wait to get out of here,’ and then, we just opened up.” She credits the Upstate’s increasing international presence with adding to the energetic mix of theater, restaurants, schools, and events, including the BMW Charity Pro-Am golf tournament on the PGA’s Nationwide Tour.

Walters also directs the International Center of the

Upstate, a nonprofit that shows transplants the ropes — which banks handle international currency or where people can get good translation services. They also offer language classes, films, and lectures, and even help new arrivals with details such as school registration. “Sometimes it’s as simple as saying, ‘Here are some of the people who speak Russian in town,’” she says.

The BMW Performance Driving School Delivery Center and BMW Motorcycle Rider Training School also draw about 10,000 visitors a year. For a fee, drivers can try out cars on the tracks.

But the presence of foreign firms and people is unremarkable today — it’s common to hear foreign languages everywhere, Linda Gschnitzer and Walters say. To everybody in the Upstate, Hitt says, it sounds like money.

Polish Skills, Burnish Image

Just about the time Walters considered leaving, the textile business was slipping away too. Firms like the 150-year-old textile giant Milliken & Co. still thrive, but the textile industry today is a shadow of its former size. The BMW plant is part of a larger effort by South Carolina to grow the automotive segment and revive manufacturing jobs, which fell from about 18.4 percent share of employment in 1999 to about 11.7 percent in 2009. The state has for decades lagged the nation in per capita income and living standards.

The success of BMW proved the workforce was capable. Overcoming a perception that workers were poorly educated and unskilled has helped the state’s image. The logic was to disprove the notion that maybe your average South Carolinian can make wheels but can’t make a sophisticated car, according to economist Doug Woodward of the University of South Carolina. The effort paid off.

When the plant opened, 60,000 people living within 50 miles of it applied for 1,000 jobs. Since then, BMW has invested a total of nearly \$5 billion and has spawned 7,000 direct jobs — not counting the additional jobs created by suppliers and retailers that migrated to the region because of BMW.

As expected, the technical college system played a pivotal role. “There was a good bit of pre-employment training and then some on-the-job training,” says former president Morris. “The whole concept of pre-employment is you have a workforce that’s ready to go to work.”

Today, South Carolina’s automotive cluster represents 5.4 percent of employment statewide, according to Woodward’s study. Research and development now takes place at Clemson University’s International Center for

Automotive Research, established seven years ago in Greenville. BMW gave \$10 million to help fund a graduate program in automotive engineering.

Other foreign subsidiaries are moving in: German transmission maker ZF Group will open a plant in Laurens County — 900 jobs are projected by 2012. In Spartanburg and Greenville counties, 8,000 and 2,900 people, respectively, worked in core auto manufacturing jobs in 2008 — that is, the firms that assemble vehicles of various types and about 300 supply firms that sell directly to those original equipment manufacturers.

And then there’s been some positive press: The Upstate receives the most foreign investment per capita of any region in the United States, according to *Fortune*.

Raising per capita income is something else, though. That’s the point, after all, of the incentives: Jobs. Income. Prosperity. But that takes time.

Per capita personal income (PCPI) in the state has fallen over the past decade. Greenville County’s PCPI in 2008 was 92 percent of the national average, but that was a decline from its par with the rest of the nation in 2000; in Spartanburg County, PCPI in 2008 was 76 percent of the national average, down from 82 percent in 2002, according to the Bureau of Economic Analysis. By most accounts, the region still hasn’t shaken its nondurable manufacturing losses; as automotive jobs grew, textile jobs continued to plunge. The service sector has grown — but most of those jobs don’t pay as well as manufacturing jobs.

The hope is that change will come, if slowly, in part because of the relationship between South Carolina and BMW, which benefits both. And South Carolina proved its workforce could handle advanced, precision manufacturing work. “The BMW decision clearly demonstrated to, literally, the world, that we have a workforce that can produce quality products,” Morris says.

This “halo effect” and positive publicity is something money can’t buy, and the BMW investment produced that effect, Woodward says. No matter how many tires Michelin produces, or how many soccer balls Adidas pumps up, or how efficient a Bosch electronic component, the presence of a high-profile company like BMW piques interest because of the status and reputation of the very visible finished good.

And this tangible prestige pervades the Upstate now, thanks to a BMW perk, the employee leasing program: Plenty of BMW sedans and sports activity vehicles now glide along the highways and back roads of these red clay hills.

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READINGS

Rubenstein, James M. *The Changing U.S. Auto Industry: A Geographical Analysis*. New York, London: Routledge, 1992.

Schunk, Donald L., and Douglas P. Woodward. “Incentives and Economic Development: The Case of BMW in South Carolina.” In Sammis B. White, Richard D. Bingham, and Edward W. Hill (eds.), *Financing Economic Development in the 21st Century*. Armonk, N.Y., London: M.E. Sharpe, 2003.



The Jwaneng diamond mine in Botswana is the richest in the world: It produced 11.5 million carats of diamonds in 2009. Diamonds are about one-third of Botswana's GDP.

Why Aren't All Countries Rich?

Economists have long studied how countries develop, but that work hasn't led to growth for much of the world

BY JESSIE ROMERO

The numbers are disheartening. As of 2005, according to the World Bank, 2.6 billion people were living on less than \$2 per day. Of those, 1.4 billion live in severe poverty, on less than \$1.25 per day, without access to electricity, clean water, basic medicines, elementary education, or even enough food. Millions of children and adults die each year of AIDS, malaria, pneumonia, diarrhea, and other easily preventable diseases. In Sierra Leone, for instance, the infant mortality rate is 284 deaths per 1,000 live births, compared to seven per 1,000 in the United States.

There has been progress during the past 30 years: The share of the world's population living below the \$1.25 poverty line declined from 52 percent to 25 percent, owing largely to the economic growth of China, where the rate dropped from 84 percent to 16 percent. But during the same period, the number of poor people in Sub-Saharan Africa nearly doubled, and only three countries out of 51 graduated from the United Nations' "least developed country" list (defined as having a gross national income per capita of less than \$900 per year, among other criteria).

Why do some countries thrive while others fail? Economists have pondered that question since Adam Smith published *An Inquiry into the Causes of the Wealth of Nations* in 1776, but there is still considerable debate about what poor countries should do to become rich and what rich countries should do to assist them. It is clear that sound legal, political, and economic institutions are essential to economic growth, but it is less clear how countries can acquire them — and how to feed and educate their citizens in the meantime.

Producers versus "Grabbers"

Rich countries got that way for one of two reasons: Either they have more resources than poorer countries do, or they have institutions that allow them to put their resources to effective use. Development work in the 1950s and 1960s was driven by the former belief, but the evidence suggests that institutions are what matters.

Economic growth requires cooperation; individuals and firms must come to agreements about how to organize

themselves in order to realize the gains of specialization and trade. Such cooperation requires incentives, and those incentives require legal systems that enforce contracts and property rights, and economic policies that limit predatory behavior by governments and firms. If a country's growth were determined by its original endowment of labor, land (including natural resources), or capital, there wouldn't be extreme divergence in countries in close proximity, such as North and South Korea or East and West Germany, as the late Mancur Olson, an economist at the University of Maryland, College Park, noted in a 1996 article. The difference is the national border, which marks the boundary between one set of institutions and another. Unfortunately, Olson notes, "the intricate social cooperation that emerges when there is a sophisticated array of markets requires far better institutions and economic policies than most countries have."

Abundant resources may actually lead to a "resource curse," the paradox that, on average, countries with a wealth of natural resources lag far behind countries with fewer natural resources. Despite having an estimated \$24 trillion in untapped mineral deposits, for example, the Congo is one of the poorest countries in the world.

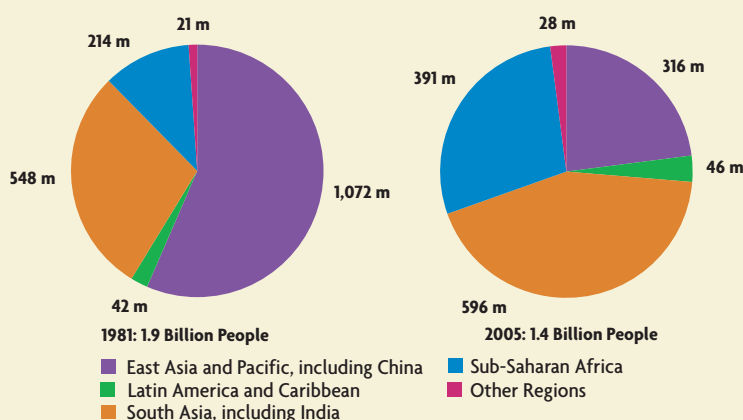
One explanation for the curse is so-called Dutch disease, whereby a boom in a commodity export (in the case of the Dutch, natural gas) leads to declines in other sectors of the economy such as manufacturing and agriculture. The volatility of commodity prices may also make countries that depend on exporting those commodities vulnerable to foreign shocks and create large deficits as governments overspend during the upswings. In the Congo, as in other countries, these problems are exacerbated by civil war and ethnic strife as different groups vie for control of the wealth.

Institutions can help countries escape the resource curse. For instance, diamonds have made Botswana one of the richest countries in Africa. Its strong democratic government developed a productive relationship with the diamond company De Beers, in contrast to the exploitative relationships that often exist when governments are weak or corrupt. Botswana exemplifies the difference between producer-

Where Do the World's Poor Live?

Number of people in millions, by region, 1981 and 2005

The total number of people living on less than \$1.25 per day has decreased globally, but most of that decrease was in China. The number of poor people increased in every other region, with the biggest increase in Sub-Saharan Africa. The share of the world's population living in poverty declined from 52 percent to 25 percent.



NOTE: "Other regions" includes Eastern Europe, Central Asia, the Middle East, and North Africa.
SOURCE: Chen and Ravallion (2008)

friendly and "grabber-friendly" countries, as Halvor Mehlum and Karl Moene of the University of Oslo and Ragnar Torvik of the Norwegian University of Science and Technology describe in a 2006 paper. They find that weak or absent institutions create incentives for entrepreneurs to specialize in rent-seeking, vote-buying, and violence, aka "grabbing." Where there are sound institutions, however, entrepreneurs specialize in production, and the country can profit from its natural resources.

A version of the resource curse is seen in "rentier" states such as Libya, where the government gets the majority of its revenues from a natural resource, usually oil. Because the government (typically autocratic) doesn't have to rely on taxing the domestic economy, it doesn't have an incentive to promote its growth, and can focus on extracting all the resources for its own gain. Libya has one of the highest GDP-per capita rates in Africa; but its unemployment rate is 30 percent, and one-third of Libyans live below the national poverty line.

Development also may depend on a country's geography and its degree of integration with the rest of the world. Versions of the geography hypothesis propose that a country's climate, natural resources, endemic diseases, or distance from Western influence, among other factors, determine a country's economic growth. Countries engaged in international trade may be highly developed because they have greater access to technical knowledge and foreign capital. But recent empirical work substantiates the idea that "institutions rule," in the words of Dani Rodrik and Francesco Trebbi of Harvard University and Arvind Subramanian of the International Monetary Fund (IMF). In a 2002 paper, they find that geography and integration do

have an effect on income, but only through their influence on institutional quality; once institutions are controlled for, the effect disappears. Institutional quality trumps the other factors; a country may draw the short end of the geographical straw, but still prosper if it has strong institutions.

The source of those institutions may go back hundreds of years, according to Daron Acemoglu and Simon Johnson of the Massachusetts Institute of Technology and James Robinson of the University of California at Berkeley. In a 2001 paper, they link the mortality rates faced by European colonial settlers to present-day institutional quality. In hospitable countries, the colonists set up "Neo-Europes," with institutions and policies that mimicked their home countries. In countries where Europeans contracted a lot of diseases and died, they set up "extractive states," focused solely on transferring wealth from the colony to the colonizer, as Belgium did in the Congo. Other economists, noting that former British colonies have fared better than former French, Spanish, or Portuguese colonies, suggest this is due to the superiority of British common law and other institutions.

Economists who see the roots of present-day poverty in a country's long history don't mean that these roots doom a country forever. So the question remains: How can poor countries grow rich?

Big Push or Invisible Hand?

Development economics emerged as a distinct discipline after World War II, as former colonies in Africa, East Asia, and Latin America gained independence and the new leaders made development a priority. With memories of the Great Depression still fresh, many Western economists thought that poor countries were too fragile to be subjected to the vagaries of the market, and the success of the Marshall Plan and Russia's rapid industrialization pointed toward heavy state planning and massive capital investment as the keys to economic growth. "Economic progress is not a spontaneous or automatic affair," Ragnar Nurkse, an Estonian-born economist who went on to teach at Columbia University, wrote in 1953. "Through the application of capital over a wide range of industries, the general level of economic activity is raised."

Many economists also subscribed to an economic model that stated that GDP growth was proportional to the level of investment in GDP. Logically, it followed that the problem with developing countries was merely a "financing gap," which could be solved by borrowing from rich countries to fund state-led infrastructure and industrialization projects. In 1960, economist and presidential adviser W.W. Rostow projected confidently that "an increase of \$4 billion [about \$30 billion today] in external aid would be required to lift all of Asia, the Middle East, Africa, and Latin America into regular growth, at an increase of per capita income of say, 1.5 percent per annum."

The World Bank and the IMF were founded at Bretton Woods in 1944 to support the reconstruction of Europe and

promote international economic stability. Their attention soon turned to helping finance the development of the so-called Third World. Today the World Bank gives out more than \$70 billion each year in concessionary loans and grants for health, education, and development projects. The IMF concentrates more narrowly on macroeconomic reforms and serving as a “lender of last resort” for troubled countries, although it, too, has moved well beyond its original function of smoothing balance-of-payments adjustments.

Not everyone agreed that what poor countries needed was a “big push” from outside. One prominent critic was Hungarian-born economist Peter Bauer, who believed that the primary purpose of development should be to expand individual choice and freedom, and who objected to Western intervention in developing countries. As early as 1948, based on a study of small-scale rubber growers in Malaysia, Bauer advocated private property rights, free markets, and the ability of poor people to respond to

Inequality and Development

Does economic growth lead to greater income inequality? And, conversely, is inequality detrimental to economic growth? As with most questions in development economics, these are difficult ones to answer.

One early attempt to link growth and inequality was that of Nobel laureate Simon Kuznets in a 1955 *American Economic Review* paper. Using data from the United States, the United Kingdom, and Germany, he found that the relationship followed an inverted “U” shape: At low levels of per capita income, growth leads to increasing income inequality, which then decreases as the country reaches higher levels of income and more workers transition to higher-skill, better-paying jobs.

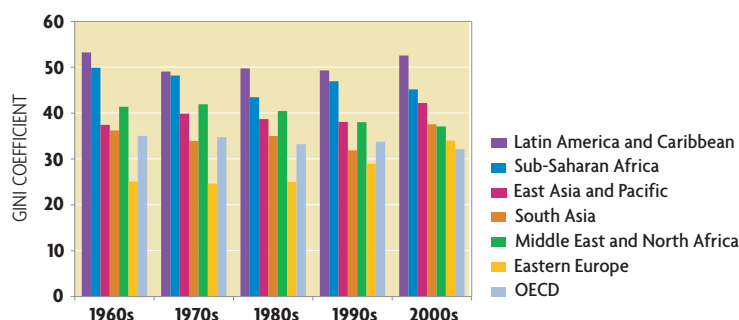
The “Kuznets curve” is often interpreted as implying that greater inequality may be a necessary, but temporary, trade-off on the path to development.

Many development experts believe the Kuznets curve means that the poor are left behind by economic growth, especially when countries are starting from very low bases, but recent research suggests that growth does raise the incomes of the poor. David Dollar and Aart Kraay of the World Bank found in a 2001 paper, for example, that “growth in the overall economy is reflected one-for-one in growth in income of the poor” and does not lead to greater income inequality.

Dollar and Kraay’s work followed the research of Klaus Deininger and Lyn Squire, also of the World Bank, who in 1996 published a paper that challenged a decade of previous research which found income inequality to be a cause of slow economic growth. Economists had turned to this question after growth patterns in Latin America and East Asia suggested that the Kuznets curve trade-off didn’t hold true; East Asian countries grew rapidly while maintaining relatively low levels of inequality, but many Latin American countries had slow or zero growth and high inequality. (The figure displays income inequality by region, as measured by the Gini coefficient, a statistical measure of inequality. The higher a country’s Gini number, the greater the amount of income inequality.) Researchers concluded that higher inequality inhibited growth by leading to

Inequality by Region

Despite slow growth, income inequality is persistently high in Latin America and Sub-Saharan Africa.



NOTE: Data are not available for every country for every year. Gini is the non-weighted average of available data for the respective decade.

SOURCES: Deininger and Squire (1996), CIA World Factbook, World Bank

political unrest, ethnic violence, macroeconomic instability, or large fiscal deficits if poorer citizens voted for social welfare policies.

But these findings were based on cross-country comparisons, rather than on changes within a single country over time, and didn’t take into account country-specific factors such as the initial level of development or political and economic institutions, all of which influence growth and income distribution. Using an extensive new data set, Deininger and Squire did not find a significant relationship between inequality and subsequent growth, or between growth and subsequent inequality. “Rather than being governed by an unmovable universal law,” they concluded, “the evolution of income and inequality is affected by initial conditions and possibly policies.”

Rich countries also worry about inequality. The OECD held a forum in May to discuss widening income inequality in its member countries, and many commentators in the United States are concerned about the growing share of total income taken home by the top 1 percent of earners. This disparity may contribute to a host of social problems, including moderate-income households spending beyond their means in order to “keep up with the Joneses,” leading to higher divorce and bankruptcy rates, according to economist Robert Frank of Cornell University. Others make the argument that “a rising tide lifts all boats,” noting that although the tide has risen more rapidly for the rich, living standards overall have increased dramatically. — JESSIE ROMERO

incentives and save for the future.

During the 1970s, the “dirigiste dogma,” as the big-push approach was dubbed by Indian-born economist Deepak Lal, came under increasing criticism, particularly as cracks appeared in the centrally planned Communist economies. “Imperfect markets are superior to imperfect planning,” Lal wrote in the 1983 book *The Poverty of “Development Economics.”*

This belief was borne out by Latin America, where the debt crisis in the early 1980s revealed that state-directed industrialization had created uncompetitive industries, widespread corruption, price distortions, and hyperinflation. On the other side of the world, however, the Asian Tigers — Hong Kong, Singapore, South Korea, and Taiwan — were growing at unprecedented rates with market-friendly policies and trade liberalization. Development economists advocated “getting the prices right,” and the World Bank and the IMF began encouraging countries in Africa, Latin America, and the Middle East to privatize industry, eliminate barriers to trade and foreign direct investment, and stabilize their currencies. Encouragement came in the form of “structural adjustment loans” (SALs), which were conditioned on countries enacting a host of policy reforms prescribed by the lenders. This approach was known as the Washington Consensus, after a list of 10 reforms published by economist John Williamson of the Peterson Institute for International Economics in 1989. The original Consensus was relatively moderate, but the term came to be popularly associated with an aggressively capitalist and pro-market approach.

Today, the structural adjustment era, like the big push era before it, is largely viewed as a failure. Between 1980 and 1999, 12 countries received 15 or more SALs, but had an average per capita growth rate of -0.5 percent, according to William Easterly, an economist at New York University. The countries that received the most loans also had persistently high inflation. And although many countries in Latin America made progress on policy reforms, growth was slow or nonexistent in these countries as well.

The reasons why SALs didn’t work are varied: Developing countries were asked to do too much, too soon; institutions weren’t in place to support the new policies; and loans kept being given out even when the conditions weren’t met, creating moral hazard and corruption. Easterly, a vocal critic of foreign aid, views SALs as just a variation on the “big push” of the 1950s and 1960s, with outside organizations imposing rapid, top-down change. Jeffrey Sachs, a proponent of aid, also is critical of structural adjustment, although he believes that the problem was a narrow focus on policy reform that actually led to too little aid being given.

Everything Old Is New Again

Some economists and international organizations now advocate ideas that harken back to those of the 1950s and 1960s. Citing the recent global financial crisis and subsequent downturn, for example, the United Nations’ 2010 *Least*

Developed Countries Report advises against dependence on the market system and calls for a development strategy based on “country ownership, structural changes, capital accumulation, and the developmental State.” In 2005, Britain’s then-Prime Minister Tony Blair gave a speech calling for a “big push” to save Africa. Also that year, Sachs published *The End of Poverty*, in which he outlines an ambitious agenda to meet the Millennium Development Goals (MDGs) established by the United Nations in 2000. Drawing on financing gap models of growth, Sachs calls for a dramatic increase in foreign aid to help poor countries increase their capital stock and thus escape the poverty trap.

A number of studies estimate that achieving the MDGs, which include reducing global poverty by half, reaching full employment, and reducing infant and maternal mortality, among other goals, would require increases in foreign aid (excluding loans) of between \$40 billion and \$70 billion per year. One problem, however, is that such estimates don’t take into account the capability of recipient countries to absorb and spend the funds. The pressure to achieve the goals could lead to “premature load bearing,” according to Lant Pritchett and Matt Andrews of Harvard’s Kennedy School of Government and Michael Woolcock of the World Bank. “There is at least a risk that pressuring countries to *appear as if* they are fully ‘modern’ and take on difficult tasks before they have the capability to do so actually creates a negative dynamic in the evolution of capability,” they write in a 2010 working paper. If a new institution collapses under the pressure, they contend, the country is worse off than if it had progressed more slowly from the beginning.

What the MDGs have in common with central planning in the 1950s and 1960s and structural adjustment in the 1980s is the attempt to find a universal solution to an important problem. But development experts increasingly emphasize the importance of tailoring efforts to the needs and culture of individual countries, rather than aiming for “accelerated modernization via transplanted best practices,” as Pritchett, Andrews, and Woolcock call it. Nearly all economists would agree, for example, that property rights are essential to economic growth. But attempts to impose Western-style land titling programs in Africa and Cambodia have not been successful. That’s because institutions are idiosyncratic to the country where they develop, explains William Savedoff, a senior fellow at the Center for Global Development, a think tank in Washington, D.C. “Even procurement systems in Sweden and Norway are different. They developed to respond to the particularities of their behavioral, linguistic, and political systems,” he says.

Accordingly, many are turning to projects at the micro rather than the macro level such as distributing water purification tablets or paying individual families to send their children to school. Healthier, better-educated people, it is hoped, will be able to participate in their own development.

One project that shows promise is increasing cell phone distribution, bypassing the large-scale infrastructure investment required for land lines. Cell phones improve market

efficiency by making it easier for farmers and traders to get information about prices, which reduces price dispersion and increase the availability of goods, according to Jenny Aker, an economist at Tufts University who has studied the impact of cell phones on grain markets in Niger. Cell phones are also being used to teach literacy classes and enable mobile banking, among other projects. Many hope that such bottom-up efforts will add up to long-term growth. Cell phones, Aker says, are “a great tool. But we still need to have investment in basic public goods that allow people to grow.”

Paying for Change

Funding for those investments comes from the World Bank, bilateral aid agencies such as USAID in the United States, and private sources such as the Gates Foundation. Developing countries received about \$130 billion from non-private sources in 2010, in addition to \$72 billion in loans from the World Bank. Many studies show, however, that aid has at best a negligible effect on growth.

Some development experts believe this is because there hasn't been enough aid — U.S. assistance is only 1 percent of the federal budget, and only 0.21 percent of GNP — but others see the problem in the nature of aid itself. Donors face pressure to disburse their funds before next year's budget is written, and thus have an incentive to keep giving even if conditions required of the aid haven't been met; recipients know that funds will arrive regardless, and thus have no incentive to meet the conditions. A lack of accountability and transparency on both sides can create waste and corruption, and a lack of rigorous impact evaluation makes it hard to know what really works.

The influx of foreign experts that comes with most aid projects also may discourage local learning and investment. “People and organizations and countries really learn by doing,” Savedoff says. “The dynamic where they turn around and say, ‘Tell us how to do it, send us your consultants and tell us your way of doing it,’ just doesn't strike me as the way that any country that's rich today got there.” Recipient governments also have to devote significant time and resources to the business of receiving aid, instead of to governance. “When you have a lot of donors and foundations coming in, they can actually undermine the ability of the local government or district to function,” Savedoff says.

Reforms to aid practices are under way. More than 100



A cell phone charging station in Uganda: There are 10 times as many cell phones as landlines in Sub-Saharan Africa.

countries and aid agencies signed the Paris Declaration in 2005, which calls for greater transparency, better measurement, and local ownership of projects. One U.S. initiative is the Millennium Challenge Corporation (MCC), created by Congress in 2004, which funds specific projects only in countries that meet established criteria for governance and economic policies. The World Bank now encourages countries to develop their own Poverty Reduction Strategy Papers rather than imposing conditions for lending from outside. But actually changing the bureaucratic structure of aid is difficult. The MCC has made a number of exceptions to its own rules, aiding countries that don't meet their criteria. And a group of African countries described the strategy papers as “structural adjustment lending in sheep's clothing,” since they are written with significant input from the World Bank and subject to its approval.

The solutions to poverty will be as heterogeneous as the causes; countries need both vaccines and property rights, and the complex links between people, communities, governments, and nations make it difficult to tease out cause and effect. But economists and policymakers on all sides of the debates continue to search for answers, motivated by the same thing: making life better for 2.6 billion people. **RF**

READINGS

Aker, Jenny C., and Isaac M. Mbiti. “Mobile Phones and Development in Africa.” *Journal of Economic Perspectives*, Summer 2010, vol. 24, no. 3, pp. 207–232.

Bauer, Peter. *Dissent on Development*. Cambridge: Harvard University Press, 1976. (Revised edition.)

Easterly, William. *The White Man's Burden: Why the West's Efforts to Aid the Rest Have Done So Much Ill and So Little Good*. New York: Penguin Press, 2006.

Olson, Mancur Jr. *Power and Prosperity: Outgrowing Communist and Capitalist Dictatorships*. New York: Basic Books, 2000.

Pritchett, Lant, Michael Woolcock, and Matt Andrews. “Capability Traps? The Mechanisms of Persistent Implementation Failure.” Center for Global Development Working Paper No. 234, December 2010.

Sachs, Jeffrey. *The End of Poverty*. New York: Penguin Press, 2006.

Organizing in Decline

Tracing the (diminishing) role of unions in today's labor market

BY RENEE HALTOM

Labor unions had a moment in the spotlight in the first half of 2011. They sparked heated protests — involving up to 100,000 people across all 50 states — after Wisconsin governor Scott Walker tried to reign in the bargaining power of state and local government workers. Lawmakers in several other states followed suit. The backlash in support of collective bargaining rights echoed massive protests against government spending cuts in several European countries.

For unions to dominate the headlines is increasingly rare. Labor unions have been on the decline in the United States since the late 1970s. This has come despite a meteoric rise after the Great Depression, with membership leaping from about one-tenth of private sector workers before the 1930s to more than a third of them by the 1950s. By the end of the 20th century, however, the numbers were right where they started.

Even union rates for blue-collar workers — the prototypical model for organized labor — have fallen. Almost 40 percent of private manufacturing workers were unionized in the early 1970s, compared to fewer than 11 percent in 2010. The numbers for construction during that period went from 40 percent to 13 percent.

Among both private and public sector workers, 11.9 percent were union members in 2010 — about 14.7 million workers. Union declines have been concentrated almost entirely in the private sector. Data are available from the Census Bureau's Current Population Survey starting in 1973 — the year private sector union membership peaked by that measure at just under a quarter of workers. Private sector membership is at a low of 6.9 percent, representing 7.1 million members.

The public sector experience has been quite the opposite: Membership rates also started at about a quarter of workers in 1973, jumping to more than 35 percent by the late 1970s and staying in that territory since. Public sector workers constitute 17 percent of employment but 52 percent of union members.

Despite declines, unions manage to make their voices heard. The 11 major strikes and lockouts last year added up to the second-lowest amount on record since the data were first collected by the Bureau of Labor Statistics in 1947. Still, they idled 45,000 workers for 302,000 lost work days.

What Unions Do

Picket lines may be the caricature of collective bargaining, but the vast majority of union efforts come in less visible forms.

"Everyone 'knows' that unions raise wages. The questions are how much, under what conditions, and with what effects

on the overall performance of the economy," write economists Richard Freeman and James Medoff of Harvard University in *What Do Unions Do?*, a seminal 1984 book on the economic effects of unions. Quantifying those effects is difficult. Unions can have both positive and negative effects on workers and businesses that vary across industries and even firms, so magnitudes are empirical questions that economists have not answered with certainty.

Unions give employees monopoly power within a firm, inducing employers to raise wages and benefits above competitive levels. Labor economists call this the "monopoly face" of unions. According to Georgia State University economist Barry Hirsch, the evidence is fairly clear that unions boost private sector wages on the order of 10 percent to 20 percent, and probably more if one includes retirement and health benefits. The union wage premium probably is a bit lower for public sector workers, he says, but they receive a greater proportion of total compensation in the form of benefits (more later on the difference between public and private sector unions).

The monopoly face sometimes makes economists squeamish. In a competitive labor market, successful collective bargaining efforts by definition distort input prices from what the market would achieve on its own. All else equal, those distortions will make production more expensive, thereby reducing output and employment, and causing some degree of welfare loss. (If, in contrast, the employer is a monopsony — that is, it faces little competition for workers and thus has power to pay lower wages — the monopoly power of unions can actually encourage the market to function more like a competitive one.) Through the monopoly face, unions redistribute firms' profits toward employees.

But that is not the end of the story. Freeman and Medoff also emphasized the "voice face" of unions. Unions can aggregate the preferences of workers to air issues that employers may not otherwise know are driving the best workers away. This has the potential to increase productivity by reducing unnecessary quits, providing management with the information to adopt more efficient practices, improving communication, and helping employers better match compensation with employee preferences. Unions are associated with a more formalized governance structure within a workplace, such as established grievance processes and codified policies. Of course, more onerous procedural requirements for management can hurt productivity.

Economists have spilled much ink analyzing the net productivity effects of unions by industry, location, and time. The evidence is far from conclusive; some studies show positive effects while some show the opposite. The relationship between management and the union is a crucial determi-

nant, as is the economic environment in which the firm operates. “From what we know in the United States, productivity effects tend to be positive on average but very small,” Hirsch says, “but are certainly not sufficient to offset the higher wage cost.”

That is, unions almost always make a firm less profitable. This result has been standard in the literature on unions regardless of profit measure and whether studies look at the industry or firm level, Hirsch writes in a 2004 review of studies on unions and firm performance. Where economists disagree is how union wage gains squeeze firms’ profits. Some say they extract monopoly rents from the firm, while others argue they act as a tax on returns to capital and other forms of innovation. Economists tend to find the latter more troubling. In that scenario, firms expect that unions will down the road extract some of the returns to capital, causing them to invest less today, hurting their longer-term prospects. Unions are also associated with slower employment growth, although the data don’t indicate that unions have an obvious effect on firm “births” and “deaths.”

But by taking a bigger slice of the pie, unions may also reduce the pie’s overall size. “So that’s the tension,” Freeman says today. “You have something that does good for workers, may do some good for the firm, but the firm is paying more than whatever good it is doing.” That’s why employers often resist unionization, even improving wages or working conditions under the possible threat of unionization.

Where Unions Thrive

Union gains will be harder to achieve when there are fewer rents to be found. That’s why unions are less likely to thrive in highly competitive industries. “If unions operated in perfectly competitive markets, and if *all* they did were to raise wages above competitive levels, unions would have a very difficult time surviving,” Freeman and Medoff wrote in 1984.

Union membership rates are higher in oligopolistic industries and those that have a history of strong regulation or government involvement. The highest union membership rates in the country are found in sectors such as rail transportation (70 percent of workers), the U.S. Postal Service (69 percent), and air transportation (39 percent).

Increasing competitiveness, aided in part by globalization, is the primary reason for the long-term decline of unions, Hirsch and many other labor economists argue. “If you’re in a relatively noncompetitive market, such as the old automobile industry after World War II, where the whole industry was unionized, those price increases could be passed on to consumers fairly easily because car buyers didn’t have anywhere else to go. Over time, of course, it has become much more competitive and easier for buyers to go elsewhere.”

The union decline has also occurred as the American economy has shifted toward services and away from goods production. Manufacturing and other industrialized job functions are a smaller share of total employment, having moved from about one third of jobs in the 1950s and 1960s

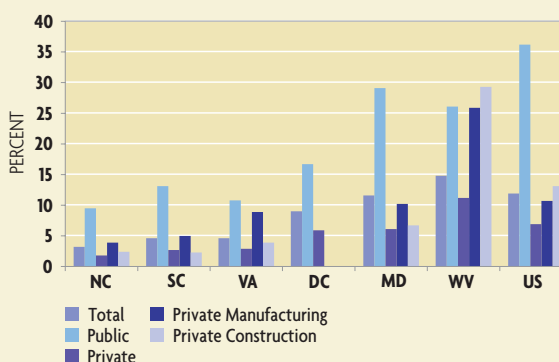
to less than 15 percent today. All the private sector union decline since the 1970s is concentrated in three historically high-union sectors, Hirsch found in 2008: Outside of manufacturing, construction, and the sector comprised of transportation, communications, and utilities, private union membership has remained more or less constant at 3.5 million workers despite growing enormously in employment.

Competitiveness is one of several reasons that private and public sector unions are different animals. At first glance, it is not obvious whether unions would be more powerful in the public or private sector. Public employers face much less competition since the government functions more or less as a monopoly in many of its activities. They also lack a profit motive, may be subject to unions’ political influence, and tend to provide essential services that make strikes conspicuous and costly — all of which might be expected to boost union influence. On the other hand, public sector employers answer to the public and tend to operate primarily in white-collar industries — for which the union premium tends to be lower — which might be expected to mute public sector union outcomes.

Public sector workers tend to earn more than private workers by crude measures — that is, ones that don’t adjust for educational attainment and job experience. This makes them an easy target for those concerned about the budget deficits that currently afflict most U.S. states and have led to painful layoffs and budget cuts. Many states’ public sector pensions, in particular, face severe funding shortfalls and reports of retirement plan abuse that some blame on union power. Government employees have retained defined-benefit pensions at a time when defined-contribution plans, such as 401(k)s, dominate the private sector. The shortfalls are partly a result of the recession, partly a result of the benefit levels that governments and unions have negotiated, and partly a result of the pension funding decisions that plan managers have made during both good and bad times in

Fifth District Unions: Most states less unionized than national average

Percent of workers who are union members, 2010



NOTE: Membership rates were zero for D.C.’s private manufacturing and private construction sectors.

SOURCE: Compiled by Barry Hirsch, Georgia State University, and David Macpherson, Trinity University, from Current Population Survey data. Available at <http://www.unionstats.com>

recent years. (For more on this topic, see “Fuzzy Math: Public pensions are underfunded — how bad is it?” *Region Focus*, Third Quarter 2010.)

Holding worker characteristics constant, public sector unions have produced a faster-growing wage premium over time, but it is still smaller than the union premium in the private sector, argue economists David Blanchflower of Dartmouth College and Alex Bryson of the National Institute of Economic and Social Research in a 2004 paper. They found that private sector union members earned 17 percent higher wages than nonunionized counterparts, while public sector union members earned 14.5 percent more than theirs. (It’s hard to say how benefits data would alter the comparison since those data are hard to come by. Government workers earn a greater proportion of their total compensation in the form of benefits.) Public sector unions tend to increase wages most for local government workers, followed by staff at state and then federal agencies.

But some aspects of the public sector union premium may show up in places other than wages. Government jobs tend to have lower retirement ages and more vacation. They also tend to offer more job security; data from the Bureau of Labor Statistics show that public sector layoffs and discharges occur at one-third the rate of those in the private sector on average, possibly because government employers face far less product competition and the demand for public services is less elastic. Some may have less job stress and work fewer hours. These job features may exist partially because of the heavy union presence in the public sector.

The Unorganized South

The southeastern United States is known for its paucity of union membership. But not for the unions’ lack of trying. In 1946, the Congress of Industrial Organizations — today one half of the AFL-CIO union federation — launched a major effort to organize the Southeast. Operation Dixie had a budget of \$1 million and a staff of 250 charged with organizing every major industry — textiles, lumber, coal, and iron and steel — across a dozen states. The goal seems ambitious in retrospect considering how spectacularly it failed.

There were reasons for initial optimism. Unions experienced large membership gains and wage concessions during World War II. The post-war strike wave — 3 million workers in 1945 and 5 million in 1946 — was the largest the United States had ever seen.

Not helping matters was the Taft-Hartley Act, passed just as Operation Dixie was launched. It allowed states to pass right-to-work (RTW) laws, which say workers cannot be required to join the union at their workplace. Employees in RTW states can benefit from the results of collective bargaining without the associated dues or membership, making it potentially harder for unions to organize and attract new members.

Taft-Hartley was a marked shift in the political climate toward unions. Previous union legislation leaned heavily in favor of workers, while the more moderate Taft-Hartley was

aimed at balancing union power with the interests of the general public and employers. It reduced the amount of government protections that unions received, and allowed employers to voice their opinions on unionization on the eve of elections.

Operation Dixie was a failure almost from the beginning. Culture may have been its biggest impediment. The South was relatively undeveloped economically, especially in manufacturing; most workers simply never knew anyone who had been part of a union, and that made it a harder sell.

Race was probably an even bigger factor. Many white workers preferred a distinction between “white jobs” and “black jobs,” supported by the segregation that Jim Crow laws created, writes historian William Jones at the University of Wisconsin-Madison. Rather than address the race issue, the CIO’s Operation Dixie set aside the race question entirely. Union heads “believed that the question, ‘You want your pay raised, don’t you?’ is a more effective gambit than a long talk about human equality and human rights,” Jones quotes the *Saturday Evening Post* as stating at the time. The union’s equivocal attitude toward race made it more difficult for organizers to motivate black southern workers without isolating white ones.

The CIO officially ended Operation Dixie in 1953 having won just 64 out of 232 elections, and losing most of the larger plants that were its initial target. RTW laws would appear on the surface to have hurt Operation Dixie’s success. The 22 RTW states, most of them southern, do tend to be relatively less unionized (see map). In the Federal Reserve’s Fifth District, Virginia and the Carolinas are RTW states. North Carolina has the lowest union membership rate in the nation at 3.2 percent of workers, while South Carolina and Virginia are tied for the sixth-lowest union membership rates at 4.6 percent. The other Fifth District territories — Washington, D.C.; Maryland; and West Virginia — are non-RTW states and place 22nd, 30th, and 38th, respectively. New York is the most unionized state in the nation at nearly a quarter of all employees.

But according to some economists, it is a misconception that RTW laws have a big effect on union density in the South or anywhere else. A state that has passed a RTW law probably has a pre-existing pro-business attitude that is more important to union membership rates than the RTW law itself. In a 1975 study published in the *Journal of Political Economy*, economists Keith Lumsden and Craig Petersen ran regressions on states’ union membership rates both before and after Taft-Hartley was passed. They included a variable representing the presence of a RTW law — and it showed roughly the same significant and large effect both before and after RTW laws existed. While not the final word on the subject, it does imply that RTW laws are to some degree a proxy for a state’s business environment. “Think about it,” Hirsch says. “In which states are you going to be likely to get majority support to pass a RTW law? It wouldn’t be New York or Michigan.”

Even if they can, most workers choose not to free-ride on

the benefits of collective bargaining. About 81.5 percent of private workers who are covered by union contracts are actually union members themselves. Even in non-RTW states, just 8 percent of covered workers are not actually members of a union, since new workers don't always have to join the union right away, and may never be required to join at all (though some of the gap may be due to reporting error).

Therefore, Hirsch says, the maximum amount of free-riding that takes place due to RTW laws — the difference between coverage rates in RTW and non-RTW states — is just 11 percent, not a substantial number in his view. Nonetheless, union supporters devote considerable resources to opposing RTW laws, implying the statutes must have some effect on unions' abilities to organize and bargain.

Not Winning Any Popularity Contests

By some measures, unions are less popular among the general public than they have ever been. The number of Americans saying in Gallup polls that they approve of unions dropped from 59 percent in 2008 to 48 percent in 2009. It was the first time in the poll's more than 70-year history that approval rates fell below half, though the numbers inched back above that threshold in 2010.

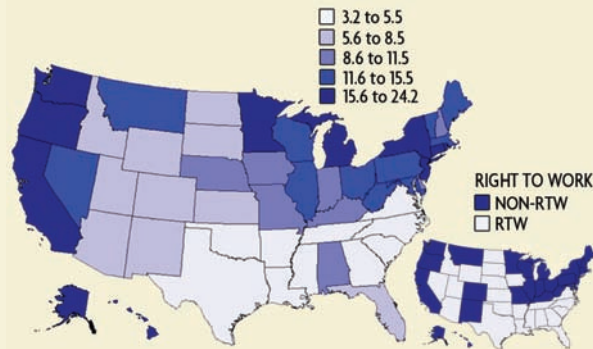
The bailout of the U.S. auto industry probably didn't do unions any favors. Many Americans blamed the unions for the companies' troubles. There also seems to be a cyclical effect: When the average household is more likely to be unemployed, unions' demands seem less reasonable, Gallup speculated with the release of the latest poll numbers. Concerns over state budget deficits and underfunded public pensions also aren't helping the union cause.

Declining public support won't necessarily show up in union membership rates, which don't vary dramatically from year to year. Where it could hit home is in legislation relating to unions. For example, union supporters have been trying to pass the Employee Free Choice Act for a few years. The EFCA would make the election process easier and more visible, and, critics say, may intimidate workers into voting in favor of unionization by eliminating secret-ballot voting over union representation.

The laws surrounding unions potentially make a differ-

The Unorganized South

Percent of Workers Who Are Union Members, 2010



SOURCE: Hirsch and Macpherson, www.unionstats.com

ence in how effective they are. The National Labor Relations Act (NLRA) governs organizing for private unions (with the exception of state RTW laws); the Federal Labor Relations Act governs federal employee unions; and state laws govern state and local public employee unions. While states must allow employee unions, they can pass laws that make it difficult for them to bargain. The Carolinas and Virginia are among five states that explicitly ban collective bargaining entirely for public sector employees.

Considering waning public support after the recent economic slump, it is ironic that unions got their liftoff in the United States after the Great Depression. Unemployment dragged out and the crash forced employers to renege on wage and other agreements. "The public turned against employers and big business, and they became very pro union," Freeman says. Masses of fed-up workers and policymakers led to the 1935 passage of the NLRA, which codified workers' right to organize. Within a decade, the National Labor Relations Board, the governing agency for unions, had supervised 24,000 union elections leading to the unionization of 5 million workers.

Before the recession hit, Freeman says he was amazed by the high degree of public support that unions received on polls. "But people didn't react to this recession the same way as they did in the Depression." How workers fare as the recovery continues to unfold may partly determine where organized labor goes from here.

RF

READINGS

Blanchflower, David, and Alex Bryson. "What Effect Do Unions Have on Wages Now and Would Freeman and Medoff Be Surprised?" *Journal of Labor Research*, Summer 2004, vol. XXV, no. 3, pp. 383-414.

Freeman, Richard, and James Medoff. *What Do Unions Do?* New York: New York: Basic Books, Inc., 1984.

Hirsch, Barry. "What Do Unions Do for Economic Performance?" *Journal of Labor Research*, Summer 2004, vol. XXV, no. 3, pp. 415-455.

Jones, William. "Black Workers and the CIO's Turn Toward Racial Liberalism: Operation Dixie and the North Carolina Lumber Industry, 1946-1953." *Labor History*, August 2000, vol. 41, no. 3, pp. 279-306.

INTERVIEW

Bruce Yandle

Editor's Note: *This is an abbreviated version of RF's conversation with Bruce Yandle. For the full interview, go to our website: www.richmondfed.org/publications*

There's only one planet Earth. So until the day comes when technology makes pollution-control measures costless — or, at least, makes them cheaper than disposing of raw wastes in the air, in water, and on land — environmental economists will have a critical set of problems to study, drawing on such concepts as externalities, risk assessment, cost-benefit analysis, microeconomic theory, and public choice theory. Bruce Yandle of Clemson University and George Mason University's Mercatus Center is among the circle of economists who pioneered environmental economics as a distinct subfield in the 1970s. His approach has been marked by an interest in the application of private-law solutions (such as tort law) to environmental issues. He has authored or edited 14 books on regulation and environmental policy. He has also, starting in the 1990s, studied the movement of the macroeconomy. David A. Price interviewed Yandle in Williamsburg, Va., in March 2011.

RF: How did you become interested in the economics of the environment?

Yandle: What some people refer to as the “externality revolution” was occurring in economics when I was a doctoral student in the late 1960s. In addition to that, there was the revolution that was formed by the rise of public choice as an analytical device, primarily associated with Gordon Tullock and James Buchanan's 1962 book, *The Calculus of Consent*. Both were associated with a move from normative to positive economics and empirically-based studies. I wrote my dissertation on externalities in housing and the rise of what were then called slums and the programs that were addressing them, urban renewal. So I began writing on property rights and external effects, and that led naturally into questions of water quality, air quality, pollution, and so forth.

My direct link into questions of the environment as we think of it narrowly — water, air — was a colleague I became associated with at Clemson by the name of Hugh Macaulay. He was writing on, as he put it, “dirty water.” So when I joined that faculty, there was a senior faculty member who was working on this. I thought, my work transfers directly. I just have to change the names on the axes from “housing” to “water,” then I've got my model.



RF: In your writings about environmental economics, you've described a “systems approach” and a “process approach” to environmental policy issues. What do you mean by these terms?

Yandle: A systems approach is where the “brightest and best” get together and look at a problem and come up with what they believe to be the best solution. They describe the system that can be installed that will lead to a solution of the problem and so it tends to be top-down.

In a process approach, you identify goals and outcomes, develop some rules of the game, and then let the process take hold, holding accountability with respect to outcome. You don't tell people how to do things; you say this is the outcome that must be achieved, or it's going to be costly for you.

RF: You have been a proponent of the process approach. But aren't there success stories that the systems approach has enjoyed?

Yandle: There are success stories in both camps. The process approach is by far the oldest because common law is a process approach where there are rules of property, rules of liability, rules with respect to pollution that have been around for centuries, so that one cannot impose costs on his

neighbor without your neighbor's permission, or your neighbor has a cause of action against you. At common law, people downstream hold property rights to water quality and people upstream cannot destroy that with impunity. Basically what protected air and water quality in the United States up until the late 1960s was the process approach based on common law, with a lot of state and local ordinances and statutes supplementing it. So there are wonderful success stories there. That is, somehow we all survived until the 1970s without having a systems approach imposed from the top for the environment in a consistent way.

There are transaction-cost problems and enforcement-cost problems that lead to situations where people will understandably develop a systems approach. Generally, when you have crises, systems approaches tend to take over — that is, we move to hierarchies, just as we are seeing now with Japan and nuclear power.

There are some wonderful success stories: EPA is now promoting process with respect to river basin management approaches for water quality and we've got some pretty interesting success stories going on there. They are, I would say, hampered inasmuch as they are promoting it within the context of technology-based, systems-approach standards based on inputs, and that's because of the statutes under which they operate. The statute says you will define "best available control technology" and require it of all users of these particular streams. We have gotten to the point now where the EPA is identifying maximum loads that can be imposed on a stream; that's an outcome. Then EPA says, OK, members of this watershed community, tell us how you would like to achieve that goal. That's a process.

RF: You mentioned transaction costs. How much of an obstacle are transaction costs to environmental protection under the process approach?

Yandle: Transaction costs are large under either approach. The transaction costs are high in a technology-based systems approach on the input side. The difficulty is no one is keeping score on the output side and we literally have rivers that come close to dying, even though every discharger is meeting the requirements of the law. So you have a community of legal polluters killing a river. You can say we saved a lot of transaction costs. Well, I would say, "But you didn't save the river!" Should we be concerned with transaction costs or outcomes? You do have a trade-off there.

I looked at the level of litigation under common law and statute law. We looked at the amount of litigation in the post-1970 world and the pre-1970 world and it looks like you get about the same amount of litigation with the statutes as you do at common law. It's not an apples-to-apples

As income rises across any population of people anywhere we've ever measured it, the demand for environmental quality changes.

comparison because all we're looking at are counts of cases that are brought. Statute law generates a huge amount of litigation, and litigation costs are transaction costs in a way. That's an important consideration, but I think the more important consideration is outcomes, and then to look, in some way, at the costs.

RF: At what point in American history do you believe the systems approach became dominant?

Yandle: I would say the turning point was around 1970. You can look at it in terms of statutes that were passed. Up until about 1967, there were no federal regulatory agencies deeply involved in environmental regulation, workplace safety — what regulatory economists call "social regulation." Most of the major statutes were passed in 1970-1972.

If you look at a count of pages in the *Federal Register*, where the rules get published, as an indicator, there's an interesting time series. It begins in 1940 when the *Federal Register* first starts. So you're bubbling along with occasional hills and valleys until you get to about 1969 and that's when mountains start appearing. From 1970 through last year, we had 2.5 million pages of the *Federal Register* published during that period; from 1940 to 1970, about 350,000. What I call the environmental saga begins in the United States in about 1970 and that's when the world changes dramatically.

RF: Where's that coming from? Is it just a matter of public consciousness or awareness having changed?

Yandle: There are probably many reasons. It would be associated with rising income; that is, as income rises across any population of people anywhere we've ever measured it, the demand for environmental quality changes. From a very low level, the demand for environmental quality actually goes down; that is, you trade it off in order to get enough food to stay alive. But you reach a turning point. At that turning point, higher income generates higher environmental quality, so almost everything we can measure — not everything, but many things — begins to improve at that turning point. So it is income-driven. It is knowledge-driven as well. So as we get population concentrations, we get additional use of environmental assets, we get crowding, we begin imposing costs on each other and then as our incomes go up, we look for different solutions.

An interesting feature of our saga is that if you go back and study the Clean Air Act as it was passed, it started as a process statute. Senator Muskie — it's coming from his committee — is challenged by Ralph Nader saying he's being soft on pollution. They rewrite the statute; it becomes a systems approach. This is in conjunction with Earth Day: The world changes, the politicians respond.

As we look at other countries, we see similar patterns.

There's Japan's passage of major environmental statutes almost head-on with ours and very similar. In other places, France took a process approach to water quality. Germany did. In France today, every river is managed as a river basin association where you pay to discharge into the rivers or pay to withdraw from the rivers. The same thing was true in what was West Prussia going back into the 1800s: They incorporated the rivers, they made them corporations, managed them as corporations, and set out cost, holding the shareholders responsible. This occurred after they had some terrible typhoid epidemics. So you see different approaches. The process approach for water quality can be demonstrated to be a lower-cost alternative.

RF: Is there a stronger case for the systems approach where there is a possibility of a catastrophic event, as the Japanese faced at the Fukushima nuclear reactors?

Yandle: Probably. We would want to look at history as best we can, to see what were the incentives in place that we might be dealing with or that we might buttress. Given that you have earthquakes, do you indemnify builders of nuclear-generating plants by statute as we have in the United States and as they did in Japan so that they will only be liable for this much damage? Or do you say, sorry, your liability is basically unlimited if you want to build a nuclear plant on top of a location where we have earthquakes? That's a very different incentive package. If something terrible happens, the cost could be horrendous. I don't know of any insurance company that would write you an insurance policy. If you were trying to do that as a private agent, you would say, "Well, I don't think I will build a nuclear-generating plant, thank you."

We had the same kind of thing with the oil spill in the Gulf of Mexico where, by statute, we limit the liability. Changing those rules, given a high-risk situation, perhaps ought to be considered as we go forward. That could lead to a relocation of those kinds of facilities whether you make it open or whether you raise those liability limits.

Having the limits is a kind of systems approach. A process approach says you will be responsible for the cost you impose on your neighbors.

RF: Why does the public seem to be skeptical of the process approach?

Yandle: When we talk about a market process, we cannot identify ex-ante winners and losers. We cannot identify ex ante what the solution would really look like. We say, "Let's just leave it to the market and we've got to have faith." You hear statements like that. "I believe that the market can handle this problem." When we're talking about something which has potentially a high price tag, in terms of social costs associated with it, people want to see something that is more concrete. What will this do to South Carolina or what is this going to do to Kansas, and what about this Yucca

Mountain solution to nuclear waste? I want to know exactly the way the trucks are going to run, where they are going to carry it, how deeply it's going to be buried, and so forth. As opposed to saying, let's just let states bid competitively to provide storage locations for nuclear waste and see what the market delivers, which may be an illustration of what we're talking about here.

People are very passionate about themselves and their health and many are very passionate about natural resources and the environment. I think that's a wonderful aspect of human behavior that you do have that passion.

What is truly extraordinary is when you find people who are passionate about the environment who are looking for a low-cost solution to the problem, as opposed to simply celebrating when you get a statute passed.

The Nature Conservancy is one group that has promoted the use of conservation easements and environmental trusts, perpetually managing resources in kind of a positive cash-flow environment. The National Wildlife Federation is another one that has looked for solutions. There are organizations in the West that have developed interesting insurance schemes, for example, in an effort to try to reintroduce wolves free into the wild. So that if any farmer or cattleman has a loss that can be directly attributed to a wolf, they will pay him off. By working with the farmers and the ranchers and the people who just love wolves, they arrive at a partial solution. The people who love wolves put money in the kitty to run the insurance mechanism. Then the cattlemen who despise wolves are told if you ever have any damage, you will be made whole, so please don't shoot that wolf. That's an example of what I'm talking about.

RF: You've argued that the systems approach to environmental protection tends to favor established firms over newcomers. Why is that?

Yandle: That's a feature of our law. It's not a vice of having a systems approach per se. It's a systems approach where there is a differential standard. There are stricter standards for new sources than for old sources in our statutes in the Clean Water Act and in the Clean Air Act. When you have a differential standard that raises the cost to new competition, old firms love it. Now you have a cartel that is enforced by the U.S. government.

I was working on the White House staff reviewing newly proposed regulations during the end of the Ford administration and the first part of the Carter administration, in a unit of the Council on Wage and Price Stability. My beat was the EPA. I reviewed the copper smelter standards. I would get their big regulatory bundles and review them, and we would make comments in an attempt to try to reduce the cost of accomplishing the goal. EPA had an excellent economic analysis. The last section said when this regulation becomes final, there will never be another copper smelter built in the United States of America. How would you feel if you had a copper smelter? You'd just

been told you will never have any new competition.

RF: That's not too far from the parable of the bootlegger and the Baptists from your famous *Regulation* article.

Yandle: Yes, it was like the coalition of the bootlegger and Baptists. That was the story of two groups who favor restrictions on the sale of alcoholic beverages on Sunday. The Baptists take the moral high ground; they would like to see a diminution in the consumption of alcoholic beverages. The bootlegger just wants to get rid of competition one day a week. I called it bootlegger and Baptists for alliterative purposes. It could have been called "bootlegger and Methodists" and you would have the same story.

Probably one of the most extreme public choice stories in environmental economics had to do with the 1977 amendments to the Clean Air Act, which required scrubbers to be installed on all modified and newly built coal-fired electricity plants in the United States. You could have accomplished the environmental goal by saying we don't care where you get your coal or how you produce; you've got to achieve a performance standard. What we worry about is what comes out of the pipe, not what you put in your plant called a scrubber. Coal from the West was clean and could have accomplished the same goal as burning eastern coal with a scrubber. The Eastern coal workers happened to be organized, which gave an advantage in terms of collective decisionmaking and public choice. The Western coal workers were not. You had a wonderful senator from West Virginia who was chairman of EPA's oversight committee. EPA internally fought against it, the White House fought against it. They lost.

RF: You made a transition when you took emeritus status at Clemson. I know you're keeping very busy, but was that harder than you expected?

Yandle: I failed retirement the first time. I retired in 2000 as a faculty member and then came back. They had a need in 2005 in the College of Business and Behavioral Science and asked me to come back to serve as dean for two years, which I did. So I've gone through that transition twice.

Some people are very good at retirement and I admire them. There are people who have all kinds of things just waiting. It's going to be a new life, literally. They walk the gangplank and they land out there in a sailing boat and now

Bruce Yandle

► Present Position

Dean Emeritus, College of Business and Behavioral Sciences, Clemson University; Distinguished Adjunct Professor of Economics, Mercatus Center, George Mason University

► Previous Faculty Appointment

College of Business and Behavioral Science, Clemson University (1969–2000, 2005–2007)

► Education

A.B. (1955), Mercer University; MBA (1968), Georgia State University; Ph.D. (1970), Georgia State University

► Selected Publications

Author or co-author of numerous books, including *Common Sense and Common Law for the Environment*, *Taking the Environment Seriously* (with Roger E. Meiners), and *Regulation by Litigation* (with Andrew P. Morriss and Andrew Dorchak), as well as articles in such journals as *Public Choice*, the *Eastern Economic Journal*, the *Journal of Risk and Insurance*, and *Regulation*.

they are sailing the coastal waters of Florida, then they're going up to New England. I wasn't that guy. What I have done, whether it's good or bad, is to carry with me pieces of work and activities that I truly enjoyed in my life as an economist, as a teacher, and I've kept those going.

I don't have the luxury of having undergraduate students around me at 9:05 Monday, Wednesday, and Friday any more, but I do have the luxury of engaging with undergraduate students in different settings on a fairly regular basis. I don't have to grade papers, and I don't have to go to faculty meetings, and I still get paid.

I don't know what's typical, but I think that maybe more for economists than some disciplines, there seems to be a tendency for economists to be economists, whatever happens to them. They may be out with their lawnmowers cutting grass, but they're thinking about some kind of economic problem; they're still economists.

RF: What is your advice for economists who are approaching that stage of their careers, who can see that gangplank in the distance?

Yandle: The question is how deeply in love are you with your discipline and what you do. If you have a deep passion and love for it, I would suggest you stay active with some professional association or organization where there are people you like who you would be associating with. If you like that wonderful experience of seeing a young scholar come alive and maybe bloom, or on some days wilt, try to establish an adjunct position with your university or the university close to where you will live so that you might have that privilege of being on a master's thesis committee or dissertations in your field.

Another thing is don't be too stingy with respect to paying your way to things that you really enjoy, such as professional meetings. One of the challenges is that we are accustomed to someone else paying our professional travel expenses. When we're retired, there's not anybody to pay our travel expenses, so there's something in us that says, well, therefore, I won't go. You may be denying yourself some real pleasure for relatively modest amounts of money.

If you like to write, then pick up your pen or get to your computer and make some connections with newspapers, magazines, blogs, and turn out something so that you're still playing with ideas and getting them out there. I guess those are the things that I think about.

RF

HARNESSING THE IRON HORSE

Fifth District companies pioneered railroading in the United States

BY KARL RHODES AND BETTY JOYCE NASH

In 1829, Horatio Allen sought to persuade the directors of the South Carolina Canal and Rail Road Co. to invest in steam locomotives, instead of horses, to pull their trains.

“There is no reason to expect any material improvement in the breed of horses in the future,” said Allen, the company’s chief engineer. “While, in my judgment, the man is not living who knows what the breed of locomotives is to place at [our] command.”

The company purchased a locomotive, named it “The Best Friend of Charleston,” and demonstrated the new technology on Christmas Day, 1830, on six miles of track in Charleston, S.C. The railroad’s first 141 passengers “flew on the wings of the wind at the speed of fifteen to twenty-five miles per hour, annihilating time and space,” the *Charleston Courier* reported.

Six months later, the Best Friend’s boiler exploded and killed the fireman, but by then the engine had earned its place in history as the first steam locomotive to power regular rail service in the United States. Within three years, the company’s 136-mile line from Charleston to Hamburg, S.C., was the longest in the world.

Motivated by money and imagination, Allen and the other early visionaries of railroads in the Fifth District understood that the marriage of iron rail to steam locomotion would profoundly change the sprawling new nation. They boldly claimed that trains would unify the country, create wealth in the East, and tap untold riches in the West. Many of their wildest predictions eventually came true.

A Better Way

The quest for better trade routes pervades the early economic history of the Fifth District and North America. Christopher Columbus searched for a superior passage to India. Christopher Newport and John Smith, leaders of the Jamestown settlement, tried to find a river route from Virginia to the Pacific Ocean, and George Washington proposed canals to connect the nation’s eastern and western waterways.

Many of America’s most ambitious canal schemes ultimately failed, but when the Erie Canal opened in 1825 — spanning 360 miles from Lake Erie to the Hudson River — New York became the economic envy of East Coast commerce. The canal dramatically reduced the cost of transporting cargo from Buffalo to New York City. Maryland responded to the Erie Canal with two grandiose plans, the Chesapeake and Ohio Canal and the Baltimore and Ohio Railroad (B&O). Both projects broke ground with patriotic

exuberance on July 4, 1828. The canal, using proven technologies, connected Washington, D.C., to Cumberland, Md., but the railroad, using largely untested technologies, extended past Cumberland to the Ohio River by 1853.

“The Baltimore and Ohio was the first leg of a national rail system,” wrote historian James Dilts in his 1993 book, *The Great Road*. “Its early engineers formed the core of the railroad engineering profession in America; their theories of survey and location laid the groundwork for future textbooks. Building the B&O Railroad through 200 miles of mountain wilderness between Cumberland and Wheeling was a major feat of civil engineering.”

The B&O offered short passenger excursions before the South Carolina Railroad did, but those early efforts were sporadic and experimental. They featured cars powered by horses, wind, cranks, even dogs. By 1830, however, the B&O started testing steam locomotives, most notably those built by Peter Cooper and his colleagues. One of their engines — later called the “Tom Thumb” — lost a legendary race against a railcar pulled by a horse on a parallel track. A witness described a “neck and neck, nose and nose” contest won by the horse-drawn car only after the Tom Thumb threw a belt.

The Tom Thumb’s troublesome belt foreshadowed the many problems — technical, legal, financial, and managerial — that the B&O encountered as it chiseled its way westward through the Allegheny Mountains. From incorporation to completion, it took the railroad a quarter century to reach the Ohio River. Only one of the company’s original entrepreneurs made the celebratory train ride to Wheeling, W.Va., for the dedication in 1853, but the B&O’s founders understood the importance of their work from the outset, according to Dilts. Charles Carroll, the old patriot who laid the railroad’s cornerstone back in 1828, said the only document he ever signed of greater consequence than the incorporation papers of the B&O was the Declaration of Independence.

“The Baltimore entrepreneurs sensed that they were not just building a railroad,” Dilts wrote. “They were following George Washington’s plan of binding together a young nation, commercially and politically, and they were tracing a route Washington himself had picked out. They expanded the country’s horizons.”

Losing Steam

Fifth District companies pioneered large-scale railroading in the United States with the B&O and the South Carolina Railroad, but three decades later, the region’s railroads were

substandard by all accounts, noted James Ward, a railroad historian at the University of Tennessee at Chattanooga, in a 1973 article in the *Journal of Southern History*.

Because the South had more navigable rivers, its railroads developed in a piecemeal pattern. “Their primary function was to transport produce and people to the nearest markets, most of which were connected to other market centers via water,” Ward wrote. This river-rail approach led to shorter routes that served their purposes, often profitably, but they were less interconnected than railroads in the North. The South Carolina Railroad, for example, initially extended to the small town of Hamburg, S.C., to intercept freight — chiefly cotton — headed down river to Savannah, Ga.

Ward points out that in the 1830s, Southern railroads were better capitalized than Northern railroads on average. That changed drastically, however, with the depression of 1839, when cotton prices fell from more than 15 cents per pound to less than 6 cents per pound. The depression lasted longer in the South than in the North, and investment in railroads slowed considerably for 10 years in Fifth District states. Wealthy planters hesitated to invest in railroads because they had witnessed previous failures of public works and because they needed liquidity to ride out the depression and cover potential crop losses.

Early American railroads received substantial government support, especially from states in the South. Beginning in 1848, with a policy called “hypothecation,” Southern legislatures guaranteed returns on railroad stocks and bonds. This practice attracted more European investors and encouraged wealthy planters to participate, either by investing directly or by accepting stocks and bonds as payment for slave labor to build and operate railroads. As a result, slave labor almost completely supplanted immigrant labor among the Southern railroads. In addition to railroad construction, slaves worked as repairmen, brakemen, firemen, and enginemen.

In the North, railroads promoted greater industrialization, but in the South they mostly reinforced the plantation system. They opened up more land for agriculture (particularly cotton production) and drove up prices for slaves. They also lowered the cost of exporting produce and importing other goods, allowing the South to further exploit its comparative advantages in agriculture. As a result, plantations became larger, more specialized, more productive, and more valuable.

Just as state-backed stocks and bonds had begun to attract more investors, however, Southern railroads encountered other limiting factors. “The Mexican War and the pent-up demand for engineering services in other parts of the country prevented the region from securing competent technical talent,” Ward wrote. “Moreover, when the Crimean War unsettled the European money markets between 1853 and 1855, the South was deprived of a prime source of capital.”

Southern railroads finally started to catch up with their Northern counterparts in the late 1850s, but the Civil War halted their progress. Soldiers on both sides demolished



A bridge on the Orange & Alexandria, Va., Railroad, as repaired by Union army engineers ca. 1865.

great swaths of rail infrastructure. The B&O bridge at Harper's Ferry was repeatedly destroyed, and the South Carolina Railroad was badly damaged. But as the war progressed, Union forces rebuilt, expanded, and improved railroads under their control. The rails' ability to transport and supply troops — a huge advantage for the Union — showed how vital the technology had become in just three decades.

Reconstruction and Expansion

After the Civil War, railroads expanded rapidly throughout the nation, partly in response to federal land grants to encourage them to push west from the Mississippi River and east from the West Coast. The Union Pacific and the Central Pacific joined tracks in 1869, just four years after the surrender at Appomattox, to form the first transcontinental route.

Southern railroads also cobbled together longer lines, but with great difficulty. “Capital was lacking, labor proved exceedingly scarce, and plant, tools, and equipment could be obtained only in the North or abroad,” wrote historian Maury Klein in a 1968 *American History Review* article. Initially, Southern railroads formed alliances with each other to expand their reach, but those pacts often fell apart as each line acted independently. “Yet in less than 30 years the South more than tripled its railway mileage, and the worn, disconnected roads of 1865 were transformed into a cohesive network dominated by a handful of giant systems.”

“The center of gravity shifted towards the lines that were integrated,” says Steven Usselman, who teaches the history of technology at the Georgia Institute of Technology and wrote *Regulating Railroad Innovation*. “So the Pennsylvania reached St. Louis in 1876; Norfolk & Western got out to Louisville. You had these increasingly long through-lines, and that's what the key to success was.”

The B&O, though twice bankrupted in the late 19th century, reached Pittsburgh and Chicago in 1876 and got a piece of the industrial development in Ohio and Indiana. The Norfolk & Western, which enjoyed heavy local traffic in coal, nevertheless built more through routes, established a

new line to the Ohio River, pushed for new western connections with the East Tennessee, and completed the Shenandoah Valley Railroad as a rival route to the Danville's Virginia Midland.

Driving Innovation

Technological improvements accelerated after the war as railroad-related patents grew from 50 to 500 annually. Improvements in metallurgy — using steel rather than iron — allowed tracks and bridges to last longer and carry more weight, and coal completely replaced wood as the fuel for locomotives. Railroads also started converting their tracks to a standard gauge, which boosted productivity and connectivity.

The rail firms resisted some advances, however. They were slow to adopt telegraph and signaling technologies, and they embraced hand-operated brakes and couplers only after federal legislation forced the change. Early on, railroads viewed such improvements as complicating the business, Usselman says. Rail firms wanted simply to ship commodities in bigger and bigger trains over longer and longer distances without getting sidetracked by complex devices. “The railroads were trying to follow the path of least resistance,” he says. “They did the stuff that was easy and were getting large productivity returns for doing it.”

In the 1870s, the industry again struggled to find capital as intense competition forced cuts in shipping rates. “Years of massive land grants and liberal investment had left segments of the industry overbuilt and vulnerable,” and low commodity prices cut trade volume, according to Usselman. Rail companies competed for business through price wars, secret rebates, and price concessions. States could not regulate rates across borders, so the federal government passed the Interstate Commerce Act of 1887, creating the Interstate Commerce Commission. (Railroad rates remained regulated

Railroad Milestones

1828 — The Baltimore and Ohio Railroad (B&O) breaks ground in Baltimore with plans to reach the Ohio River.

1830 — South Carolina Canal and Rail Road begins first regular rail service powered by a steam locomotive in the United States.

1833 — South Carolina Railroad completes 136-mile line to Hamburg, S.C., the longest in the world at the time.

1839 — Depression of 1839 stalls railroad development in the South for 10 years.

1853 — B&O reaches the Ohio River at Wheeling, W.Va.

1861 — The Civil War demonstrates the strategic importance of railroads.

1865 — Railroads start rebuilding and expanding after four years of war.

1869 — Union Pacific and Central Pacific railroads meet in Utah to create the nation's first transcontinental connection.

1873 — Panic of 1873 marks the end of a railroad building boom. Many railroads go bankrupt.

1886 — Railroads complete their conversion to standard-gauge tracks.

1887 — Congress passes the Interstate Commerce Act, primarily to regulate railroads.

until Congress passed the Staggers Rail Act of 1980.)

Driven by necessity, railroads cut operating costs so they could handle higher volumes in an orderly fashion. This required efficiency experts who ultimately made railroads the model for modern management. Tough times also forced railroads to produce major innovations in corporate finance, organization, and labor relations.

By the end of the century, railroads had become big business. Between 1870 and 1900, for example, the Pennsylvania Railroad was the largest private employer in the United States. Railroads helped grow urban centers, which in turn intensified and expanded demand for rail transportation. Railroads cut freight rates from 2.25 cents per ton

mile in 1860 to less than a penny per ton mile in 1890. They also transported people and products with unprecedented speed. This raised productivity and changed the way Americans think about and value time: Scientists enlisted the help of railroads to adopt standard time zones, vital for railroad scheduling, and critical for scientists who wanted to coordinate observations across great distances.

This massive taming of time and space began in the Fifth District. By 1860, the South Carolina Railroad and its allied lines were serving much of the South, with one line reaching all the way to Memphis on the Mississippi River. The South Carolina was the earliest predecessor line of Norfolk Southern Railways, which today operates roughly 20,000 route miles throughout the eastern half of the United States. Likewise, the B&O was the earliest predecessor line of CSX Transportation, which today runs about 21,000 route miles in the eastern United States. The B&O is sometimes called the nation's first railroad. It harnessed the iron horse and drove it across the Alleghenies — proving that railroads could forge the cross-country trade routes long sought by America's European explorers and pioneers. **RF**

READINGS

Dilts, James D. *The Great Road: The Building of the Baltimore and Ohio, the Nation's First Railroad, 1828-1853*. Stanford: Stanford University Press, 1993.

Ferguson, Roger W., and William L. Wascher. “Distinguished Lecture on Economics in Government: Lessons from Past Productivity Booms.” *Journal of Economic Perspectives*, Spring 2004, vol. 18, no. 2, pp. 3-28.

Klein, Maury. “Southern Railroad Leaders, 1865-1893: Identities and Ideologies.” *American History Review*, Autumn 1968, vol. 42, no. 3, pp. 288-310.

Thies, Clifford F. “The American Railroad Network During the Early 19th Century: Private Versus Public Enterprise.” *Cato Journal*, Fall 2002, vol. 22, no. 2, pp. 229-261.

Usselman, Steven. *Regulating Railroad Innovation*. Cambridge, England: Cambridge University Press, 2002.

Ward, James A. “A New Look at Antebellum Southern Railroad Development.” *Journal of Southern History*, August 1973, vol. 39, no. 3, pp. 409-420.

Fed Transparency: TMI?

BY CHARLES GERENA

“Central Bank Transparency and the Crowding out of Private Information in an Experimental Asset Market.” Menno Middelcorp and Stephanie Rosenkranz, Federal Reserve Bank of New York Staff Report No. 487, March 2011.

Chairman Ben Bernanke gave his first press briefing on April 27 after a meeting of the Federal Open Market Committee. Such efforts are meant to provide the public additional context for monetary policy decisions. They are also intended to make the Fed’s policies more predictable.

Menno Middelcorp, a senior economic analyst at the New York Fed, and Stephanie Rosenkranz, an economist from Utrecht University, question the latter rationale in a recent paper. They suggest there may be a point where financial market participants receive so much information from the Fed that they feel less compelled to invest in their own sources of private information on monetary policy. This undermines their ability to predict the course of policy, which may lead to increased market volatility surrounding policy decisions.

There are several ways to test how a more transparent central bank affects market stability. For example, one could look at interest rates after monetary policy decisions. The less movement in rates, the more likely they had already factored in the impact of those policy decisions. In several studies, interest rate volatility declined after the FOMC began announcing its rate decisions in 1994 and Norway’s central bank began releasing interest rate forecasts in 2005.

Other empirical research has looked at indirect measures of monetary policy expectations (such as the price of Fed futures) and direct measures (such as predictions from professional forecasters). In both cases, the gap between expectations and outcomes narrowed after central banks released more information about their policy decisions.

Middelcorp and Rosenkranz took a different approach. They conducted a controlled experiment with groups of 16 to 20 young adults to see how their trading of imaginary risky assets was affected by the presentation of public information and the offer to acquire additional private information. The experiment closely mirrored a model which predicted that “more accurate public information can crowd out private information to such an extent that the market’s ability to predict monetary policy deteriorates,” the researchers note.

The results of their experiment roughly confirm the model’s prediction. “Although an experimental asset market is inherently limited due to the use of a small number of unsophisticated traders, our evidence does appear to be applicable to real world markets,” the authors conclude.

“Sessions with more numerous and experienced subjects produced a stronger effect.”

“The Great Recession’s Effect on Entrepreneurship.” Scott Shane, Federal Reserve Bank of Cleveland Economic Commentary No. 2011-4, March 2011.

One defining trait of entrepreneurs is their ability to hear opportunity knocking at the door when others hear silence. Companies like Microsoft and CNN started during a recession when a lot of labor and capital were idled.

Scott Shane, a visiting scholar at the Cleveland Fed and a professor at Case Western Reserve University, looked at how entrepreneurship fared during the historic recession of 2007–09. He found that there was a net reduction in entrepreneurial activity during that painful period.

For example, while more people became self-employed during the recent recession, an even greater number of people transitioned out of self-employment. As a result, the ranks of the self-employed shrank about 4 percent between December 2007 and June 2009.

Also, from November 2007 to June 2009, the number of self-employed who incorporated their businesses fell 8.9 percent while the number of unincorporated self-employed decreased only 0.5 percent. This has important implications. “Corporations have more of an economic impact in general than sole proprietorships,” notes Shane. Therefore, it appears that “the more substantial type of entrepreneurial activity was more adversely affected by the recession than the less substantial kind.”

“Facts on the Distributions of Earnings, Income, and Wealth in the United States: 2007 Update.” Javier Díaz-Giménez, Andy Glover, and José-Víctor Ríos-Rull, Federal Reserve Bank of Minneapolis *Quarterly Review*, February 2011, pp. 2-31.

José-Víctor Ríos-Rull, an economist and consultant at the Minneapolis Fed, has worked with a colleague from Spain for more than a decade to track various aspects of economic inequality. Their latest paper revealed some interesting details about America’s poor, rich, and middle class.

According to the Survey of Consumer Finances, household earnings increased by 13 percent between 1998 and 2007, while income (earnings plus government and private transfers) increased by 18 percent. During the same period, wealth increased by a noteworthy 54 percent.

Growth in income and wealth has not been evenly distributed, however. “The three variables have become more concentrated in their very top tails, and the bottom tails have changed little,” note the paper’s authors. **RF**

Change in the Fifth District: What Can the 2010 Census Tell Us?

BY SONYA RAVINDRANATH WADDELL

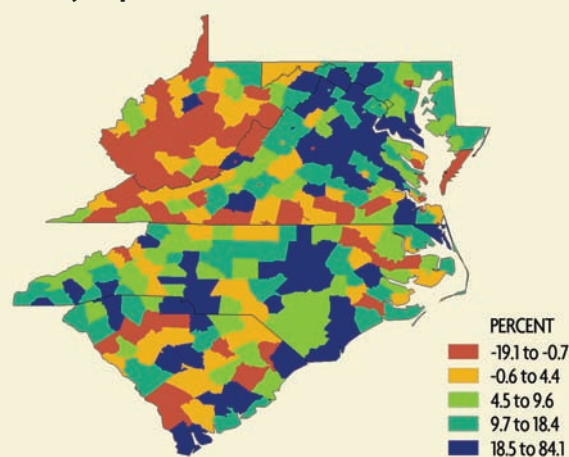
The release of new decennial census data offers a rare opportunity to document and better understand decade-long demographic and social changes among states and localities in our nation. For the Fifth Federal Reserve District, the release of the 2010 census data offers insight into population growth and demographic shifts that will continue to shape our region throughout this century. This article seeks to better understand the changes that the Fifth District has experienced and try to gain an understanding of where we might be moving in the future.

Population Change

The Fifth District — composed of the District of Columbia, Maryland, North Carolina, South Carolina, Virginia, and most of West Virginia — is primarily a Southern district, and its population trend is consistent with the general population movement from the Northeastern and Midwestern areas of the United States to the Western and Southern regions. From 2000 to 2010, the population of the Fifth District grew more than 13 percent, surpassing the 9.7 percent population growth of the nation as a whole. Although the District accounted for less than 10 percent of the U.S. population in 2000, the region accounted for 13.1 percent of the nation's population increase over the ensuing decade.

The Fifth District trend contrasts with those of some other areas of the country. Although only Michigan had an outright population loss from 2000 to 2010 (of less than 1 percent), a number of Northeastern states had growth of below 4 percent (Massachusetts, Vermont, Rhode Island, New York, and Pennsylvania), as did the Midwestern states of Illinois and Ohio. Of course, examining a state as a whole can mask considerable differences within the state. Even

County Population Growth 2000-2010



SOURCE: Bureau of the Census

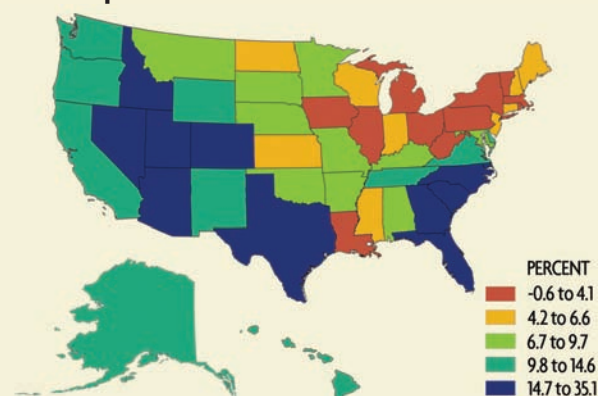
Michigan had pockets of sizeable population growth from 2000 to 2010, despite its decline at the state level.

The Fifth District expansion was driven primarily by an increase in the adult population. About 87 percent of the population increase is accounted for by those over the age of 18. This is not a phenomenon unique to the Fifth District — about 83 percent of the national population increase was in the population over the age of 18. In 2000, both the nation and the Fifth District had about 75 percent of their population aged over 18. By 2010, almost 76 percent of the national population was over age 18 and almost 77 percent of the District was over age 18 — a small, but nonetheless steady, increase.

Furthermore, the sharpest aging in the District was not in states that had an influx of older Americans in recent years such as North Carolina and South Carolina, as might have been expected. Maryland saw its population aged over 18 increase from 74.4 percent of the population in 2000 to 76.6 percent in 2010. In Washington, D.C., the share went from 80 percent to 83.2 percent. When the Census Bureau releases the more detailed population data, it will be possible to examine more extensively the change in population distribution by age in our Fifth District states.

Population growth in D.C. was the most noteworthy of the Fifth District jurisdictions, since the 5.2 percent population increase in D.C. from 2000 to 2010 was its first decennial population increase since the 1940s. Nonetheless, in total contribution to Fifth District population growth, North Carolina and South Carolina were the most important. North Carolina's 18.5 percent growth and South

State Population Growth 2000-2010



SOURCE: Bureau of the Census

Population Growth Recap

State	Population Ranking	Population 2010	Population Growth 00-10
North Carolina	10	9,535,483	18.5
Virginia	12	8,001,024	13.0
Maryland	19	5,773,552	9.0
South Carolina	24	4,625,364	15.3
West Virginia	38	1,852,994	2.5
District of Columbia	50	601,723	5.2

SOURCE: Bureau of the Census

Carolina's 15.3 percent growth put both states among the top-10 growth rates in the nation. (The fastest-growing state in the nation was Nevada with 35.1 percent growth.) In the northern part of the District, the population of Maryland expanded 9 percent over the decade while Virginia's population grew 13 percent.

The state numbers mask differences within areas of Virginia, however. The Washington, D.C., MSA and the surrounding area grew substantially over the period, while many counties in southern and southwest Virginia saw declines in population. West Virginia also struggled with population loss from 2000-2010, with more than 50 percent of counties in the state losing residents in the decade.

Hispanic Origin and Racial Shifts

Data on race have been collected since the first U.S. decennial census in 1790, but starting in 1997, the U.S. Office of Management and Budget (OMB) required federal agencies to use a minimum of five race categories: White; Black or African American; American Indian or Alaska Native; Asian; and Native Hawaiian or Other Pacific Islander. The Census Bureau also included a sixth category — other — for respondents unable to identify with any of these five race categories. For the first time in the 2000 census and again in the 2010 census, individuals were presented with the option to identify with more than one race. In the end, the 2010 census question on race included 15 separate response categories and three areas where respondents could write in detailed information about their race, all of which can be combined to create the five minimum race categories plus "Some Other Race."

Federal standards issued by OMB mandate that race and ethnicity (which includes Hispanic origin) be separate and distinct concepts. For this reason, the census has one question to determine a citizen's race and another to determine whether they are of Hispanic (or Latino) origin. According to the Census Bureau, "Hispanic or Latino" refers to a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, and "origin" can be considered the heritage, nationality group, lineage, or country of birth of the person or the person's parents or ancestors before their arrival into the United States.

People who identify their origin as Hispanic, Latino, or Spanish may be of any race.

In the Fifth District, the number of people who identified with being more than one race rose from about 1.6 percent of the population in 2000 to about 2.4 percent of the population in 2010. This translates into about 300,000 more District residents who identified with being more than one race. In percentage terms, the rise was consistent with the national increase.

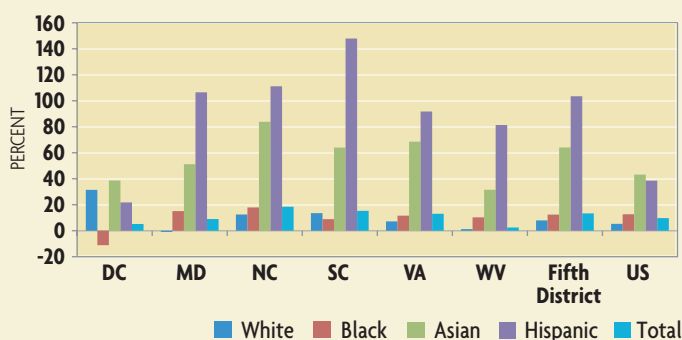
As a region, the Fifth District did not experience a considerable racial shift from 2000 to 2010 among those residents who consider themselves of one race.

There were small changes, however. The percent of the District population that identifies as being white fell from 71.6 percent in 2000 to 68.8 percent in 2010, offset by an increase in the share of the District that is Asian (2.4 percent to 3.6 percent) and an increase in the "other" category. Nonetheless, looking only at the District as a whole masks some notable changes within jurisdictions. For example, the white population in D.C. grew 31.4 percent while the number of residents who identified as black or African American dropped 11.1 percent.

This racial shift in D.C. — particularly the exodus of the black population — is not a new trend. According to a 2003 Urban Institute report entitled "Segregation Patterns in the District of Columbia 1980-2003," the black population in D.C. has been declining since the 1970s. In fact, from the 1970s until 2000, D.C.'s population decline was driven primarily by the contraction in the black population.

The reasons for this exodus are not entirely clear. There is some evidence — according to a *Washington Post* article in March 2011 — that the change is the result of gentrification that has transformed areas of downtown D.C., leading to rising rents across D.C. and soaring property taxes that have pushed out working-class families. According to a 2010 report by the D.C. Fiscal Policy Institute, D.C.'s low-cost rental stock has shrunk by more than one-third since 2000, and the number of D.C. homes valued at \$250,000 or less fell from 58,000 to 15,000 between 2000 and 2007.

Change in Population by Race and Hispanic Origin 2000-2010



SOURCE: Bureau of the Census

Homes valued at this level represented more than half of the owner-occupied units in 2000, but just one-sixth of units in 2007. In addition, 40 percent of D.C. households spent more than 30 percent of their income on housing in 2007 — the federal threshold for what is considered affordable.

Some have argued, however, that it is the middle-income black population that is leaving D.C. A 2008 Urban Institute study entitled “State of Washington, D.C.’s Neighborhoods” reported that it is a decades-long perceived lack of progress in civil rights and economic equality that has encouraged the growing African-American middle-class population to leave the city. Unfortunately, the 2010 census does not provide data that could shed light on the validity of either explanation.

What is relatively new to the Fifth District is the growth in the Hispanic-origin population. In fact, more than half of the total population increase in the Fifth District was due to an increase in the number of Hispanic residents. The growth of the Hispanic population is a nationwide, not a regional, phenomenon. Although the Hispanic population more than doubled in the Fifth District, versus a 30 percent increase in the nation, the District accounted for a little less than 10 percent of the total Hispanic population growth in the United States. This is primarily because states like California, Florida, Texas, and Arizona had extremely sharp absolute changes in the number of Hispanic residents, but because their Hispanic populations are so large, the percentage changes remain lower than other states. Nonetheless, of the nine states that saw their Hispanic populations more than double from 2000 to 2010, three of them — Maryland, North Carolina, and South Carolina — are in the Fifth District.

With 421,157 more Hispanic residents in 2010 than in 2000 (111 percent growth), North Carolina had the largest absolute increase among Fifth District states. (In percentage terms, South Carolina’s 148 percent increase was higher.) According to a report by John D. Kasarda and James H. Johnson of the University of North Carolina at Chapel Hill entitled “The Economic Impact of the Hispanic Population on the State of North Carolina,” between 1995 and 2004, 38.2 percent of Hispanic residents in North Carolina came directly from abroad, 40.2 percent migrated from another jurisdiction, and 21.6 percent were born in North Carolina. The majority of those coming from abroad came from Mexico and most reside in North Carolina’s metropolitan areas. The report argues that for the most part, the growth of the Hispanic population in North Carolina has been a form of labor migration, and in 2005 nearly 75 percent of all Hispanics in North Carolina were employed in four industries: construction (42.2 percent), wholesale and retail trade (11.5 percent), manufacturing (10.7 percent), and agriculture, forestry, fishing, and hunting (9.2 percent).

Once again, however, examining states as a whole obscures trends within states. Northern and central Virginia had particularly strong growth in the Hispanic population, as did the southeastern portion of South Carolina. In

Northern Virginia, there can be little doubt that the boom in residential construction in the first seven years of the decade was at least partly responsible for the strong growth in the number of Hispanic residents. According to a 2008 report by the Pew Hispanic Center, Hispanic workers account for about one-fourth of construction industry employment in the nation and were among the greatest beneficiaries of the housing boom. The suburbs of Washington, D.C., particularly Northern Virginia and the Maryland suburbs, were among the areas of the Fifth District that experienced the sharpest housing market boom (and decline).

Scattered counties throughout the District also had sharp increases in their Hispanic populations. For example, when the number of Hispanic residents in Gilmer County in central West Virginia rose from 50 people in 2000 to 493 people in 2010, that translated to an almost 900 percent increase in the county’s Hispanic population.

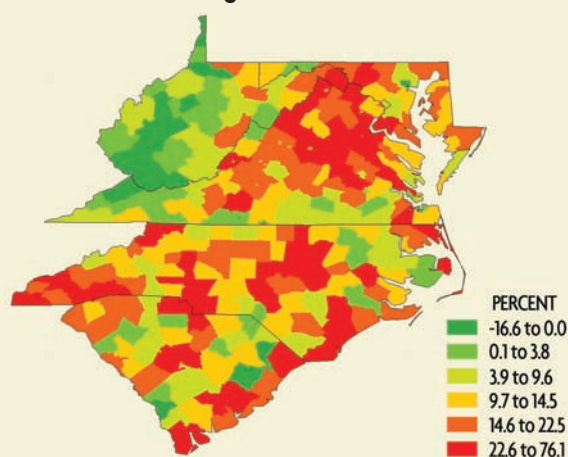
Housing Units

The release of the 2010 census also offers a glimpse into changes in the housing sector from 2000 to 2010. Given the upheaval in residential real estate in the past few years, however, looking just at the change over the decade masks shifts in total housing units and vacancy rates within the decade.

From 2000 to 2010, the total number of housing units in the Fifth District rose 17 percent. Although the census does not yet provide data on the change in the number of households over the same period, we do know that the total growth of Fifth District population older than 18 in the same period was 15.3 percent — 1.7 percentage points below the increase in housing units. This suggests that housing units in the Fifth District grew faster than the number of households over the decade. The growth in housing units in the Fifth District outpaced that of the nation, where the number of units grew 12.2 percent and the population over 18 expanded only 10.7 percent.

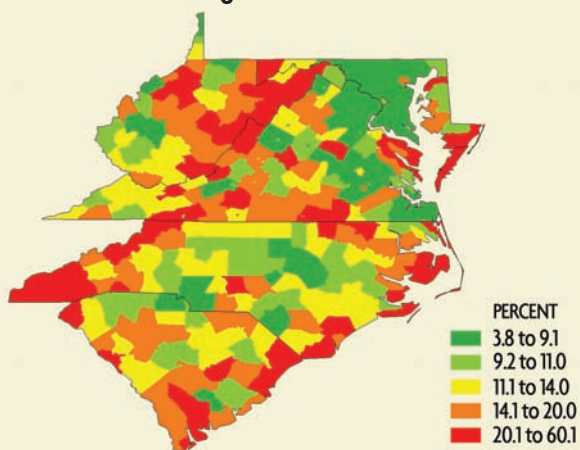
Data from the Census Bureau’s American Community

Growth in Housing Units 2000-2010



SOURCE: Bureau of the Census

Percent of Housing Units that are Vacant — 2010



SOURCE: Bureau of the Census

Survey (ACS) can shed some light on housing markets between 2000 and 2010. The ACS collects and produces population and housing information every year based on a sample of about 3 million households nationwide. Because of the small sample size, it is often preferable to use the ACS three-year estimates that compile the data collected over three years. The ACS data suggest that much of the housing unit boom in the Fifth District was concentrated in the early part of the decade. The number of housing units grew 4.8 percent at an average annual rate from 2002 to 2006, but only 1.5 percent on average from 2006 to 2008. Using 2010 census data, annual average growth in Fifth District housing units fell further, to 1.2 percent, from 2008 to 2010.

The decade-long rise in housing units was geographically widespread. From 2000 to 2010, the number of housing units increased in all states and almost all counties in the Fifth District, albeit not uniformly. North Carolina and South Carolina saw the biggest booms in housing, with the number of units rising more than 20 percent in each. Drilling down to the county level, however, reveals that counties in Northern Virginia, Maryland, and along the coast of North and South Carolina saw the sharpest residential building boom, although areas in the center of the Fifth District also experienced notable rises in the number of units. Only West Virginia — at least the areas not connected to the Washington, D.C., MSA — escaped the boom in housing construction.

Vacancy rates also rose over the decade. In 2000, 9.7 percent of Fifth District housing units (and 9 percent of housing units in the United States) were vacant. By the 2010 census, 11.9 percent of Fifth District housing units and 11.3 percent of housing units in the nation were vacant. At least some of this increase in vacancy must be due to the

housing downturn in the few years before the 2010 census. The ACS provides some evidence for this: In 2002, the Fifth District residential vacancy rate was 11.3 percent; in 2005-2007, the vacancy rate moved up to 12.4 percent; and by 2007-2009, the rate had moved up to 13.2 percent. This means that from 2002-2006, the Fifth District vacancy rate moved up about 0.2 percentage point every year, while from 2006-2008, the rate moved up about 0.4 percentage point each year. This indicates that vacancy rates increased at a faster rate toward the end of the decade. Unfortunately, we do not have more precise, or frequent, data on housing vacancy at the regional level. Data from the Census Bureau on the entire United States indicates some increase in the vacancy rate from 2000, but a steeper rise from the end of 2005 through the beginning of 2009.

Among Fifth District states, residential vacancy rates have traditionally been the highest in South Carolina, which also saw the sharpest increase since 2000. Over the decade, the vacancy rate rose 3.2 percentage points in the state to 15.7 percent by 2010. Virginia continued to report the lowest vacancy rate — 9.2 percent in 2010 — although even the Virginia rate rose 2.2 percentage points since 2000. Drilling down to the county level, it is clear that the recent housing market downturn explains only part of the housing story, since southern and southwest Virginia, as well as some central parts of North Carolina, saw notable increases in vacancy rates. The population declines discussed above and illustrated in the population map provide some insight into the rise in vacancy. The Danville metropolitan statistical area in southern Virginia, for example, is the only MSA in the state to see its population decline steadily over the decade.

Conclusion

The 2010 census data reveal a number of important changes in the economic and demographic characteristics of the Fifth District. Overall, the District is proving to be an attractive place to live. As the population continues to increase, District states, counties, and localities will have to grapple with increased population density and diversity in the makeup of residents. The increased diversity of District residents is evident in the expansion of the Hispanic population. Further, the census brings to light the challenges in residential real estate that will continue to confront both the District and the nation. As the Census Bureau continues to release more detailed information, it will be important to follow these trends and use the new data to understand better the reasons behind demographic and economic developments throughout the Fifth District and the implications of those changes.

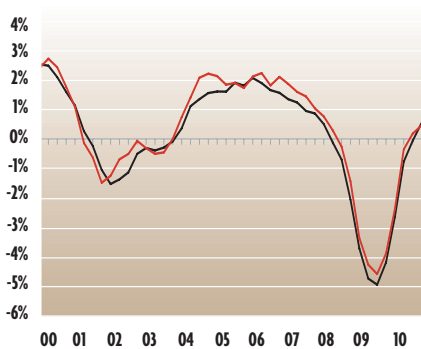
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State Data, Q4:10

	DC	MD	NC	SC	VA	WV
Nonfarm Employment (000s)	714.5	2,516.4	3,858.0	1,808.4	3,631.8	747.7
Q/Q Percent Change	0.7	-0.1	0.0	0.0	0.0	0.0
Y/Y Percent Change	1.6	0.4	0.0	1.0	0.4	1.0
Manufacturing Employment (000s)	1.2	113.6	431.0	209.1	229.4	49.2
Q/Q Percent Change	0.0	-0.6	-0.1	0.7	-0.2	0.0
Y/Y Percent Change	-7.7	-2.3	-0.5	0.8	-1.7	0.5
Professional/Business Services Employment (000s)	150.1	388.6	489.5	222.7	656.7	61.2
Q/Q Percent Change	0.5	0.7	1.0	2.3	1.0	0.3
Y/Y Percent Change	2.0	1.8	4.6	9.5	2.7	2.0
Government Employment (000s)	247.6	497.8	693.1	334.4	698.8	150.9
Q/Q Percent Change	1.8	-0.9	-0.7	-3.4	0.0	-1.1
Y/Y Percent Change	2.2	0.2	-1.6	-3.3	-0.4	0.2
Civilian Labor Force (000s)	331.1	2,979.2	4,464.2	2,162.6	4,181.1	778.9
Q/Q Percent Change	-0.3	0.0	-0.5	0.1	0.1	0.0
Y/Y Percent Change	-0.4	0.0	-1.4	-0.1	0.2	-1.4
Unemployment Rate (%)	9.7	7.4	9.8	10.9	6.6	9.6
Q3:10	9.8	7.4	10.1	11.0	6.8	9.2
Q4:09	10.3	7.6	11.2	11.8	7.1	8.6
Real Personal Income (\$Mil)	38,858.0	257,039.9	307,826.8	139,344.7	325,616.2	55,119.3
Q/Q Percent Change	0.7	0.4	0.3	0.5	0.5	0.3
Y/Y Percent Change	3.1	2.5	3.1	2.9	2.9	3.7
Building Permits	139	1,969	6,621	2,870	3,598	276
Q/Q Percent Change	-40.9	-37.0	-22.0	-14.9	-40.8	-34.8
Y/Y Percent Change	-67.0	-33.8	-11.9	-24.6	-23.8	-24.8
House Price Index (1980=100)	569.3	432.1	318.6	324.0	412.4	227.0
Q/Q Percent Change	-0.5	-1.1	-0.8	-0.7	-0.6	0.4
Y/Y Percent Change	0.7	-1.4	-2.3	-2.4	-1.4	1.1
Sales of Existing Housing Units (000s)	7.6	68.0	125.2	67.6	96.4	26.4
Q/Q Percent Change	-5.0	6.3	14.7	15.8	-5.9	6.5
Y/Y Percent Change	-26.9	-22.4	-23.1	-17.2	-19.9	-19.5

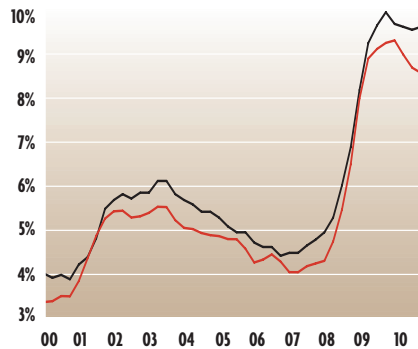
Nonfarm Employment

Change From Prior Year
First Quarter 2000 - Fourth Quarter 2010



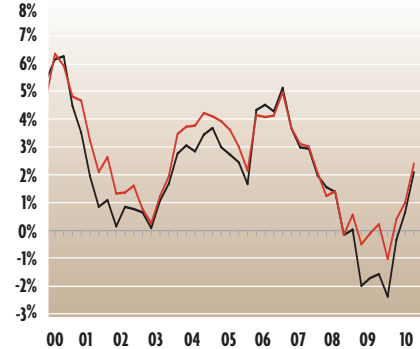
Unemployment Rate

First Quarter 2000 - Fourth Quarter 2010



Real Personal Income

Change From Prior Year
First Quarter 2000 - Fourth Quarter 2010

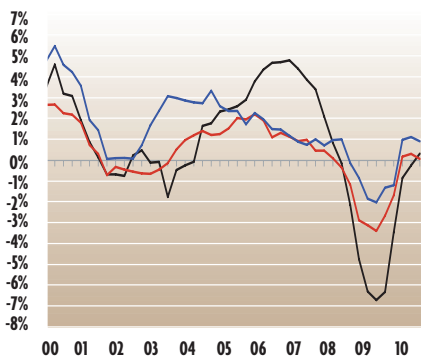


Fifth District

United States

Nonfarm Employment Metropolitan Areas

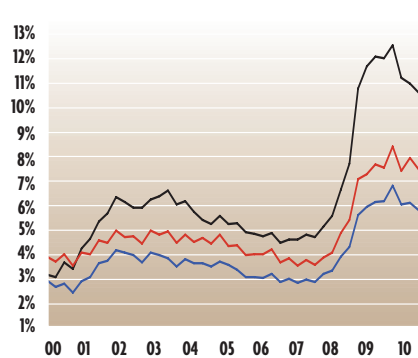
Change From Prior Year
First Quarter 2000 - Fourth Quarter 2010



Charlotte Baltimore Washington

Unemployment Rate Metropolitan Areas

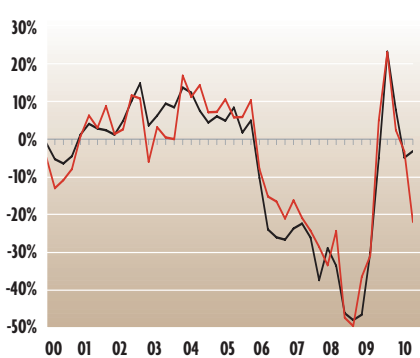
Change From Prior Year
First Quarter 2000 - Fourth Quarter 2010



Charlotte Baltimore Washington

Building Permits

Change From Prior Year
First Quarter 2000 - Fourth Quarter 2010



Fifth District United States

FRB—Richmond Services Revenues Index

First Quarter 2000 - Fourth Quarter 2010



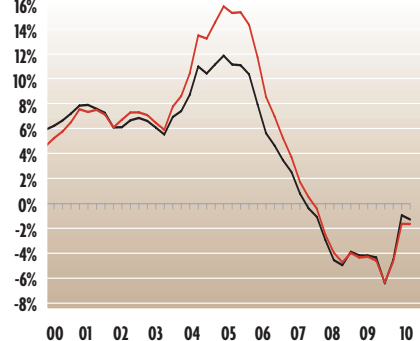
FRB—Richmond Manufacturing Composite Index

First Quarter 2000 - Fourth Quarter 2010



House Prices

Change From Prior Year
First Quarter 2000 - Fourth Quarter 2010



Fifth District United States

NOTES:

- 1) FRB—Richmond survey indexes are diffusion indexes representing the percentage of responding firms reporting increase minus the percentage reporting decrease. The manufacturing composite index is a weighted average of the shipments, new orders, and employment indexes.
- 2) Building permits and house prices are not seasonally adjusted; all other series are seasonally adjusted.

SOURCES:

Real Personal Income: Bureau of Economic Analysis/Haver Analytics.
Unemployment rate: LAUS Program, Bureau of Labor Statistics, U.S. Department of Labor, <http://stats.bls.gov>.
Employment: CES Survey, Bureau of Labor Statistics, U.S. Department of Labor, <http://stats.bls.gov>.
Building permits: U.S. Census Bureau, <http://www.census.gov>.
House prices: Federal Housing Finance Agency, <http://www.fhfa.gov>.

Metropolitan Area Data, Q4:10

	Washington, DC	Baltimore, MD	Hagerstown-Martinsburg, MD-WV
Nonfarm Employment (000s)	2,424.8	1,280.1	97.5
Q/Q Percent Change	0.3	0.3	0.1
Y/Y Percent Change	0.9	0.1	-0.6
Unemployment Rate (%)	5.9	7.6	9.7
Q3:10	6.1	7.9	9.7
Q4:09	6.2	7.7	9.3
Building Permits	1,896	997	107
Q/Q Percent Change	-43.7	-23.7	-27.7
Y/Y Percent Change	-34.0	-24.8	-26.2
	Asheville, NC	Charlotte, NC	Durham, NC
Nonfarm Employment (000s)	168.7	807.1	281.5
Q/Q Percent Change	1.0	1.3	0.7
Y/Y Percent Change	0.5	0.3	-0.1
Unemployment Rate (%)	7.7	10.7	7.0
Q3:10	7.9	11.3	7.5
Q4:09	8.7	12.0	7.9
Building Permits	206	937	351
Q/Q Percent Change	-62.7	-24.1	-44.1
Y/Y Percent Change	-19.2	-34.7	-30.9
	Greensboro-High Point, NC	Raleigh, NC	Wilmington, NC
Nonfarm Employment (000s)	340.2	502.2	136.9
Q/Q Percent Change	0.4	0.8	-0.7
Y/Y Percent Change	-0.4	1.0	-0.1
Unemployment Rate (%)	10.1	7.8	9.6
Q3:10	10.6	8.3	9.5
Q4:09	11.4	8.9	10.5
Building Permits	444	837	361
Q/Q Percent Change	-17.2	-35.9	-11.3
Y/Y Percent Change	3.7	-31.8	-10.2

	Winston-Salem, NC	Charleston, SC	Columbia, SC
Nonfarm Employment (000s)	204.6	285.3	343.5
Q/Q Percent Change	1.1	0.3	0.7
Y/Y Percent Change	-1.5	1.5	-0.5
Unemployment Rate (%)	9.3	9.1	9.2
Q3:10	9.7	9.4	9.5
Q4:09	10.1	9.8	9.5
Building Permits	229	568	559
Q/Q Percent Change	-25.9	-14.1	-28.5
Y/Y Percent Change	61.3	-18.2	-41.7
	Greenville, SC	Richmond, VA	Roanoke, VA
Nonfarm Employment (000s)	297.7	602.6	154.6
Q/Q Percent Change	1.0	0.0	0.8
Y/Y Percent Change	1.0	-0.1	-0.7
Unemployment Rate (%)	9.3	7.3	6.9
Q3:10	9.7	7.7	7.3
Q4:09	10.4	7.9	7.5
Building Permits	368	601	56
Q/Q Percent Change	15.7	-41.8	-50.4
Y/Y Percent Change	4.5	-26.3	-45.6
	Virginia Beach-Norfolk, VA	Charleston, WV	Huntington, WV
Nonfarm Employment (000s)	734.3	148.3	114.7
Q/Q Percent Change	-0.5	-0.3	1.2
Y/Y Percent Change	-0.5	-0.2	-1.2
Unemployment Rate (%)	7.1	8.3	8.7
Q3:10	7.3	7.9	8.9
Q4:09	7.2	7.0	7.7
Building Permits	951	28	9
Q/Q Percent Change	-11.0	-31.7	0.0
Y/Y Percent Change	-24.2	-40.4	12.5

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History as a Useful Guide...When Read Carefully

BY JOHN A. WEINBERG

The Great Recession has led to many comparisons with the Great Depression of the 1930s, enough to earn the same adjective. The current, slow recovery from the very deep recession of 2007-2009 and the persistently high unemployment we continue to experience have prompted painful memories of that earlier time — although the magnitude of the declines in output and employment, relative to the size of the economy, was much larger in the 1930s. But there are other parallels as well. Like the recent recession, the onset of the Great Depression was associated with a widespread financial panic, which in turn led to significant new financial regulation. Some students of the Great Depression have emphasized the role that government interventions — those which placed artificial upward pressure on wages and prices — may have played in worsening and prolonging the contraction. Similar arguments about a potential drag from actual or prospective legislative action have found their way into discussions of the current situation as well.

References to the Great Depression have also figured prominently in arguments about what monetary policy can and can't do to further stimulate economic growth and job creation. In this regard, two episodes from the 1930s figure most prominently. The first occurred in 1933, when the new Roosevelt administration took the dollar off of the gold standard. This action contributed to the end of a deflation that had continued for three years at rates close to 10 percent per year. This amounted to a substantial reversal of monetary policy, as the money supply stopped shrinking and began growing. Many historians see this policy change as key to the positive economic growth that began in that year.

The second episode from the 1930s used to highlight the real effects of monetary policy is the move by the Fed to increase banks' reserve requirements in 1937. This act generally had the effect of slowing the growth of the money supply, contributing to a fall in inflation (in fact, a reappearance of deflation) and the second economic contraction of the Great Depression.

Economic historians continue to debate the relative contributions of both of these monetary policy moves to the overall path of the economy in the 1930s. Certainly, at any one point in time, there were other things happening as well, and it's always difficult to identify a single factor as the unique cause of the ups or downs in the economy. Still, arguments that monetary factors were important in these two turning points seem convincing. So it's possible to take away from this history the conclusion that shifts in monetary

factors can have a sizable effect on real economic activity, particularly in a setting where the economy is operating below its long-term trend.

But in both of these examples, the change in direction of real activity came along with large changes in inflation — from close to negative 10 percent per year to around zero in the first case, and in the second, from an average annual rate of nearly 4 percent in 1937 to negative 2 percent in 1938. Not only were these changes in inflation large but they were arguably unexpected. This last fact is consistent with the notion, originally developed by Milton Friedman and Edmund Phelps, that changes in inflation that take economic decisionmakers by surprise can have real effects, while expected changes in inflation are less likely to affect real activity.

Of course, the lesson of both economic research and experience since then is that policymakers cannot count on always being able to surprise the public. Changes in inflation eventually affect future expectations, meaning the stimulus achieved by moving inflation from negative 10 percent to zero, for instance, couldn't be repeated simply by holding inflation at zero. It would take higher inflation still. And as higher rates of inflation become embedded in people's expectations, bringing down inflation gets costly. The example of 1979-1982, when the Federal Reserve pursued tighter monetary policy to bring inflation in check, is a good example. Price stability was achieved and was crucial to subsequent economic growth, but it required actions that produced a steep recession first.

The existence and the nature of a trade-off between inflation and real economic activity have been debated by economists for more than 60 years. On balance, it's proven fairly difficult to fine-tune the relationship between changes in inflation and changes in the path of real activity. The events of the Great Depression showed us that large changes in inflation (and inflation expectations) can have sizable effects. While that experience provides useful evidence on this matter, the size of the movements seen in that period were large compared to anything we have seen since. In short, stimulating the economy seems to have required very significant policy changes then, arguably beyond the range of much of what has been discussed in the current environment. This suggests caution may be warranted in drawing broad generalizations from past experience. **RF**

John A. Weinberg is senior vice president and director of research at the Federal Reserve Bank of Richmond.

It's proven fairly difficult to fine-tune the relationship between changes in inflation and changes in the path of real activity.

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The United States has gained only half a million jobs since the end of the recession — far from the number needed to put almost 14 million people back to work. What factors are holding back job growth, and what steps can policymakers take to relieve them?

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✓ The *2010 Annual Report* is available online at www.richmondfed.org/publications or by contacting Research Publications at 800-322-0565.