

THE SOUTH TAKING THE LEAD IN THE 1990s

An economic overview of six southern states

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THE FOLLOWING ARTICLE is based on Dallas Fed President Bob McTeer's speech to the Japan-U.S.-Southern Conference in Houston, September 5, 1996.

Texas, New Mexico, Louisiana, Oklahoma, Arkansas and Mississippi have experienced dramatic changes in the structure of their populations and economies over the past few decades. (Throughout this article, these states are referred to as the South.) Although these states have maintained distinctive cultural and ethnic identities, their economies have become more similar to one another's, as well as to the U.S. economy as a whole. Although the South's economy more closely resembles that of the nation, the regional economy has outpaced the nation's throughout the 1990s. This article explores the recent economic performance of these southern states and the unique characteristics of the region that account for much of its current strength.

These six southern states have diversified away from resource-based industries and traditional manufacturing to become more service-oriented economies. Charts 1 and 2 demonstrate this shift. In 1970, agriculture and mining combined (which includes oil and gas exploration and production) accounted for 15 percent of the South's

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Texas

The slowdown in the national economy will reduce the present strength of Texas' economic growth over the next two to three years....GSP growth is expected to slow to 3.2 percent in 1996 from 4 percent in 1995 and to more sustainable rates of 2.8 percent in 1997 and 2.5 percent in 1998. Employment growth will follow a similar trend, falling...to just over 2 percent annually in 1997 and 1998. During this time, personal income growth will slow from 6.7 percent in 1995 to under 5 percent in 1998....[S]ervices will continue to be the state's most important sources of new jobs.... [B]ecause of the slowdown in high-tech and construction-related industries, total manufacturing employment will grow somewhat slower over the next two to three years than in the recent past.

—Texas Comptroller of Public Accounts (July 1996)

New Mexico

The outlook for the New Mexico economy is moderate at best, with employment and income growth significantly below the rates we have recently enjoyed. Employment growth, which averaged about 4.5 percent annually from 1993 through 1995, is expected to fall to 3.2 percent in 1996 and 1.9 percent in 1997. Personal income growth is also expected to be subdued, with gains of 5.4 percent this year and 4.5 percent next year....The services sector will likely remain fairly robust...while trade and manufacturing will enjoy moderate employment growth. Growth in construction and government employment, however, will be weak.

—University of New Mexico, Bureau of Business and Economic Research (1996)

gross state product (GSP). By 1992—the most current year for which GSP figures are available—agriculture and mining's share of regional output had fallen to 8 percent. Yet over the same period, narrowly defined services, such as health care, temporary placement services and computer-related services, grew from 10 percent to 17 percent of GSP. In Texas alone, oil and gas extraction's share of state output was 9 percent in 1970, then peaked at 18.5 percent in 1981, only to fall to just below 7 percent by 1992. The story is similar in agriculture. For instance, in 1970, agriculture accounted for 6.6 percent of Mississippi's GSP but had fallen to 3 percent of GSP by 1992.

While the South has become less dependent on its natural resource-based sectors, they still exert a strong influence on the region's economy. For example, agriculture accounts for a much larger share of total GSP in New Mexico, Oklahoma, Arkansas and Mississippi than in the nation as a whole. While Texas' agricultural sector makes up less than 2 percent of its total GSP, Texas still has more farmland and produces more cattle and cotton than any other state in the nation.

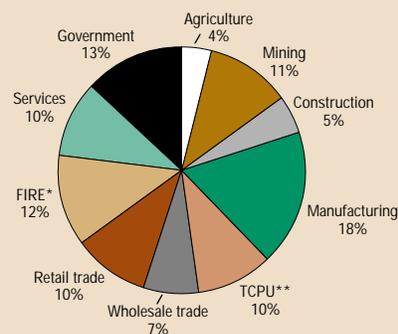
The South accounts for 50 percent of the nation's mining sector. In fact, Texas

alone accounts for 27 percent of national mining output, most of which is oil and gas extraction. While the national energy industry has been downsizing and consolidating, the increased concentration has favored Texas and Louisiana. For example, near the height of the oil boom in 1981, 47 percent of all energy industry wages, salaries and benefits went to workers in Texas and Louisiana. By 1993, industry consolidation had boosted this figure to 62 percent. In short, the size of the national energy industry pie has been shrinking, but the South's piece is getting larger.¹

Continued diversification of the southern economies means the region will be less vulnerable to the cycles associated with the energy and agricultural sectors. On the other hand, when these industries do well, consolidation will bring the South a greater share of the benefits relative to the nation.²

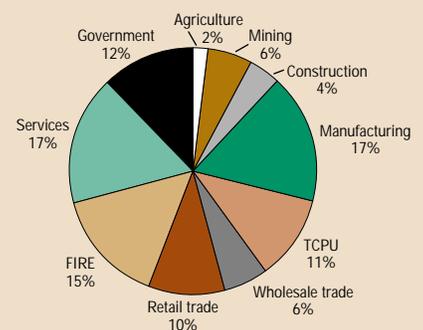
Any comparison of the southern region with the United States should be qualified by noting that Texas, because of its size, is overrepresented in regional GSP, employment and population figures. Texas accounts for 60 percent of the South's combined GSP (*Chart 3*) and about 57 percent of its population (*Chart 4*). Texas employment as of June 1996 was 8,256,200—larger than the combined total of

Chart 1
Southern Gross State Product, 1970



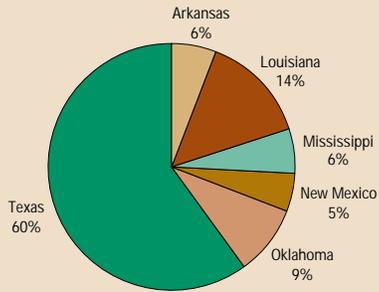
* Finance, Insurance, Real Estate
** Transportation, Communication, Public Utilities
SOURCE: U.S. Bureau of Economic Analysis.

Chart 2
Southern Gross State Product, 1992



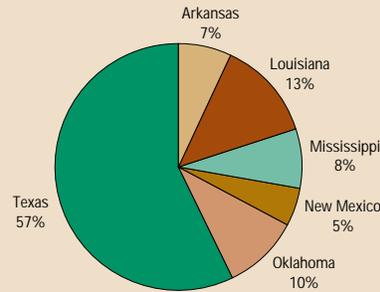
SOURCE: U.S. Bureau of Economic Analysis.

Chart 3
Southern States' Share of Regional Output, 1992



SOURCE: U.S. Bureau of Economic Analysis.

Chart 4
Southern States' Share of Regional Population, 1995



SOURCE: U.S. Bureau of the Census.

6,013,600 jobs in the region's five other states.

Southern Economies Outpace the Nation in the 1990s

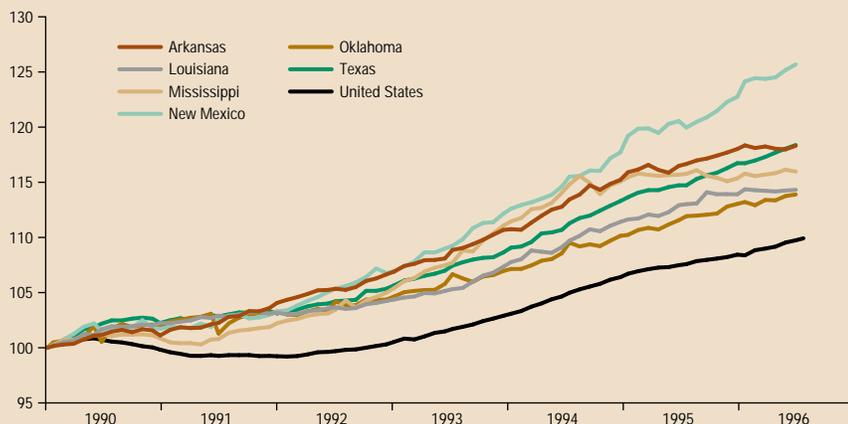
The United States began the 1990s with negative employment growth as a result of the 1990–91 recession. Chart 5 shows that the southern states weathered this downturn much better than the rest of the nation, with positive annual employment growth over the

period. The chart also shows that as the 1990s have progressed, each state in the region has continued to outpace the nation. What is the source of this growth? In general, the South continues to benefit from resource-based sectors like energy and agriculture, but the region has developed several new strengths as well.

As Table 1 shows, growth in services and construction in all six southern states' economies has exceeded the national average. The growth in these sectors has been fueled by rapid population growth in the South—much of it

Chart 5
Southern States' Employment Growth Exceeds the Nation's

Index, January 1990 = 100



SOURCES: Federal Reserve Bank of Dallas; Bureau of Labor Statistics.

Louisiana

The Louisiana economy will pick up an additional 66,000 jobs between now and 1998. Our growth rate will average about 1.8% a year....[D]espite setbacks in textiles and apparel and the health care industry, the state's economy will continue its record setting pace....[T]echnological advances and unusually productive fields in the Gulf [will help] the extraction industry to add another 2,300 jobs over the next two years.... Louisiana will gain manufacturing jobs over 1997–98, a trend that is counter to trends at the national level.

—Scott et al. (1996)
Louisiana State University

Oklahoma

Real Gross State Product...is predicted to grow by...2.6 percent during 1996 on the basis of strong national stimulus and continuing trends and structural adjustments....This expansion of economic activity is expected to generate at least an additional 30,000 nonagricultural wage and salary jobs and combine with higher nonearnings forms of income (i.e., profits, dividends, rents, and interest) to see an increase of total personal incomes of 4.6 percent....As usual, job growth will be almost totally in the broadly defined service industries. Retail trade, health services, and business services account for the majority of growth.

—Oklahoma State University,
College of Business
Administration (1996)

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Arkansas

Despite current strength, Arkansas will settle into lower growth for the next year and a half as national demand factors weaken and limited inflationary pressure becomes evident....Arkansas will technically extend its streak of employment growth above the nation, but absolute growth will be low compared to recent years....Growth in retail sales and gross state product will decelerate through mid-1997 and make a moderate recovery in 1998....Manufacturing industries in Arkansas will be held back by generally weaker domestic markets in construction and automotive sectors.

—University of Arkansas at Little Rock, Institute for Economic Advancement (1996)

Mississippi

Mississippi's economy is keeping pace with the rest of the South, which again is outperforming the nation as a whole.... Both output and employment in 1996 are expected to grow at rates comparable to those of last year....Overall employment growth is projected at 0.9 percent in 1996 and 1.2 percent in 1997....A continuing rise in unemployment is likely over the next few years as the current period of economic expansion draws to a close....[T]he increase in personal income will be solid, at close to 5.0 percent for (1996 and 1997)....The service sector will continue to lead employment growth...and will be the single largest source of new jobs. Employment in wholesale trade and retail trade, which, along with services, has accounted for most of the jobs created in the past decade, is the only sector apart from services which will enjoy a growth rate of over 2 percent in employment.

—Mississippi Institutions of Higher Learning, Center for Policy Research and Planning (1996)

Table 1
1990–95 Annualized Nonfarm Job Growth
(Percent)

	Total nonfarm employment	Service-producing	Manufacturing	Construction	Mining
Texas	2.49	2.87	.66	4.03	-2.92
New Mexico	3.53	3.49	.95	9.42	-.6
Louisiana	2.20	2.65	.41	2.75	-3.78
Oklahoma	1.91	2.43	.14	3.97	-5.77
Arkansas	2.96	3.27	2.15	3.37	-3.78
Mississippi	2.81	3.48	.92	4.24	-4.26
United States	1.40	1.94	-.63	.32	-3.93

SOURCES: Federal Reserve Bank of Dallas; Department of Labor, Bureau of Labor Statistics.

from relocations, as well as high birth rates due to its relatively young population and immigration. Population growth tends to benefit homebuilders, home furnishings suppliers, retailers and service providers, which in turn tends to encourage further increases in population as these sectors draw firms and workers from other states and countries. Another factor boosting the expansion of the service and construction industries in the South has been the fast-growing tourism and gaming industries, especially in Louisiana and Mississippi. While the casino boom remains alive in Mississippi, it has tapered off in Louisiana and may provide less stimulus to the region in coming years.

From 1990 through 1995, growth in the South's service and construction

sectors was accompanied by job gains in the manufacturing sector. During the early 1990s, manufacturing lost 605,330 jobs nationally, while each of the southern states recorded job gains in that sector. In Arkansas and Mississippi, manufacturing accounts for more than 20 percent of total employment, a larger share than in Texas, New Mexico, Louisiana and Oklahoma, where manufacturing's share is less than the 15-percent national average. Arkansas' and Mississippi's manufacturing sectors have expanded in the 1990s, partly due to strong growth in industrial machinery manufacturing in Mississippi and transportation equipment manufacturing in Arkansas.³ Texas and New Mexico have benefited from the expansion of high-tech manufacturing, such as semicon-

Table 2
Wages, Salaries and Income

	1995 average wage in manufacturing	1995 per capita personal income (Estimates)	Annualized income growth, 1990–95 (Percent)
Texas	\$11.60	\$20,654	5.4
New Mexico	10.75	18,055	6.2
Louisiana	13.57	18,827	7.2
Oklahoma	11.55	18,152	4.7
Arkansas	10.23	17,429	6.0
Mississippi	9.90	16,531	7.1
United States	12.48	22,788	5.1

SOURCES: Department of Labor, Bureau of Labor Statistics; John Sharp, Texas Comptroller of Public Accounts; U.S. Bureau of Economic Analysis.

“A favorable climate...makes the South an attractive place to live and conduct commerce.”

ductor, computer and telecommunications equipment manufacturing, and strong demand for new homes and buildings has boosted construction-related industries in Oklahoma’s manufacturing sector. Overall, the relative vitality of the South’s manufacturing sector can be attributed to several factors that make the business climate in the South a favorable one.

The South A Good Place for Business

A favorable climate, in terms of business as well as the weather, makes the South an attractive place to live and conduct commerce. Several characteristics of the region provide its economic environment with a comparative advantage over much of the rest of the nation. Texas, New Mexico, Louisiana, Arkansas, Oklahoma and Mississippi enjoy cheaper labor, less expensive real estate and a lighter tax burden than their counterparts in the Northeast and on the West Coast.

Labor. Perhaps the biggest business advantage the South offers is cheaper labor. Average hourly manufacturing wages are below the national average in all states except Louisiana (Table 2).⁴ Louisiana’s average wage numbers are higher because a large share of Louisiana’s manufacturing jobs are in the high-paying chemical industry. On a less positive note, while relatively cheaper labor is good for business, it translates into lower per capita income. Nevertheless, the region’s recent economic prosperity has meant that, in most cases, incomes have been increasing faster than the national average in the 1990s.

Real Estate. Real estate prices are also lower in these six states, making this region attractive to relocating firms and their employees. In the South, home prices and office rents plummeted after the 1986 bust and have only begun to recover in recent years. Some of the cost differential between the

Table 3
State Rankings for Per Capita Tax Revenue As a Percentage of Personal Income in 1992

	Total state and local tax revenue	Property tax	Income tax	Sales tax
Texas	34	14	None	9
New Mexico	10	49	36	3
Louisiana	28	45	39	4
Oklahoma	36	48	25	14
Arkansas	42	46	26	8
Mississippi	45	37	40	10

SOURCE: Advisory Commission on Intergovernmental Relations (1994).

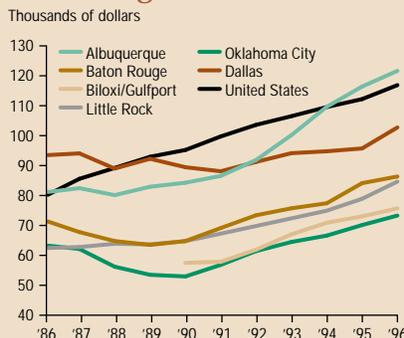
South and other areas has eroded as firm relocations and expansions have helped the region’s real estate markets recover, but the South remains a bargain. For example, office rents average about \$18 per square foot in Albuquerque and Las Colinas, near Dallas. This figure compares with rates of \$32 per square foot in New York and \$25 per square foot in San Francisco. In addition, Chart 6 shows that while home prices are rising in some southern cities, for the most part they remain lower than the national average, with one exception being fast-growing Albuquerque.

Tax Burden. In addition to lower labor and real estate costs, most southern states have relatively low total tax

burdens. As Table 3 shows, with the exception of New Mexico, the southern states rank in the bottom half of the 50 states in estimated tax burden.⁵ The distribution of the tax burden, however, is not shared equally among all goods, services and factors of production. The weight of taxes in the South tends to fall more heavily on consumption of goods and services through relatively high sales tax burdens. Because Texas has no state income tax, it must generate revenue through other forms of taxation, particularly property taxes. On the other hand, New Mexico imposes a very low property tax liability, but the state ranks high in terms of total tax burden because it has one of the nation’s largest sales tax burdens.

Demographics. Another distinguishing feature of the South is its younger and faster growing population. Overall population growth averaged 1.5 percent in the South during the first half of the 1990s, compared with 1 percent for the nation. In particular, Texas’ and New Mexico’s populations grew at least twice as fast as the national average in the 1990s. Growth rates were less marked in the other southern states, but as the overall U.S. population ages, growth rates may pick up in states that attract retirees, such as Arkansas. Strong population growth in the region is a result of both high rates of domestic and international migration and generally higher than average birth rates.

Chart 6
Median Sales Price Of Existing Homes



SOURCE: National Association of Realtors.

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The southern region's population is also younger than the national average. For example, Texas' population is the third youngest in the nation, behind Utah and Alaska. In 1994, the median age was 31.9 years in Texas and 32.4 in New Mexico, Louisiana and Mississippi. In comparison, the national median age was 34.

A faster growing and younger population should benefit the South in several ways. First, a faster growing population is likely to boost the construction sector as more homes and apartments are needed in the South relative to other areas. Second, the South's fast-growing population should attract retailers and other consumer-oriented businesses. Finally, labor force growth is likely to be faster in the South than at the national level, which may be important as the aging of the baby boomers causes U.S. labor force growth to cool. This could be a positive factor for businesses in southern areas with tight labor markets, as entry-level positions will be less difficult to fill.⁶

A Challenge: Education. Youth and diversity have brought a special challenge to the South. In most of the region, the percentage of the population that is high school and college graduates remains below the national average.⁷ Rapid improvement in these figures seems unlikely, given that high school dropout rates in Texas, Louisiana and Mississippi are above the national average.

As the South's population increases, it is also expected to become more ethnically diverse. In fact, minorities are likely to represent the largest segment of new entrants into the labor force in the coming years. Because the high school dropout rate is higher for minorities, they may be less likely to obtain the education necessary for high-skill, high-wage positions. A challenge for the southern states is to train, educate and successfully assimilate these young Southerners into an increasingly diverse labor force.

Conclusion

The South has staged quite a comeback from the difficult economic times of the late 1980s. In addition to a mild climate and central location, several unique factors have attracted people and businesses to the southern states. These factors—which include low labor and real estate costs, relatively favorable tax treatment and a relatively young population—should help keep the South's expansion alive in coming years.

Because the South has diversified away from resource-based industries toward service-based industries, the southern states' economies are more like the nation's and are therefore governed in large part by national trends. The national economy is expected to slow in the next few years as the recent expansion matures, and the economies of the southern states are expected to slow as well.⁸ Based on the forecast of a softening in national growth, the coming years in the South are expected to be somewhat less robust than the first half of the decade. Still, barring any purely regional shocks, the South's economy should continue to perform somewhat better than the national economy as a whole.

— D'Ann Petersen
Marci Rossell

Notes

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¹ For a more thorough discussion of the oil industry's recent consolidation, see Gilmer (1996).

² For an explanation of how different states respond to an increase in oil prices, see Brown and Yücel (1995).

³ In 1996, the manufacturing sectors in these two states have weakened, but growth was quite healthy over the 1990–95 period.

⁴ These wages are nominal—that is, not adjusted for the price level. The lower nominal wages that make the South attractive to business

would make the South unpopular among workers were it not for the fact that the cost of living in the South tends to be lower than the national average as well.

⁵ Tax burden here is defined as the amount of total state–local revenues as a percentage of state personal income. For other measures of state tax burden, see Tannenwald (1996).

⁶ See Petersen (1996).

⁷ Although Texas has a relatively high percentage of college graduates, this can be attributed to the migration of highly educated workers to the state rather than a superior education system within the state. (The high school dropout rate is a better indicator of the quality of the state's current system.)

⁸ See DRI/McGraw-Hill (1996).

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THE UPSIDE OF DOWNSIZING

WORKERS FEAR IT. Firms ponder its benefits. Financial markets celebrate it. Some politicians want government to shield us from it. Media portray it as the scourge of the 1990s. *Downsizing*.

Even in an economic recovery moving through its sixth year, Americans can't escape the reality that some workers are still losing their jobs. The numbers making the headlines are often big enough to provoke anxiety: 74,000 jobs cut at General Motors, 60,000 at IBM, 50,000 at Sears, 40,000 at AT&T.¹ In the 1990s, hundreds of other companies have announced layoffs large enough to command at least a few inches in the *New York Times*, and many more jobs have vanished without fanfare. A recent U.S. Department of Labor survey found that companies dismissed 17.4 million workers from 1990 to 1995.²

Our instinct is to interpret job losses as a sign of failure—something wrong with the system or something wrong with us. To some people, downsizing signifies a breakdown in the loyalty that once held company and worker

together. To others, it signifies personal defeat, a verdict that we, as workers, are no longer valuable human resources. Viewing layoffs as a malfunction, some of capitalism's critics go so far as proposing that government reward "good" companies that don't cut jobs and punish "bad" ones that do with taxes, sanctions and regulations.

Such views are incomplete, if not wholly incorrect and dangerous. Layoffs aren't a sign of failure, not for the economy, not even for most workers. Job losses hurt American workers and their families, no doubt about that, but downsizing cannot be understood apart from a broader view of the economy's health and well-being. More often than not, labor force turnover reflects positive market forces at work. Companies develop new or cheaper products, entrepreneurs pursue opportunities, factories and offices become more productive. In the process, new jobs inevitably replace old ones. This is how the economy grows: through a relentless process of turmoil, a continuous "churn," what economist Joseph Schumpeter called *creative de-*

struction. One of the great ironies of a free enterprise system is that the bad news of job losses is part and parcel of the good news of rising living standards.

Downsizing in Microcosm Smaller but More Productive

A microcosm of recent downsizing will help illustrate what's happening behind the handwringing and headlines. Table 1 presents a sample of 10 large U.S. companies that shed labor in the 1990s, each mentioned time and again in accounts of America's layoffs.³ All told, they jettisoned almost 850,000 workers between 1990 and 1995. Every one of these companies employs fewer workers today than five years ago, so the layoffs appear to be permanent. These companies, and others like them, are the ones critics of downsizing wag their disapproving fingers at and scold as hard-hearted and uncaring.

Beyond the lost jobs, however, another set of facts, typically overlooked,

Table 1
Less Equals More

Downsizing and Productivity Among the Top 10 Corporate Job Cutters

Company	1990			1995			Jobs cut	Productivity gain or loss (-), 1990-95 (Percent)
	Sales*	Employees	Stock price	Sales*	Employees	Stock price		
Sears	\$ 65,263	460,000	\$ 25 ³ / ₈	\$ 35,181	275,000	\$ 39	185,000	-10.3%
IBM	80,475	373,816	113	71,940	252,215	91 ³ / ₈	121,601	28.1
K-mart	37,405	370,000	14 ¹ / ₄	34,654	250,000	7 ¹ / ₈	120,000	31.6
General Electric	68,111	298,000	28 ³ / ₄	70,028	222,000	72	76,000	32.2
General Dynamics	11,872	98,100	12 ⁵ / ₈	3,544	27,700	59 ¹ / ₈	70,400	5.6
Digital Equipment	15,257	124,000	54 ⁷ / ₈	13,813	61,700	64 ¹ / ₈	62,300	59.9
McDonnell Douglas	19,065	121,190	6 ¹ / ₂	14,332	63,612	46	57,578	35.9
Boeing	32,176	161,700	45 ³ / ₈	19,515	105,000	78 ³ / ₈	56,700	-6.8
General Motors	146,936	761,400	34 ³ / ₈	168,829	709,000	52 ⁷ / ₈	52,400	21.0
GTE	21,424	154,000	29 ¹ / ₄	19,957	106,000	43 ⁷ / ₈	48,000	30.3
Total	\$497,984	2,922,206	100**	\$451,792	2,072,227	\$230 ³ / ₄ **	849,979	24.7

NOTES: * Figures are in millions of 1995 dollars.
 ** Equally weighted index; calculated as $100 \sum_{i=1}^{10} \left(\frac{P_i^t}{P_{1990}^i} \right)$, where P signifies a stock price, i signifies a company and t first equals year-end 1990, then 1995.

SOURCES: Compustat, *Fortune* (various issues), Dow Jones News/Retrieval Service.

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Man acquires wealth in proportion as he puts his labor to better account.

— Frederic Bastiat

The creation of new capital always...releases...labor. Its actual effect [though] is not to make jobs scarce, but to free men's labor for other jobs.

— Frederic Bastiat

Table 2
Dialing for Dollars Pennies

Downsizing and Productivity in Long-Distance Communications

	1970	1994	No progress*
Long distance calls	9.9 billion	83.4 billion	83.4 billion
Switchboard operators	421,000	176,000	3,564,607
Calls per operator per day	64	1,300	64
Operators as a share of the labor force	.51%	.14%	2.85%
Work time required to buy a five-minute, coast-to-coast call	40.3 minutes	7.0 minutes	40.3 minutes

* 1994's volume of calls at 1970's level of productivity.

SOURCES: Federal Communications Commission (1994-95); U.S. Department of Labor, Bureau of Labor Statistics (1996a).

deserves equal attention. After adjusting for inflation, the collective output of all 10 firms was down 9.7 percent. The companies used 34.4 percent fewer workers, however, so output per worker surged nearly 25 percent, or 5 percent a year. Their performance greatly exceeded the economy's average annual productivity gain of roughly 1.5 percent.⁴ Rising productivity plays a vital role in rising living standards, so it's incongruous to celebrate productivity gains yet denigrate downsizing.

That's not all. With the exceptions of Sears and Boeing, the companies in Table 1 emerged from downsizing more competitive, and thus more likely to survive. Those who want to identify "good" firms and "bad" firms should take note: if firms don't survive, *nobody* has a job.

More often than not, the wisdom in the hard-nosed decision to downsize wins approval on Wall Street as companies become more profitable and stock prices rise. Indeed, stock price gains among the companies listed in Table 1 averaged over 130 percent from 1990 to 1995, as compared with only 86 percent for the S&P 500 companies overall.⁵ That's half again as much, a gain that surely pensioners and other investors would celebrate.

And what about the 850,000 employees cut by the 10 companies shown in Table 1? In such a complex economy,

of course, there's no way of tracking what happened to each individual worker, but the vast majority most likely found jobs elsewhere. Clearly, this isn't a heroic assumption: today's unemployment rate of 5.2 percent is below that of 1990, and the economy has added nearly 11 million new jobs, net of those destroyed, in the past five years. Opportunities are out there, and many displaced workers are moving to new jobs in sectors that need labor to expand.

As displaced workers take new jobs, they add to U.S. economic output. A precise calculation of their contribution isn't possible, but a reasonable estimate might come from the average output of an American worker—roughly \$58,000 a year. The 850,000 workers recycled from downsizing just 10 firms could increase the country's GDP by \$49 billion, not a bad bonus hidden in the usually glum assessments of layoffs.

Downsizing in Microcosm Problem or Progress?

"Downsizing" may well be the new buzzword for layoffs. But it's something that's been going on for centuries. In 1800, for example, it took nearly 95 of every 100 Americans to feed the country. In 1900, it required 40. Today, it takes just three. The downsizing of

agriculture, however, hasn't left the country hungry. Quite the contrary, the United States enjoys agricultural abundance—and much more. The workers no longer needed on the farm are available to provide new homes, computers, pharmaceuticals, appliances, medical assistance, movies, financial advice, video games, gourmet meals, and an almost dizzying array of other goods and services. The country today would have much less if farming had not endured one of history's most drastic downsizings.

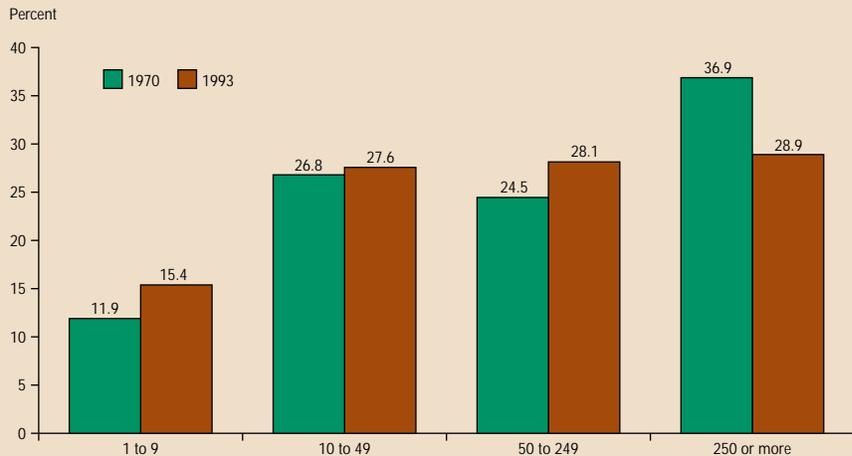
Most of the exodus from farming occurred generations ago, so today's Americans have scant memory of the dislocations it caused. What we have instead is the abundance that comes from allowing the churn to deliver the bounty of higher productivity, wherever and whenever it might occur.

Telephone service provides another rich example of how the economy as a whole benefits as some workers lose their jobs (*Table 2*). In 1970, the industry employed 421,000 switchboard operators, and Americans made 9.9 billion long distance calls. By 1994, Americans rang up 83.4 billion long distance calls. Yet new switching technology allowed telephone companies to downsize this segment of their business to 176,000 operators.⁶

The telecommunications industry could do more with less because a surge in productivity was under way. In 1970, the industry handled only 64 calls a day for every operator. By 1994, the figure had jumped to 1,300—a staggering gain. Without the boost in efficiency, today's volume of long distance traffic would require 3.6 million operators, or 2.9 percent of our labor force, instead of the 0.14 percent it actually takes.⁷ Americans would be worse off in two ways: we would lose the goods and services 3.4 million workers now produce elsewhere in the economy. And we would pay six times as much for our long distance telephone calls.⁸

Chart 1
Small Is In

Percentage of Employees in Establishments by Employee Size



SOURCE: Bureau of the Census, *County Business Patterns*, various issues.

Viewed in macrocosm and with the benefit of hindsight, it is easier to see that downsizing is simply conservation—recycling of the economy's valuable labor resources.

Rightsizing for the '90s

Shedding labor allows companies to adapt to changes in the marketplace. More often than not, downsizing is a matter of sheer survival. Companies with surplus labor will usually have higher production costs and risk losing business to "lean and mean" competitors that can lure away customers with lower prices. Market discipline—in effect, consumers' scrutiny—pushes relentlessly at companies, forcing them to economize on resources, including labor.

Each company must determine its own "right" number of employees, but there's evidence that average firm size has been shrinking in most industries. In effect, the whole economy has been downsizing.

From the early 1960s through the '70s and until 1980, the average size of a company grew—from 13.0 employees

in 1962, to 16.3 in 1970 and 16.5 in 1980. At the peak in 1970, roughly 37 percent of Americans worked in firms of 250 or more employees (*Chart 1*). In that era, bigger was better. In the past decade or so, however, the trend has gone the other way. The average number of employees per firm slipped to 14.8 in 1993, with only 29 percent of workers employed by firms of 250 or more.⁹

Downsizing has suited a broad spectrum of industrial categories—manufacturing; mining; construction; agriculture; wholesale trade; finance, insurance and real estate (FIRE); and transportation, communication and public utilities (TCPU) (*Chart 2*). Average firm size has continued to grow in only two broad sectors. Retail trade went from 12.3 workers in 1980 to 12.7 in 1993. Companies in the catchall category called "other services," which includes health care, entertainment and information industries, expanded from 11.3 to 14.1 employees, on average.

Why are companies getting smaller? One factor might be the computer, an innovation that's touched many industries.¹⁰ These tools, hard to find inside any firm two decades ago, are now

THE UPSIDE OF DOWNSIZING

almost ubiquitous. In fact, half of American workers now use computers on the job. Becoming less expensive and more powerful as they've spread through the economy, computers allow people to work easier and faster than ever before. With a computer, a secretary can quickly revise and print the boss' correspondence (or workers can do their own), reducing the work for a typing pool. Using hand-held devices, salespeople can submit orders with a keystroke or two, cutting the need for personnel to process paperwork. In steel mills, automobile plants and other factories, computers control the production process, so one technician can now do what once took dozens of workers. And with the advent of the Internet, individual workers are becoming more able every day to locate and download information that once might have taken a small staff.

The computer might also help explain why retail trade and many other services aren't showing a decline in average firm size. More than mining or manufacturing, these businesses rely on one-on-one contact with customers, a task ill-suited to the computer. As a result, firms in these sectors don't get

the same benefits from trimming employment.

A Lesson from the EC

No one can guarantee that every displaced worker will readily find a good-paying job, but unemployment in the United States is, for most workers, relatively brief. Job openings average roughly 525,000 per month, more than double the typical monthly growth of the labor force.¹¹ Half of those who lose their jobs find another within six to eight weeks; two-thirds find one within 14 weeks; and seven-eighths within six months. Recent studies show that most workers replace their old job with a new one that pays as well or better.¹²

Even if unemployment is brief, it is unsettling, and society will always be tempted to look for ways to avoid layoffs. Job-saving policies, however, aren't the way to make Americans better off. An economy will remain vibrant and forward-moving *only* if it can redistribute its labor resources in response to changes in demand and advances in technology. Efforts to protect jobs by short-circuiting the churn

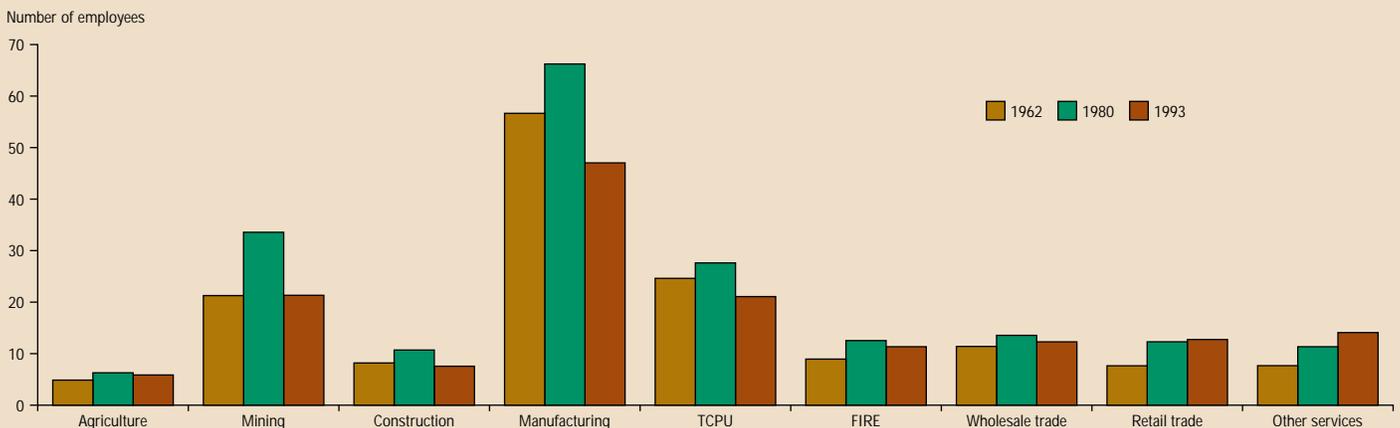
invariably produce higher unemployment, slower job growth and lower productivity growth in the long run.

A comparison between the United States and the European Community bears this out. While America's labor market remains relatively unencumbered, many EC nations, hoping to thwart job losses, have saddled employers with burdensome rules on when and how workers can be dismissed. The red tape and reproach involved in cutting jobs makes firms wary of hiring new workers in the first place. With few new opportunities opening up, workers cling to existing jobs. As a result, too many of Europe's labor resources remain frozen, and companies cannot respond quickly and aggressively to changes in the market.

The EC may have managed to "save" a few existing jobs, but at a high cost in economic performance. Growth is slower. Productivity gains are meager.¹³ Most telling, the effort to preserve jobs has largely hindered prospects for workers. The United States has added 11 million jobs since 1990, a gain of 9 percent, while the EC has created 5 million, or just 3 percent. For most of this decade, unemployment in the EC

Chart 2
Reversal of Trend

Employees per Firm and Industry



SOURCE: Bureau of the Census, *County Business Patterns*, various issues.

There is not a tool, an implement or a machine that has not resulted in a decrease in the contribution of human labor. Labor is not made permanently idle [though]; when replaced in one special category... it turns its attack against other obstacles on the main road to progress.

—Frederic Bastiat

has been at 10 percent or more, almost double the U.S. rate. Worse yet, over 5 percent of the EC's labor force has been out of work for a year or more. In the United States, the figure is less than three-fourths of 1 percent.

Enduring the Churn America's Real Source of Strength

Some may say that downsizing has "gone too far."¹⁴ There's no denying the upheaval caused by letting economic forces work. Yet we cannot ignore the much greater cost that would be imposed by forcing companies to maintain the status quo. To society, the valuable resource clearly is the worker, not an existing job. Efforts to preserve jobs may well succeed, but these policies will rob the economy of its vitality and deprive this generation and future ones of the progress that lifts living standards. Indeed, what makes the American economy so strong is our willingness to endure the churn and let it enrich our economy over and over again.

— W. Michael Cox
Richard Alm

Notes

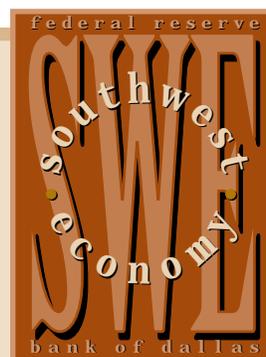
- ¹ These numbers refer to layoff announcements, not to the total jobs these companies cut from 1990 to 1995, which have been much greater.
- ² Data are from the U.S. Department of Labor (1996b).
- ³ By and large, the companies reviewed here reduced their labor force through layoffs rather than divestitures, although this distinction is not a critical one. Restructuring by any means—downsizing, divestiture, merger, acquisition, leveraged buyout and so forth—will typically have both employment and output effects for the firm, and thus can be investigated in terms of its effect on productivity.
- ⁴ *Productivity* in this study is calculated as output per worker, rather than output per hour, as typically measured.
- ⁵ Moreover, at 3.13 percent, the dividend yield for the 10 stocks listed

in Table 1 averaged more than that (2.88 percent) for the S&P 500 companies over the 1990–95 period. Reinvesting all dividends, a \$100 investment at year-end 1990, spread equally across each of the 10 firms listed in Table 1, would have grown to \$269.16 (an average annual rate of 21.9 percent), as compared with only \$214.95 (16.5 percent annually) for an S&P 500 investment.

- ⁶ At the same time jobs have been pared from this segment of the telecommunications industry, they have been added to others. Employment in the cellular telecommunications segment, for example, increased from 15,927 at the beginning of 1990 to 68,165 by the end of 1995, for a net gain of 52,238 jobs in six years.
- ⁷ Hourly wages of telephone operators also grew at a pace one-third to one-half better than average during the 1990s. From 1990 to 1995, operators' hourly wages increased at an average rate of 4.04 percent annually, as compared with only 2.66 percent for all other clerical workers and 2.91 percent for hourly employees as a whole.
- ⁸ Figures are based on the amount of work time required for a typical manufacturing employee to afford a five-minute daytime residential call from New York to Los Angeles, calculated as the price of the call divided by average hourly manufacturing wages. For 1970, this calculation is $(\$2.25/\$3.35) = 0.67$ hours = 40.3 minutes, and for 1994 the figure is $(\$1.40/\$12.06) = 7.0$ minutes. Based on AT&T's new One Rate Plan (15 cents anytime, anywhere), the 1996 work time figure is 3½ minutes.
- ⁹ Data are the most recent available.
- ¹⁰ One other important factor is the increasing tendency for firms to outsource many of their functions (such as payroll and accounting) to smaller firms that can do them more efficiently.
- ¹¹ Job openings data are monthly averages for 1993–95 and are the most recent available.
- ¹² See Council of Economic Advisers (1996).
- ¹³ GDP and productivity (output per worker) growth averaged 1.5 percent and –0.1 percent in Europe over the 1990–95 period, while in the United States, growth averaged 2.5 and 1.5 percent, respectively.
- ¹⁴ See Reich (1996).

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REEXAMINING THE MINIMUM WAGE

“A public outcry over wages... in turn-of-the-century sweatshops led to the first minimum wages in the United States.”

THE 20-PERCENT increase in the federal minimum wage scheduled to occur over the next year may not be the best way to boost the incomes of low-skilled workers and their families. This article explores the purpose and impact of the minimum wage in an effort to discover whether it is a good idea.

Proponents of the minimum wage argue that it ensures a “living wage” for workers who might otherwise be underpaid, while opponents claim it costs hundreds of thousands of workers their jobs and reduces new hires of unskilled workers. About 10 percent of workers will be directly affected by the two increases in the minimum wage Congress authorized in 1996. The first increase, which took effect on October 1, boosted the minimum wage from \$4.25 to \$4.75. The second increase, scheduled for September 1, 1997, will raise the wage floor to \$5.15.

A Brief History

A public outcry over wages and working conditions in turn-of-the-century sweatshops led to the first minimum wages in the United States. Several states, beginning with Massachusetts in 1912, regulated minimum wages, maximum hours and working conditions for women and minors. A national minimum wage was created in 1938 when President Franklin D. Roosevelt signed the Fair Labor Standards Act (FLSA). Initially set at 25 cents per hour, the wage floor applied to industries engaged in interstate commerce and covered about one-fifth of the labor force. The FLSA also required overtime pay and set restrictions on child labor.

The basic goal of the minimum wage is to guarantee workers a “fair wage.” Congress determines increases in the federal minimum wage and has usually set it at about one-half the average manufacturing wage. (Table 1 summarizes the history of the federal minimum wage.) Since the minimum wage is set in nominal terms, its real value declines as prices rise until Congress raises the wage floor again, creating the sawtooth pattern evident in Chart 1. As shown in the chart, the minimum wage fell dramatically relative to the average manufacturing wage during the 1980s, prompting one-third of the states to impose state minimum wages above the federal level. Over time, Congress has

greatly expanded the coverage of the FLSA, and almost 90 percent of workers now must be paid at least the minimum wage. Most businesses with annual sales of less than \$500,000 are exempt from the minimum wage standard.

Concerns that the wage floor would reduce employment for certain groups of workers led to the creation of “subminimum wages.” The federal wage floor has usually been lower for students, and in 1989, the subminimum wage was expanded to cover all teenagers. Under the 1996 law, employers will still be able to pay teenagers \$4.25 for up to 90 days. Tipped employees may also be paid less than the wage floor since the law currently includes a “tip credit” that allows employers to pay workers \$2.13 an hour and credit tips for the rest of the wage floor.

Table 1
Federal Minimum Wage Chronology

Date of legislation	Date of increase	Nominal minimum wage
1938	October 1938	\$.25
	October 1939	.30
	October 1945	.40
1949	January 1950	.75
1955	March 1956	1.00
1961	September 1961	1.15
	September 1963	1.25
1966	February 1967	1.40
	February 1968	1.60
	May 1974	2.00
1974	January 1975	2.10
	January 1976	2.30
	January 1978	2.65
1977	January 1979	2.90
	January 1980	3.10
	January 1981	3.35
1989	April 1990	3.80
	April 1991	4.25
1996	October 1996	4.75
	September 1997	5.15

NOTES: Nominal minimum wage is the highest minimum wage in effect; lower rates often are applied to workers newly covered by the Fair Labor Standards Act or to young workers.

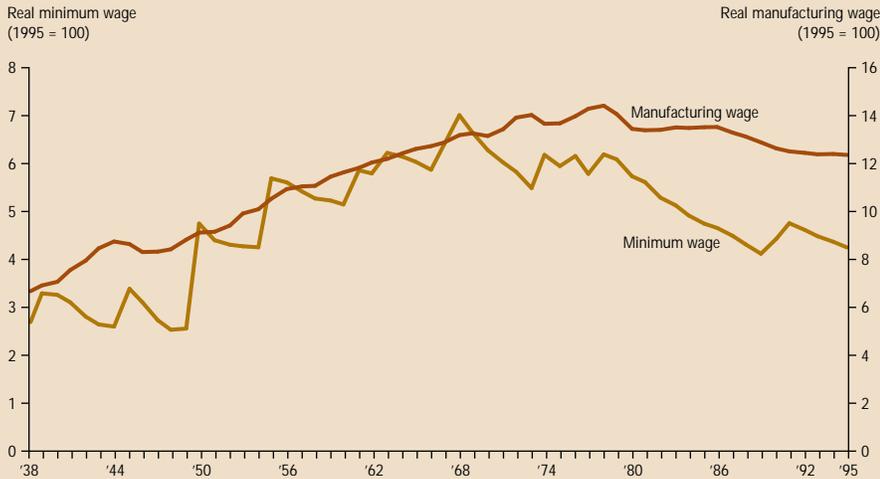
SOURCE: U.S. Bureau of the Census, Statistical Abstract, various years.

Who Earns the Minimum Wage?

Before we assess the effects of minimum wage hikes, it is useful to examine the demographics of those earning the minimum wage to determine whether the policy helps low-skilled workers who support families or merely boosts the incomes of middle-class teenagers. Relatively few workers earn exactly the minimum wage—only 5.3 percent in 1995. Fewer than 10 percent of workers earned between \$4.25 and \$5.15.

There are two main types of minimum wage workers: youths who are earning a starting wage, often while still in school, and adult women for whom the minimum wage is a primary source of household income. In 1995, more than one-third of all workers earning the federal minimum wage were teenagers, and another one-fifth were aged 20–24. The vast majority were part-time

Chart 1
Minimum Wage and Manufacturing Wage



workers, and over 60 percent of workers paid the federal minimum wage were female. Table 2 summarizes the characteristics of minimum wage workers.

Minimum wage workers are highly concentrated in the retail trade and service sectors and in small businesses. Over four-fifths of workers paid the federal minimum wage in 1993 were employed by retail trade or service establishments. More than one-half of all workers earning the minimum wage were employed at establishments with fewer than 25 employees, and about 85 percent were employed by establishments with fewer than 100 employees. In addition, a higher fraction of workers employed by small businesses are paid the minimum wage; almost 4 percent of employees at establishments with fewer than 25 employees earned the minimum wage, compared with less than 1 percent at establishments with more than 250 employees.

Many economists believe that the minimum wage raises the wages of middle-class teens while doing little to help the working poor get out of poverty. Edward Gramlich (1976) found that any income gain among teenagers resulting from the minimum wage are about evenly split between high-income and low-income families. The vast majority of minimum wage workers are *not* the primary wage earner in a poor

family; Richard Burkhauser and T. Aldrich Finegan (1989) estimated that in the mid-1980s only 7 percent of low-wage workers were heads of families living in poverty. Burkhauser, Kenneth Couch and David Wittenberg (1996) found that almost 40 percent of all workers directly affected by the minimum wage increases in 1990 and 1991 were from families in the top half of the income distribution, with 4 percent of affected workers in the top decile.

The minimum wage does have the potential to raise the incomes of some poor households, particularly those headed by women. About 40 percent of poor adults worked in 1994, and

low-wage workers contribute about one-half of household earnings. Over one-fourth of all workers in the lowest family income decile were affected by the 1990 and 1991 federal minimum wage increases, according to Burkhauser, Couch and Wittenberg. Because women tend to have lower earnings than men, working women are more likely to be in poverty. In 1987, the earnings of nearly 18 percent of working female household heads were less than the poverty level.

However, the minimum wage is not high enough to lift most single-earner families out of poverty. After the federal minimum reaches \$5.15 in 1997, a full-time, year-round worker will earn about \$10,700 annually before taxes, less than the poverty level for a family with two children. More than one-half of all families headed by single women with children were below the poverty level in 1993.

In addition, low-skilled adults may be the most likely to be laid off when the minimum wage is raised. Minimum wage increases may draw more-skilled workers into the labor market and cause employers to switch from low-skilled workers to high-skilled ones. Indeed, Kevin Lang (1994) found that minimum wage increases appear to have caused restaurants to substitute teenagers for lower skilled adult workers. Similarly, research by David Neumark and William Wascher (1995) suggests that employers substitute higher skilled teens for lower skilled teens when the minimum wage is raised.

Youths who earn the minimum wage are soon likely to earn higher wages, while adults with low levels of education are more likely to get stuck at the wage floor. Ralph Smith and Bruce Vavrichek (1992) followed a group of workers earning the minimum wage in the mid-1980s and found that over 60 percent of them were earning higher wages after one year, with a median wage gain of 20 percent. However, over one-third of those workers who were

Table 2
Characteristics of Minimum Wage Workers in 1993

Percentage of minimum wage workers*	
Age 16-19	37
Age 20-24	20
Female	61
Black	13
Hispanic	14
Part-time**	68
In retail trade or services	83
Employed by small businesses***	60

NOTES: * Defined as workers paid an hourly wage of \$4.25, the federal minimum wage. All figures based on the 1993 Current Population Survey. Establishment data are from D. Card and A. Krueger (1995).

** Usual weekly hours less than 35.

*** Establishments with fewer than 25 workers.

REEXAMINING THE MINIMUM WAGE

still employed a year later did not experience any wage increase, even before adjusting for inflation. These workers tended to be older and have less education than workers who experienced a wage increase. These demographics suggest that a substantial minority of low-wage workers might receive even lower wages in the absence of a minimum wage.

Teens and low-skilled women are the primary earners of the minimum wage. If the minimum wage is designed to ensure a “living wage” for families, it fails to accomplish this because it does not raise a single-earner household with children out of poverty. Although the minimum wage raises some workers’ wages, it also may hurt the very workers it is designed to help since businesses may respond to minimum wage increases by reducing the number of employees, cutting the number of hours worked by employees and/or raising prices.

Effects of Minimum Wage Increases

Neoclassical economic theory predicts that a minimum wage increase will reduce the number of low-wage workers demanded by employers. Under this model, employment of workers who initially earned less than the new wage floor should fall when the minimum wage is increased. If employers need to raise the wages of other workers to maintain a wage hierarchy within the firm, the ripple effect can cause even greater employment losses.

Economists have tested this theory by examining the effect of minimum wage increases on employment among teenagers. Most studies have found that an increase in the minimum wage slightly lowers teenage employment.¹ In their 1982 survey of minimum wage research, Charles Brown, Curtis Gilroy and Andrew Kohen conclude that a 10-percent increase in the minimum wage reduces teen employment by 1 to 3 percent. In a recent study, Donald Deere,

Kevin M. Murphy and Finis Welch (1995) conclude that the 1990 and 1991 increases in the federal minimum wage caused teen employment to be at least 10 percent lower than it would otherwise have been.

Several recent studies, however, have found that minimum wage increases appear not to reduce employment among low-wage workers. David Card and Alan Krueger (1995) find that increases in federal and state minimum wages during the 1980s and early 1990s did not reduce employment among teenagers or workers at fast-food restaurants. Indeed, their research suggests that the increases may even have slightly raised employment. In a particularly controversial study, Card and Krueger find that a 90-cent increase in New Jersey’s minimum wage in 1992 appears to have increased employment at fast-food restaurants relative to neighboring Pennsylvania, which did not experience a minimum wage increase. This research, and its implications for public policy, has been strongly criticized on methodological and theoretical grounds.

There are several potential reasons employment might not fall when the minimum wage rises. First, an increase in the minimum wage simply might not be large enough to raise wages. Even if the minimum wage hike raises workers’ pay, there are several possible scenarios in which employment might not fall or might even increase. One such possibility is monopsony, in which a firm can attract more workers if it increases the wage. If workers with similar skills have different reservation wages—the lowest wage at which they are willing to work—then an employer will first hire those workers with the lowest reservation wages. As a firm hires more workers, it must raise the wage, but employers may not be willing to pay higher wages to all workers to attract additional workers. Under this theory, a minimum wage increase forces the employer to offer a higher wage and

increases the number of persons willing to work, thereby possibly increasing employment.² Another possibility is that existing workers become more productive when the minimum wage is raised or higher skilled workers enter the labor market, and increased output balances out the higher cost of labor to employers.

These explanations for why minimum wage increases may not reduce employment are not particularly compelling or realistic. Monopsony power effectively requires that an individual firm have a monopoly on jobs. This almost certainly does not characterize the labor market for most firms, particularly those that employ low-skill, low-wage labor—just consider the number of fast-food restaurants in your town and think about whether any one of those firms can be considered a monopoly provider of jobs for low-skill workers. In addition, if a firm can increase output and potentially earn greater profits by offering a higher wage, it should be willing to offer the higher wage without the mandate of the minimum wage.

Another reason employment might not fall when the minimum wage increases is that businesses may reduce hours while keeping the same number of workers. This practice potentially leaves workers better off if they are able to earn the same amount as before by working fewer hours at a higher wage. However, there is no current empirical evidence to support or refute this hypothesis. Economists have also suggested that employers may replace labor with capital over the long run in response to minimum wage hikes, in which case the true impact of a minimum wage increase cannot be observed for several years.

Employers may raise prices as well as reduce employment when the minimum wage increases. This effect has been documented in fast-food prices, which is not surprising since most restaurant employees’ wages are near

“A tax-based policy can be both more equitable and more efficient than the minimum wage.”

the minimum wage. Several researchers have found that a 10-percent increase in the minimum wage is correlated with a 1-percent increase in fast-food prices. Minimum wage increases can contribute to inflation through two channels: firms may raise prices to recoup higher labor costs, and workers earning higher incomes may raise aggregate demand, creating further upward pressure on prices.

Is There a Better Way?

The historical basis of the minimum wage was to prevent the exploitation of labor. Proponents of the federal minimum argue that it is still needed almost 60 years after its creation to ensure a living wage. Although the wage floor does raise wages for some workers, it can also reduce employment opportunities and raise prices. Minimum wage supporters often argue that the poverty-reducing effects of the minimum wage outweigh the potential small disemployment effects. However, most minimum wage workers are not from impoverished families, and the least skilled, lowest wage workers are the most likely to be laid off when the minimum wage is increased.

There are better ways for government to help the working poor, particularly those who are supporting families. One option is to use tax policy to ensure that workers earn at least the poverty level for their household. The minimum wage could be replaced by a combination of tax credits and a negative income tax. This approach has several advantages. A tax policy could easily be targeted to help only workers from poor families instead of benefiting all workers regardless of need. While the minimum wage acts as a tax on businesses that hire low-skilled workers, an alternative program could be funded with general tax revenues. A tax-based policy can be both more equitable and more efficient than the

minimum wage.

In addition, a tax-based policy would offer low-skilled workers greater opportunity to acquire job-market experience. The minimum wage can be a disincentive for firms to hire low-skilled workers, reducing the ability of workers to get a foot in the door and learn skills through on-the-job training. Of course, a primary disadvantage of eliminating the minimum wage is that some firms might be able to exploit workers and pay them below-market wages.

The United States already has a policy similar to the one outlined above: the Earned Income Tax Credit (EITC), which provides a wage subsidy to low-income workers with dependents. In 1996, for example, a worker who has two children and earns less than \$8,890 receives a 40-percent wage subsidy under the EITC. Benefits are phased out as earnings increase and families rise above the poverty level. Unlike the minimum wage, the program only benefits low-income workers, and the benefit is based partially on family size. The EITC also can move more working families with only one wage earner out of poverty than can the minimum wage.³

Given that programs like the EITC are a better way to “make work pay” than the minimum wage, why do we continue to have a minimum wage? Surveys show the vast majority of the American public supports the minimum wage. Politicians support it because it offers a way to redistribute income through an indirect tax on businesses, whereas tax-based programs such as the EITC require government funding in an era of budget deficits. Some members of Congress have recently even called for reducing the EITC to reduce government expenditures. Unless the public and politicians recognize that a tax-based program is a better way to help the working poor, the federal minimum wage policy almost certainly will continue to exist.

—Madeline Zavodny

Notes

- ¹ Economists focus on the effect of the minimum wage on employment instead of on unemployment since the minimum wage potentially affects labor supply as well as employment. Several studies have found that teen labor supply falls when the minimum wage increases, and, therefore, teen unemployment can decline even though the teen employment falls.
- ² *Dynamic monopsony*, a variant of the monopsony model, is another theory for why employment might increase when the minimum wage rises. In this model, the minimum wage helps solve imperfect information problems. In one plausible version of the dynamic monopsony model, an increase in the minimum wage raises employment by reducing labor turnover.
- ³ A worker with two children earning the minimum wage of \$4.25 in 1996 would have earned \$8,840 annually. A minimum wage of \$5.15 raises the family's income to \$10,712, while the current EITC program raises it to \$12,376. The poverty level for this family was \$12,278 in 1995.

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A COMMENTARY FROM THE PRESIDENT

The Dallas Fed's recent conference on exchange rate policy rules and the tequila effect of the Mexican peso crisis took me back to graduate school and my early years at the Fed. In those days—the late 1960s—the Bretton Woods system of fixed exchange rates was on its last legs, and the intellectual case for flexible exchange rates was gaining ascendancy.

An important argument for flexible exchange rates was that they would better insulate domestic economies from external disturbances and provide greater independence for domestic monetary policies. A related claim was that flexible exchange rates would render sticky domestic prices and wages flexible in terms of foreign currencies and thus make international adjustments less harmful to domestic employment. Real wages could adjust without a change in nominal wages.

As I recall, the key to whether flexible rates would perform as touted was the international dominance of trade over capital accounts. Back then, nations traded and capital adjusted to keep overall payments in balance, at least in theory. Nowadays, capital flows dominate, and trade does much of the adjusting. In any case, the recent experiences of Mexico and Argentina bring many of the old issues back to the forefront.

Rather than use flexible exchange rates to achieve insulation and policy independence, Mexico in 1989 began using semifixed rates—a crawling peg—to achieve policy dependence. The idea was that Mexico could import greater price stability from the United States than it could achieve on its own. The central bank thus used the exchange rate as its principal instrument of monetary policy to reduce inflation. That policy—combined with free market reforms, privatization of state-owned enterprises and an opening of Mexican markets to the world—was remarkably successful prior to the financial crisis that culminated in December 1994. Many economists and others have second-guessed Mexican monetary policies during 1994. However, it seems clear to me that the primary and proximate cause of the capital flight that depleted reserves and prompted devaluation was not economic fundamentals but rather political uncertainty stemming from the Chiapas uprising and two political assassinations.

Argentina used its currency board arrangement—intended to fix the country's exchange rate at parity to the U.S. dollar—to renounce independent domestic monetary policies and tie the fate of its economy to the dollar. This arrangement was more rigid than was the Mexican arrangement, presumably because of Argentina's recent history of hyperinflation with its implications for credibility. Argentine policymakers found it necessary to burn their bridges behind them, so to speak.

Once the financial crisis hit both countries, the different outcomes were instructive. Mexico's progress on inflation was eroded by an unintendedly large devaluation, but the devaluation at least sowed the seeds of recovery from the resulting sharp recession. The Mexican economy began to recover after

only six months. Argentina's exchange rate and low inflation rate held, but at the expense of a banking crisis and a sharp, lingering recession. Furthermore, under the currency board rule, Argentina has no policy tools to combat the still very high unemployment rate. But given that inflation has been a historically intractable problem in Argentina, that trade-off may well be the correct one for that country.

At the conclusion of our conference, I was asked to summarize some of the "tequila lessons" from a policymaker's perspective. One lesson from both countries' experience is that basically sound economic policies are no guarantee of success. Another lesson is that, operating in the fog of uncertainty, policymakers can never quite know how close they are to the edge of a cliff or how far the fall might be. The appropriateness of Mexican monetary policies during 1994 can be second-guessed, but foresight is never as good as hindsight.

Another obvious lesson is that once the viability of a fixed exchange rate comes into question, it's usually too late to save it. So, no matter how beneficial the fixed rate may have been before the crisis, its demise is usually very costly. Had Mexico had a more flexible rate in the early 1990s, it probably would have been somewhat less successful initially in reducing inflation, but the peso's depreciation during 1994 would probably have been much less severe. Mexico's more recent experience confirms for me the advantages of flexibility. Its peso had settled in at a stable rate of about 7.5 to the dollar for many months, which involved an appreciation in real terms since Mexican inflation exceeded that of its trading partners. The rate has recently adjusted to about 8 to 1 in a smooth transition without a crisis.

Argentina's current dilemma illustrates another policy lesson: the importance of credibility in government and central bank policies. During our August conference, Argentina's policymakers were proposing a tax increase in the midst of high unemployment because they felt they had to reduce their budget deficit to shore up credibility. When credibility is in doubt, policies have to be tougher, or even sometimes perverse, to sustain trust. With credibility, policymakers can be less severe without adverse market reaction. Because of the credibility issue, Argentina's ironclad system of fixed exchange rates is probably necessary and appropriate there. For the United States and, I believe, for Mexico, greater flexibility is desirable.

A final policy lesson brought home to me by the Mexican crisis is just how important correct and credible policies are to our standard of living. Small policy mistakes can lead to horrible results both at home and abroad. In the United States, with our tradition of greater stability, the markets are more forgiving, and we can easily forget the human suffering bad policies can cause.



President and CEO, Federal Reserve Bank of Dallas

Policy Rules and Tequila Lessons: Conclusions from an Economic Conference

THE IMPACT OF the 1994–95 Mexican peso crisis rippled through South America in a wave later dubbed the *tequila effect*. The crisis caught many countries off-guard, especially those, like Argentina, that had implemented ironclad policy rules intended to prevent such financial problems. In the case of Mexico, it was an exchange rate policy rule intended to foster price stability that ultimately proved unsustainable, with calamitous consequences.

Under what circumstances can such rules be sustained? And what special problems do they engender for the countries that adopt them? These topics were addressed in “Policy Rules and Tequila Lessons,” a conference sponsored by the Federal Reserve Bank of Dallas’ Center for Latin American Economics and the Universidad Torcuato Di Tella in Buenos Aires on August 12–13. The central issue addressed at the conference was the sustainability of fixed exchange rate systems.

Only weeks before the conference, Argentine Minister of Economy Domingo Cavallo had stepped down amid growing concerns about the viability and desirability of that country’s policy rules. As Cavallo delivered the opening address to the conference, defending the success of those policies, his successor, Roque Fernández, was proposing tax increases aimed at buttressing their credibility in the midst of 17-percent unemployment.



Domingo Cavallo, former Argentine Minister of the Economy (left), opened the conference with remarks about his country’s efforts to uphold its currency board rule. Dallas Fed President Bob McTeer (right) was a conference cohost.

Argentina and the Currency Board Rule

To keep a fixed exchange rate as an anchor against inflation, Argentina since 1991 has adhered to a rule for printing currency called a *currency board rule*. Under such a rule, a country selects a foreign currency, such as the U.S. dollar or the German mark, and a fixed rate at which domestic currency can be exchanged for this foreign currency. In the case of Argentina, the exchange rate was fixed at one peso per U.S. dollar. Then the currency board, which effectively replaces the discretionary policies of a central bank, prints at a fixed

exchange rate only enough domestic currency to equal the country’s foreign currency reserves. If this rule is strictly followed, then at any time, the currency board is able to buy back any or all of the domestic currency using foreign reserves at the fixed exchange rate. This policy is meant to safeguard against currency devaluations but works only as long as the government maintains the currency board rule.

Under such a rule, the government, in essence, ties its own hands. And although this approach can lead to price level stability, *ex post*, circumstances often arise that tempt the government to abandon the currency board rule. For example, if a government’s debt is becoming increasingly large relative to gross domestic product (GDP), raising the taxes necessary to pay the interest on the debt becomes more difficult. The government then has an incentive to *monetize* the debt—that is, to print money to pay the government’s creditors—and in so doing, to violate the currency board rule.

More likely, however, before monetization occurs, investors will notice the increasing debt and anticipate a devaluation. Fearing the losses that would result from a devaluation or seeking to profit from it, these investors could launch a speculative attack against the country’s currency, selling the domestic currency to buy foreign currency. The consensus reached at the conference was that, to avert fears of a devaluation, a country following a currency board rule must keep a balanced fiscal budget over time by compensating for fiscal deficits with fiscal surpluses.

On this score, Argentina has been running a series of fiscal deficits that are too large to prevent the growth of debt as a percentage of GDP. The need to allay investors’ fears of default or inflation was what motivated Argentina’s new minister of economy to propose tax increases despite the country’s recent severe recession and a continued 17-percent unemployment rate.

Argentina’s struggles with the currency board reflect a key lesson from the conference: monetary and fiscal policies are inextricably intertwined. It is impossible to maintain a fixed exchange rate system without the corresponding support of fiscal policy, as Thomas Sargent stressed in his presentation,

BEYOND THE BORDER

“Stabilization Plans and the Feasibility and Credibility of Macroeconomic Policies.” Sargent is an economics professor at Stanford University and the University of Chicago.

In a related contribution, University of Minnesota Professor Timothy Kehoe, discussing his research with Harold Cole of the Minneapolis Fed, argued that in addition to the size of the government debt, the maturity structure of the debt is important in maintaining the credibility of a fixed exchange rate system. A concentration of short-term debt must be accompanied by the ability to increase tax revenues substantially in the short run. Otherwise, investors may speculate that the government will not be able to repay its debt.

This was the case in Mexico, where the stock of *tesobonos*—dollar-denominated bonds issued by the Mexican government—that would fall due between December 1994 and May 1995 represented 10 percent of Mexican GDP. Investors reasoned that Mexico could not raise the necessary taxes in just six months in the event the *tesobonos* could not be rolled over into another debt instrument. Investors’ fear of default on *tesobonos* contributed to a run on Mexican debt and currency that culminated in the December 1994 peso devaluation and the abandonment of Mexico’s fixed exchange rate system. Political events also may have been involved in the run against the *tesobonos*.

Banking Stability and the Lender of Last Resort

Another aspect of fixed exchange rate systems discussed at the conference was the constraint a fixed exchange rate puts on the government’s role as a lender of last resort; printing money to bail out troubled financial institutions violates a currency board rule. Although a government may vow not to act as a lender of last resort, it usually does so in the midst of a financial crisis. Therefore, it is better to decide and announce in advance the explicit conditions under which it may or will not do so. In particular, it is important to decide whether money creation and the inflation tax or legislated taxes will be used to fund the system. Thus, the issue of lender of last resort, traditionally an aspect of monetary policy, is ultimately an issue of fiscal policy as well.

Paradoxically, the availability of a lender of last resort services can make a financial system more prone to crises if it causes financial institutions to take more risks than they would otherwise. In addressing this moral hazard dilemma, conferees agreed that governments can do little to resolve it

through regulation. Brown University Professor Peter Garber pointed out that the ever-increasing complexity of financial derivatives markets may prevent even the most skillful regulators from distinguishing between conservative financial behavior and leveraged operations with substantial hidden currency risk.

Columbia University Professor Charles Calomiris, even less optimistic about what governments can do, advocated private disciplining mechanisms. One mechanism he proposed was the use by banks of subordinated debt, debt that is not insured by government. Banks would be required to issue a minimum amount of uninsured debt. When a bank closed, the government would cover depositor losses by liquidating the bank’s assets. Holders of the subordinated debt would receive what was left. Thus, the buyers of the debt would have a strong incentive to promote conservative lending and investment decisions by banks to protect their investment.

In any case, as Professor Alan Stockman of the University of Rochester emphasized, the stability of the banking system should be a key factor in the choice of an exchange rate system. Fixed exchange rates are harder to maintain in countries with historically unstable banking systems. A fragile banking sector leads to frequent bailouts, expenditures that make it difficult to achieve the balanced budget policy that ultimately supports fixed exchange rate systems.

Conclusion

The lessons of the conference underscore the fact that there is no quick and easy fix for a country’s currency instability. Dallas Fed President Bob McTeer summarized these lessons in his postconference remarks to the Buenos Aires Stock Exchange: “The conference presentations were all consistent with the emerging consensus within the economics profession that the long-term benefits of economic liberalization, including open capital markets, are worth the short-term costs. They also confirmed the importance of having stable, credible and predictable government policies in place. Were it not for these two factors, the negative impacts stemming from the Mexican peso devaluation—the tequila effect—would have been much worse for Argentina.”

—Sheila Dolmas
Carlos Zarazaga

Regional Update

AFTER SOLID GROWTH in the second quarter, Eleventh District employment growth slowed in the third quarter, resuming a cooling trend that has been in place since employment growth peaked in 1994. Several factors are restraining current economic growth: a tight labor market, slower national economy and brief second-quarter jump in mortgage rates that has led to slower homebuilding and weaker demand for construction-related manufacturing.

After 2.9-percent annual job growth in the second quarter, District employment growth slowed to 1.6 percent in the third quarter. The slowdown in employment growth was broad-based across industries. After rising 2.3 percent in the second quarter, manufacturing employment fell 1.3 percent in the third quarter. Private-service sector growth also slowed

sharply. After expanding 3.9 percent in the second quarter, private-service-sector employment rose only 1.2 percent in the third quarter.

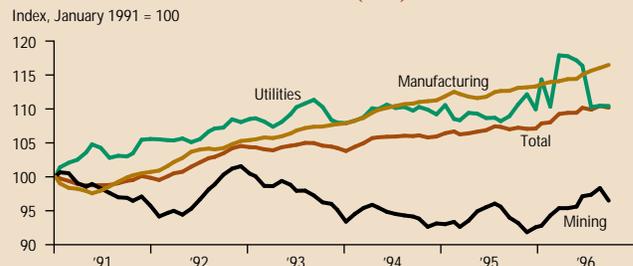
A tight labor market may have restrained employment growth, particularly in Texas, where job growth has outpaced the nation's for the past decade and outpaced the state's long-run average for the past three years. Texas' statewide unemployment rate dipped to 5.4 percent in September, just slightly above the U.S. unemployment rate of 5.2 percent. However, if cities along the Texas-Mexico border—where heavy immigration keeps unemployment rates high—are excluded, the Texas unemployment rate would drop to 4.7 percent.

—Fiona Sigalla

Total Nonfarm Employment



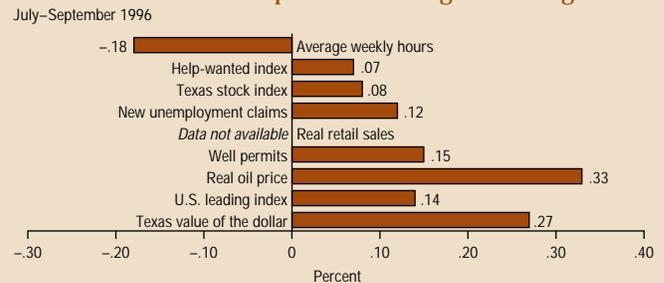
Texas Industrial Production Index (TIPI)



Texas Leading Index and Nonfarm Employment



Net Contributions of Components to Change in Leading Index



Regional Economic Indicators

	Texas Leading Index	TIPI total	Texas employment				Private service-producing	Total nonfarm employment		
			Mining	Construction	Manufacturing	Government		Texas	Louisiana	New Mexico
9/96	117.0	123.1	155.0	435.0	1,055.2	1,468.8	5,154.2	8,268.2	1,804.9	715.2
8/96	116.7	123.3	155.0	433.3	1,056.4	1,473.4	5,149.6	8,267.7	1,798.6	717.8
7/96	116.1	122.7	154.7	432.7	1,053.5	1,462.1	5,140.6	8,243.6	1,797.9	718.8
6/96	116.2	123.0	155.7	432.3	1,053.7	1,457.9	5,136.0	8,235.6	1,793.6	717.5
5/96	116.6	122.2	155.9	431.5	1,052.7	1,456.9	5,116.3	8,213.3	1,793.5	716
4/96	116.8	122.2	155.6	430.5	1,051.7	1,455.3	5,097.7	8,190.8	1,792.2	712.2
3/96	116.1	122.0	156.1	429.9	1,049.1	1,453.2	5,077.1	8,165.4	1,793.1	711.4
2/96	115.0	120.6	155.6	428.5	1,047.3	1,452.7	5,064.5	8,148.6	1,794.0	711.8
1/96	113.8	120.5	154.7	424.6	1,044.7	1,451.0	5,055.8	8,130.8	1,795.3	710.1
12/95	113.3	119.6	154.2	420.1	1,039.1	1,460.9	5,067.2	8,141.5	1,788.1	702.1
11/95	113.5	119.6	154.3	416.2	1,034.4	1,457.2	5,048.4	8,110.5	1,788.4	699.5
10/95	114.4	119.8	154.9	413.5	1,031.3	1,455.3	5,025.6	8,080.6	1,788.2	694.8

Further Information on the Data

For more information on employment data, see "Reassessing Texas Employment Growth" (*Southwest Economy*, July/August 1993). For TIPI, see "The Texas Industrial Production Index" (Dallas Fed Economic Review, November 1989). For the Texas Leading Index and its components, see "The Texas Index of Leading Indicators: A Revision and Further Evaluation" (Dallas Fed Economic Review, July 1990).

Online economic data and articles are available on the Dallas Fed's BBS, Fed Flash, (214) 922-5199 or (800) 333-1953, and WWW home page, www.dallasfed.org.



Fourth-Quarter Results Are In

Economists present empirical research into three timely issues in the Dallas Fed's fourth-quarter of *Economic Review*. *Economic Review* is a quarterly journal that takes a policy-oriented approach to thought-provoking economic issues. Free subscriptions and individual copies are available on request by calling 1-800-333-4460 or 1-214-922-5254, or you may fax your name and address to 214-922-5268.

Neighborhood School Characteristics: What Signals Quality to Homebuyers? by Kathy J. Hayes and Lori L. Taylor

Hayes and Taylor examine whether the property values of homes in the Dallas Independent School District reflect the characteristics of the neighborhood school, test scores and school expenditures.

Trade Deficits: Causes and Consequences by David M. Gould and Roy J. Ruffin

Gould and Ruffin review the conventional wisdom surrounding trade balances and investigate whether large overall trade deficits or bilateral trade imbalances are associated with lower rates of economic growth.

Can Mortgage Applications Help Predict Home Sales? by John V. Duca

Duca investigates the Mortgage Bankers Association index of home mortgage applications to discover if it can help forecast home sales.



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