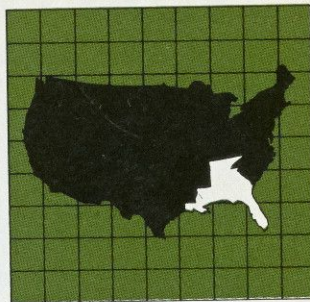


Economic Review



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Historical Origins

BANKRUPTCIES

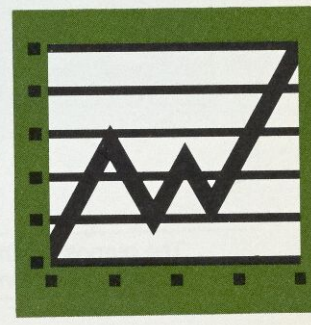
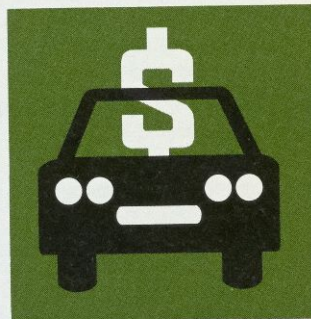
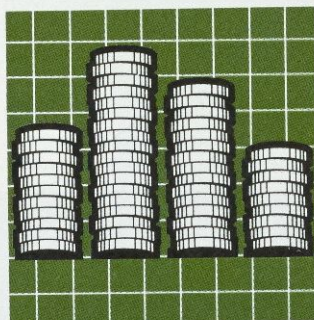
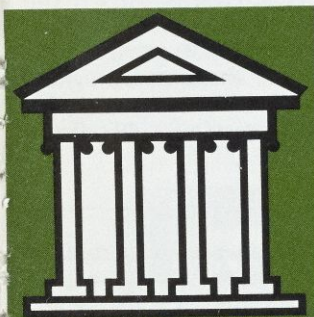
Is the New Law Responsible?

OIL

Southeast Pumping Again

INFLATION

Supply-Side vs. Alternatives



Economic Review



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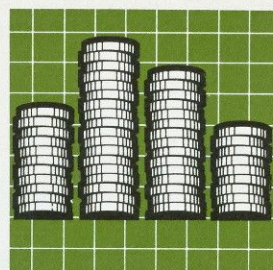
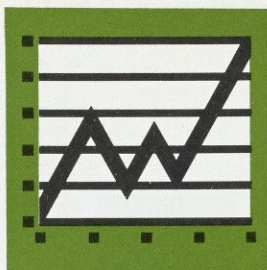
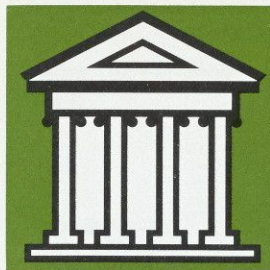
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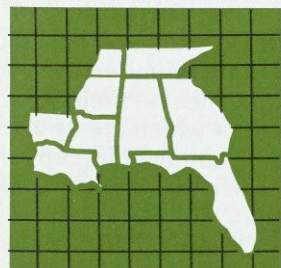
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Banking's New Competition: Myths and Realities

Faced with new competitors on all sides, commercial bankers worry that the "playing field" is far from level. Yet William F. Ford, president of the Federal Reserve Bank of Atlanta, argued in a recent speech to banking audiences that the commercial banking industry is healthy and that the new competitors' strength is overrated. The outside threat, he maintained, calls not for alarm but for hard work.

The economics profession and the banking business have a lot in common. More business economists work in banking than in any other industry. It is virtually impossible to attend a banking convention, nowadays, without finding at least one economist prominently displayed on the program, as I am today. When bankers discuss economists, they often identify us as practitioners of the "dismal science."

I propose to turn the tables by labeling bankers as practitioners of the "dismal profession." Just as we tend to focus much of our attention on the negative aspects of our economy's performance—recessions, depressions, unemployment, inflation and the like—bankers tend to preoccupy themselves with worrying about real or imagined threats to their industry's competitive strength.

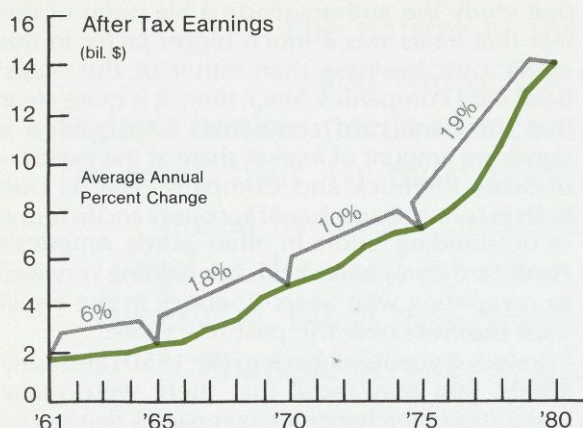
For example, commercial bankers frequently complain that Regulation Q prevents them from competing aggressively for deposits, while the Glass-Steagall Act keeps them from innovating new services, and the McFadden Act and the Douglas Amendment prevent them from following their natural markets across state lines. Then, in assessing their competition, they correctly

observe that nonbank institutions are much less regulated and seem to be able to operate more freely than banks in our financial markets. In addition, foreign banking institutions seem to be pouring into our domestic markets in increasing numbers and gaining a growing share of both the deposit and loan sides of the business.

Overall, the most frequently cited metaphor to summarize this situation is the bankers' lament about the need to establish "a level playing field." That, of course, would be a competitive environment in which bankers were able to operate just as freely as their nonbank competitors, over the full range of financial services that American households and businesses need.

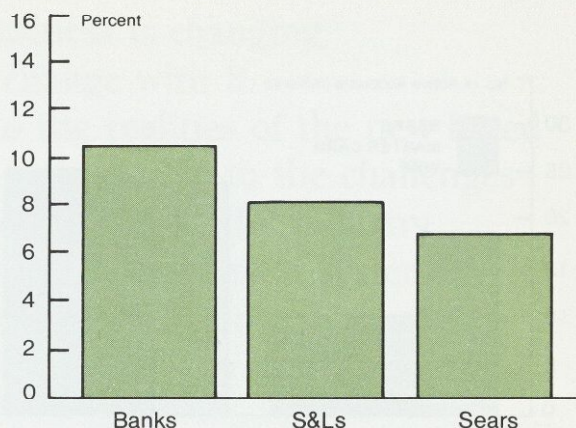
Among the many articulate leaders of the banking industry, Walter Wriston and his Citicorp teammates have frequently sounded the theme concerning a level playing field in their speeches and publications, some of which are as witty as they are worrisome. For example, Citicorp's most recent attempt to publicize the threat to banks—the "Old Bank Robbers' Guide to Where the New Money Is"—humorously outlines the financial activities of competing institutions ranging

Chart 1. Commercial Bank Earnings



Source: FDIC Bank Operating Statistics, 1961-1980.

Chart 2. Average Annual Earnings Growth 1961-80



Sources: FDIC Bank Operating Statistics, 1961-1980; U.S. League of Savings Associations; Savings and Loan Source Book; Moody's Industrial Manual.

from the D.H. Baldwin Company to J.C. Penney, Greyhound, Merrill Lynch, and National Steel. The premise, of course, is that bank robbers are looking for money in the wrong places if they attempt to find it in banks nowadays—because much of today's money is going outside the traditional banking channels and into such marvelous new areas as the money market funds, the brokerage conglomerates and so on. The merger of American Express and Shearson, Loeb, Rhoades; Prudential Insurance Company's acquisition of the Bache Group; and Gulf and Western's acquisition of banks that do everything but make commercial loans all fall into this category. Merrill Lynch's Cash Management Account is a good example of the kind of investment instrument which has diverted millions of dollars in savings.

According to Mr. Wriston, "new competitors unhindered by our laws are rapidly taking over the financial services business." The only thing that has not changed, in his view, is the political resistance to change itself. "When you look at what Sears is doing," Mr. Wriston observed recently, "the question is, can commercial banks compete?"

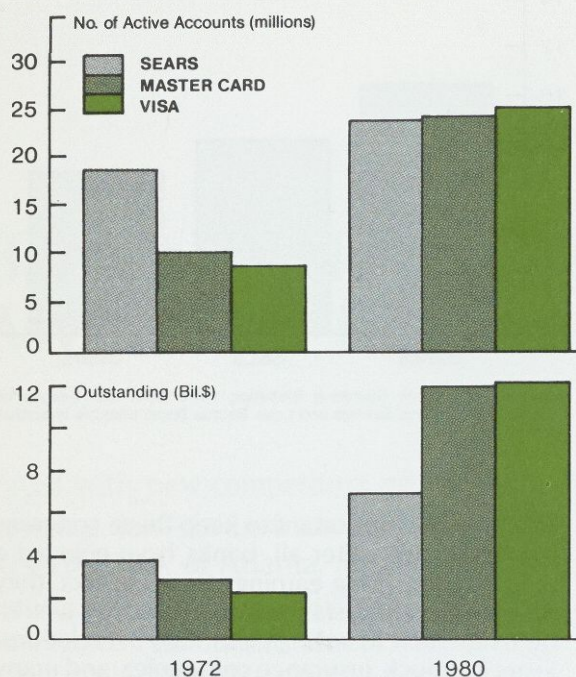
Listening to these comments, one wonders whether the American banking industry has a future at all. Are the Merrill Lynches and the Sears Roebucks truly as fearsome as they have been portrayed? Are they really an irresistible force? What are the realities—what are the myths?

Certainly there is justification for concern among bankers about the issue of the level playing field.

However, it is important to keep these concerns in perspective. After all, banks have enjoyed a long, steadily rising earnings trend. In fact, they have clearly outdistanced many of their would-be rivals such as savings and loan associations, Sears Roebuck, insurance companies, and many of their other most feared competitors. If we look at the situation objectively, we can see that the industries most aggressive in competing against banks often seem to be diversifying out of weakness rather than strength, weakness that might well limit their ability to threaten banks. The problems that have pressured them to diversify into banking services may jeopardize their chances of success if they hope to outplay bankers at their own game.

Chart 1 shows that the banking industry has achieved a remarkable string of annual improvements in earnings. It has now been 20 years since the industry as a whole has experienced a decline in net income after taxes. In fact, during the last 20 years the industry's earnings have increased more than sevenfold. Moreover, in the 1970s, the net income of all banks rose from under \$5 billion to over \$14 billion—almost tripling during a period when prices rose dramatically, but at a slower rate than bank earnings. In other words, bankers have succeeded in keeping their earnings growing at a rate that has outpaced inflation during the past two decades. And, America's bank earnings have outpaced those of both S&Ls and Sears Roebuck over the past 20 years (Chart 2).

Chart 3. Credit Card Accounts and Outstandings (Domestic)



Source: Sears: **Annual Report** and Public Information Office; Mastercard and Visa: Card Research Departments.

Since Mr. Wriston and other leading bankers have devoted so much attention to the growing financial powers of Sears Roebuck and Company, let's take a few minutes to examine Sears' recent business record more closely to see just how formidable a competitor that company really is. The vast majority of Sears' revenue gains in the past five years have come from its traditional merchandising, property and casualty insurance activities. Even though its credit card operations are often cited as a major threat to the banking industry, the fact is that as a portion of total revenue, credit card outstandings did not change for the past five years. All of its other financial activities combined—leaving the traditional All-state operations aside—still provide less than 2½ percent of its gross income.

Chart 3 shows what has happened to Sears' position in the credit card business during the period 1972 to 1980. I have chosen 1972 as the base year because that harks back to the widely quoted Citicorp study on "Competition in Financial Services" written by Cleveland A. Christophe

(with an introduction by Walter Wriston) in January of 1974.¹ In a frequently cited chart from that study the authors made a big point of the fact that Sears was a much bigger factor in the credit card business than either of the major bank card companies. Since then, it is quite clear that the bank card companies have gained a significant amount of market share at the expense of Sears Roebuck and Company. That is true both in terms of number of accounts and in terms of outstanding credit. In other words, America's bank card companies have been doing very well in competing with Sears Roebuck in the credit card business over the past few years.

In fact, if you think back to the 1950s and early 1960s, you may recall that there were many major retail merchandising companies that would not accept bank cards at all in their stores. Most of them had proprietary cards of their own which have since faded from the scene. Nowadays, I think it is fair to assert that the few remaining retailers, like Sears, which still refuse to accept bank cards on their premises and which aggressively market their own cards, are the exception rather than the rule. In reality, banks have taken over the credit function of many retail businesses through the very successful introduction and expansion of bank credit cards. That, of course, is quite contrary to the impression that some bankers leave when they talk about the threat posed by a company like Sears Roebuck. One might even go so far as to say that, at least in the credit card business, Sears is playing defense, not offense.

Now I do not mean to imply that Sears' recent acquisition of Coldwell Banker—one of America's largest real estate companies—and Dean Witter Reynolds—America's fifth largest stockbroker—might not pose a significant competitive threat to banks in the future. However, as is noted in the recent **Business Week** article on these mergers, the day that all of these plans are actually implemented is still far off. Even when it comes, Sears will have to reconcile such different management cultures as those of a traditional mass merchandiser and brokerage executives to make the integrated company work smoothly. According to **Business Week**, "already there is grumbling among Dean Witter brokers and retailing executives about Sears' solidly middle class image. Even within Sears' own ranks, some top executives

¹ Cleveland A. Christophe, "Competition in Financial Services," First National City Bank, 1974

“The nature of the business is changing,
and you’ve got to change with it.
Today’s banker needs to face up to the realities of the new breed
of competitor. He must respond aggressively to the challenges
posed by recent consolidation trends in the industry
and to the need for more flexible management systems.
Otherwise, those new competitors bidding for a share of the
financial services market may win it by default.”

argued against the new acquisition.”²

Further, to illustrate the difficulty of merging such disparate operations as a retail merchandiser and a stockbroker and a realtor, imagine the challenge facing a marketing consultant attempting to explain to the public how all these products will fit together in the market place. They might try to use sales mottos such as:

*“Buy Your Stocks
Where You Buy Your Socks.”*

*“If You Lose Your Shirt,
We’ll Sell You Another One.”*

*“Chop Your Taxes
Where You Buy Your Axes”*

*“Buy Your House
Where You Bought Your Blouse.”*

One final fact worth noting is that, although bankers have talked about Sears issuing small denomination CDs to its tens of thousands of retail customers since the early 1970s, in reality Sears has yet to issue the first such instrument.

What about the other entities skulking around, hoping to mug bankers in your own back yards? Are they more formidable?

What about Wall Street, another well-publicized threat? What about the securities and investment firms and the mutual funds that seem so anxious to lure bankers’ customers?

Wall Street conjures up the vision of cash management accounts and a nationwide system of offices with their promise of one-stop consumer banking. How many minutes away from your bank is the closest office of Merrill Lynch or Dean Witter Reynolds, threatening to compete with your institution in so many ways? Of course, securities firms can also make alliances with other competitors, such as retailers and insurance companies. That’s certainly spooky. Yet the Wall Street firms have had some pretty lean years themselves—both the mutual fund industry and the securities firms that sponsor two-thirds of the money market mutual funds. Those firms haven’t shown themselves to be immune to the economic troubles of today, any more than to those of the past.

About a decade ago, securities firms found themselves in a paperwork and financial crisis that temporarily ended their days of wine and roses. Between 1971 and 1974, fully 100 out of 500 securities firms that were members of the New York Stock Exchange disappeared through mergers and bankruptcies.

Interestingly enough, mutual funds contributed mightily to that reversal in fortunes. Back during the 1960s, you recall, the mutual fund industry became popular with investors because of the favorable returns it was delivering on equities—which at that time constituted the bulk of the industry’s holdings. Some mutual funds were increasing their net assets by 50 percent a year. Some investors thought mutual fund managers were magicians. As Howard Colhoun of T. Rowe

² “The New Sears,” *Business Week*, Nov. 16, 1981, pp. 140-146.

Price puts it, "they were confusing wisdom with a bull market."

Well, you know what happened. A flood of investors jumped on the bandwagon just about the time it rolled over a cliff with the stock market setbacks of 1973 and 1974. Investors quickly began to shy away from mutual funds as their image suffered. The mutual funds industry was stigmatized as a risky venture until 1977. That's when the so-called money market funds emerged offering a high, relatively assured rate of return.

So an incredibly successful new vehicle was born out of adversity. In less than six years, those funds have come from nowhere to grow to over \$180 billion in assets. That's pretty impressive when you consider that it took the entire credit union industry more than 100 years to evolve to its present size of only \$73 billion.³

Money market funds even continued to grow during the last three months despite the introduction of the All-Savers Certificate that was designed to take some of the wind out of their sails.

With the awesome growth of the MMFs so obvious to everyone in the financial markets, it might be worth making a few observations about what they do and do not represent. First of all, there is no denying the fact that they represent a major competitive threat to the smaller banks and other small depository institutions from which they clearly drain funds. Moreover, MMFs do have a regulatory advantage over the banks in that no reserve requirements are levied against them while reserve requirements are imposed on competing instruments in the banks and thrifts.

Finally, there can be no question but that the MMFs have substantially increased the cost of funds faced by the industries they compete with in that they make it imperative for banks and the thrifts to aggressively market the so-called money market certificates which bear market rates of interest. Therefore, as funds are rolled out of passbooks and other savings accounts into MMCs and MMFs, the cost of funds to all affected institutions definitely does rise.

However, many bankers seem to assume that the MMFs represent a net drain of funds on the entire banking industry. Nobody really knows whether or not this is so because there is very little reliable evidence on the exact sources of MMF deposit inflows. In addition to drawing money out of bank and thrift institution accounts,

they undoubtedly draw a lot of funds out of the stock and bond markets as well. To the extent that this happens, brokers who manage such funds are of course simply substituting one form of commission for another as they disintermediate themselves.

There is, however, good information about how the MMFs invest the money they attract from all sources. Basically they put it into short-term government paper, commercial paper, certain Eurodollar assets and—to a very large extent—bank CDs and bankers acceptances. As a matter of fact, it is entirely possible that the MMFs are putting more money into the banking system by purchasing CDs and BAs of the larger banks than they are taking out of all of the banks. And since virtually none of the money market funds are investing in savings and loan paper of any kind, MMFs are clearly hurting thrift institutions much more than they are hurting the banking industry as a whole.

So in summing up the impact of the MMF industry on banks, let's keep it in perspective by noting that the MMFs may *not* represent a net drain of funds on the banking industry. They definitely do represent a much more potent threat to thrift institutions than they do to the banks.

Other Threats: Insurance Companies, S&Ls, Money Center Banks

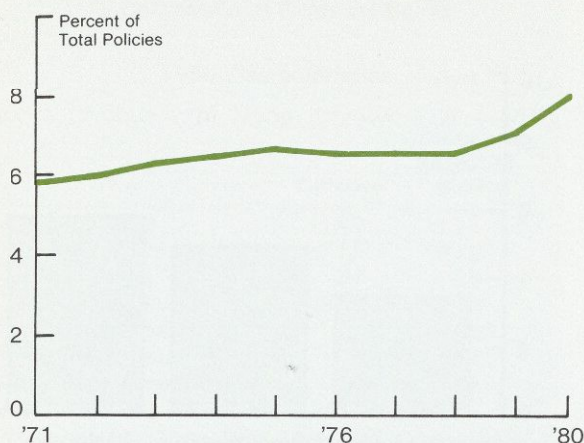
So much for the brokerage industry as a threat to the banking business. Now let's go on to look at some of the other threats that are often cited in discussing the outlook for the banking industry.

What are the other threats, real or imagined, to banking's future? What about the insurance industry? It often is cited as a serious menace to your industry—especially when insurance firms act in concert with retailers, securities dealers and others. There's no question that insurance firms can offer a broad range of financial services from a national network of offices. But this industry also has had its troubles, which have helped propel it into your line of work.

Life insurance firms, for example, have been hit by a series of setbacks that have eroded their returns. Their portfolios, for one thing, have been heavily weighted toward long-term investments—like the savings and loan associations. Therefore, they haven't been able to keep their return on

³ Credit Union Magazine, Nov. 1981, p.38.

**Chart 4. Life Insurance Companies
Standard Life Policies Voluntarily Terminated**



Source: 1981 Life Insurance Fact Book, American Council of Life Insurance.

investment in line with market returns. In addition, the cost of maintaining large groups of agents in the field has risen rapidly during the last decade.

Another problem for the industry is that people are abandoning the life insurance companies' basic product—the standard whole life policy (Chart 4). Many customers are permitting such policies to lapse and more are opting for term insurance. For the insurers, term insurance is less profitable than the standard life policy. That's why they weren't applauding when term insurance reached 57 percent of the sales volume of ordinary life insurance in 1980, up from just 41 percent in 1965. Other traditional insurance customers are leaving the whole life insurers entirely as a vehicle for saving, turning instead to money market funds, savings certificates and other high earning investments.

Many of those who do maintain their policies are also taking advantage of low-rate "policy loans" which the companies must fund at market rates. As of 1980, policy loans outstanding totaled \$41 billion compared with total life insurance assets of \$479 billion.⁴ The president of Fireman's Fund was quoted recently as estimating there is "perhaps \$125 billion in policyholder accounts just waiting to be borrowed."⁵

⁴ Sources: 1981 Life Insurance Fact Book, American Council of Life Insurance; "The Changing Life Insurers," *Business Week*, Sept. 14, 1981.

⁵ M. Gordon Gaddy, President, Fireman's Fund American Life Insurance Co., cited by Christopher Byron, "Shake-Up in a Staid Industry," *Time*, May 25, 1981.

What's more, property and casualty insurance companies recently have been hit by mounting underwriting losses and skidding earnings.

Remarkably, some bankers still see savings and loan associations as a born-again threat, with their increasingly bank-like powers and with the legislative prospect of even more such powers in the future. Savings and loans, like the MMFs, do have some advantages. They have statewide branching powers. They have the ability to start up new consumer services without antiquated operating systems or heavy investment in bricks and mortar. They have a close relationship with many commercial bank customers—and they have regulators that actively promote their industry.

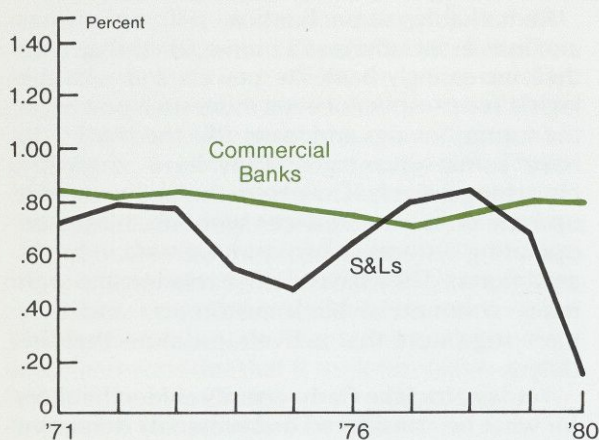
Yet Senator Jake Garn recently chided bankers for what he considered unnecessarily defensive testimony before his Senate Banking, Housing and Urban Affairs Committee, as they argued against broadened powers for S&Ls. Garn said the bankers' representatives gave the impression that they were—in his words—"scared to death of a crippled thrift industry." He called it a shame that bankers continue to worry about the S&Ls while new nondepository competitors (including MMFs) continue to make inroads into their markets.

Like other legislators, Senator Garn says the inability of bankers to reach a compromise position makes it virtually impossible to produce legislation that could help banks and S&Ls. His remarks were prompted by bankers' reservations about his bill that would give thrift institutions commercial lending powers and other bank-like authority—and which would give all depository institutions municipal bond underwriting and mutual fund authority.

What's more, the S&Ls' problems don't appear to be all short-run in nature. The industry's recovery from the continuing crisis of high interest rates will require a substantial length of time to rebuild their earnings, net worth and public confidence. They will have to consolidate and regroup after going through the major earnings drain they've experienced during this business cycle. Among other things, the industry's capital-asset ratio has declined steadily; its earnings have been less stable than those of commercial banks (Chart 5), and it has—over time—come to depend very heavily on borrowings from the Federal Home Loan Banks.

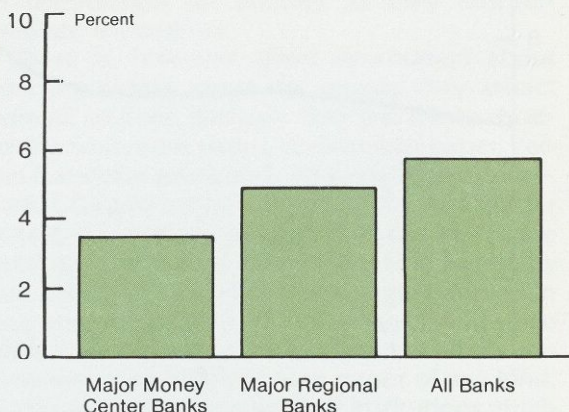
Does that exhaust the catalogue of banking's worries? Not quite. Many bankers also raise the

**Chart 5. S&Ls and Commercial Banks
Return on Assets**



Source: FDIC Bank Operating Statistics, 1971-1980.

Chart 6. Commercial Banks Equity-Asset Ratios



Sources: **Fortune**, July 13, 1981, "The 50s—The Fortune Directory of the Largest Non Industrial Companies, The 50 Largest Commercial Banking Companies," FDIC **Annual Report**, 1980.

spectre of one final threat. That's the perceived threat to smaller institutions of money center banks—the big guys from the big cities. To many community bankers, Citicorp seems to epitomize that threat to their markets. Apprehension over that kind of competition accounts for much of the division that has split the banking industry. That polarization, in turn, has made it impossible for the industry to unite on a wide range of regulatory issues.

Are small banks really in danger from poaching by big-city banks? What is the magnitude of that threat? To be sure, the larger banks are expanding across the country through loan production offices, nonbank subsidiaries, Edge Act corporations, telephones and the mails. And they may be doing it in the markets many of you serve.

Yet they also seem to be beset by some nagging problems of their own. Chart 6 shows that the large money center banks have very low levels of capital relative to the regional banks and to all banks. Despite their aggressive expansion in recent years, the assets of money center banks have declined in relation to the banking system as a whole. In 1975, the country's 10 largest banks held 34 percent of all bank assets; by 1980, that had declined to 31.6 percent. In other words, the big city banks are losing deposit market share to regional and smaller banks.

Other evidence that the bigger banks aren't an irresistible force comes from upstate New York,

where large New York City banks mobilized an assault on the market in the early 1970s. According to a study by the Federal Reserve Bank of New York, those banks achieved relatively little market penetration. Another study, by the Federal Reserve Bank of Chicago, reached a similar conclusion in another district; it found that in a majority of midwestern markets, the smaller banks have gained market share in recent years.

Neither do we find evidence that banking has become appreciably more concentrated during the postwar years, with smaller banks suffering at the hands of their larger counterparts. On the contrary, the 50 largest banks accounted for a slightly lower share of the nation's total banking assets in 1980—about 37 percent—than they did in 1960.

Table 1 provides a fascinating comparison on this point. Citicorp, as I said, is widely viewed as the epitome of the expanding money center bank. Yet Citicorp compares rather unfavorably with an equal size combination of the country's 21st through 33rd largest banks. In fact, Citicorp had much lower equity, income, return on assets and return on equity than the composite regional bank; it also had much lower equity to assets. So while small banks obviously can't ignore the money center banks and nonbank financial institutions with their ambitious and innovative managements, small banks should not underestimate themselves. Banking is a proud industry that has

**Table 1. Citicorp and
a Composite of Regional Banks**

1980 Characteristics

| | Citicorp | Composite Regional Bank |
|----------------------|-----------------|--|
| Assets (\$ bil.) | 114.9 | 113.1 |
| Deposits (\$ bil.) | 71.8 | 82.8 |
| Equity (\$ bil.) | 3.9 | 5.5 |
| Income (\$ mil.) | 499.0 | 750.0 |
| Return on Assets (%) | .43 | .66 |
| Return on Equity (%) | 12.8 | 13.6 |
| Equity to Assets (%) | 3.4 | 4.9 |

*Aggregate of 21st through 33rd largest U.S. banks (based on assets), December 1980.

Sources: Citicorp 1980 *Annual Report*; *Fortune*, July 13, 1981, "The 50s—The Fortune Directory of the Largest Non Industrial Companies, The 50 Largest Commercial Banking Companies."

been around for a long time and will be around for a long time to come.

However, the nature of the business is changing, and you've got to change with it. Today's banker needs to face up to the realities of the new breed of competitor. He must respond aggressively to the challenges posed by recent consolidation trends in the industry and to the need for more flexible management systems. Otherwise, those new competitors bidding for a share of the financial services market may win it by default.

We have now come to the point where we can sum up the situation facing most of America's banks as they move into the challenging decade of the 1980s.

First of all, the banking industry is in good condition—competitively healthier than many bankers seem to think it is. It has experienced

remarkably steady earnings growth over the past 20 years. Unlike most other industries with which it competes, it has not suffered a profit decline since 1961. And its real earnings growth record, even during the turbulent 1970s, has been positive—outpacing inflation.

Second, it is of course true that banks are more heavily regulated, in some respects, than their close competitors. However, in spite of these regulatory handicaps, bankers have—in reality—outperformed Sears, the stockbrokers, property and casualty insurers, the thrifts and most of their other most feared competitors.

In that connection, some of the most widely circulated and oft repeated stories about the competitive threats posed by companies like Sears Roebuck just won't stand close scrutiny. The fact is that bank credit cards have essentially destroyed the once extensive credit card operations of retail merchants. Sears Roebuck's card base—which is growing much less rapidly than VISA and Mastercard—is a *survivor*, not an aggressor. And the popular misconception, among bankers, about Sears' performance is characteristic of many other oft-told tales about the virility of banking's competition.

When you stop to think about it, the reason all these other kinds of businesses want to get into banking markets is quite simple. Your business looks good to them. You have been doing better than they have in earning profits, and you have been doing it for a long time. So as you turn to face these banking space invaders, I would encourage you not to show fear and not to demoralize each other with myths about their powers. Even with one hand tied behind your back—the regulated one—your competition sees you as the strongest player on the field. Remember that, because I think they're right.

Thanks very much for your kind attention to this unconventional tale.

—William F. Ford



Historical Origins of Supply-Side Economics

Dismissed by critics as “quackery” and “snake-oil economics,” supply-side theory in fact represents a return to the dominant orthodox strain of public finance analysis which originated with the attacks of Hume, the Physiocrats, Adam Smith, and others on mercantilism.

We hear an abundance of criticism of supply-side economics these days. We hear that it is “voodoo economics”, that it is simply the latest fad, and even that supply-side economists are quacks.

Is this so-called supply-side economics really just a lot of “quackery”? Is it novel? Is it already yesterday’s craze? Several very well known economists and leaders in this country have stated that it is some or all of these things.

In view of this almost daily criticism we hear about supply-side economics, I want to examine the theoretical basis and historical origins of supply-side economics.

Defining Supply-Side Economics

Since supply-side economics has come to mean many things to many people, let me define what I view as the essential features of supply-side economics.

The single line of thought that distinguishes

economics from other fields of inquiry is that human behavior responds to changes in economic incentives. Other things being equal, buyers of products purchase less of that product when the price is high. On the other hand, suppliers of that product supply more. The quantity supplied and demanded responds to price. Similarly, it is generally recognized that when you tax a product, you get less of it. And, in general, when you subsidize a product, you get more of it.

It is also common knowledge that the U. S. economy has performed rather poorly in recent years. Real economic growth, productivity growth, and personal savings rates have been low. Unemployment has been high. Supply-side economics recognizes that this poor economic performance is related to the existence of sharply higher tax rates since the mid-1960s. In other words, a primary reason for our poor economic performance is that we are taxing work, saving, and output while at the same time we are subsidizing consumption, nonwork, leisure, unemployment,

“Supply-siders contend that if you want more of something (e.g. work, saving, output), tax it less. And if you want less of something (e.g. unemployment, nonwork), subsidize it less.”

and retirement. Supply-siders contend that if you want more of something, tax it less. And if you want less of something, subsidize it less. Consequently, in order to get more work, saving, and output, these economists recommend lowering tax rates on these activities. Similarly, in order to get less unemployment and nonwork, they recommend reducing their subsidies. Thus, supply-side economics has to do with the use of fiscal policy to increase production and aggregate supply by making work more attractive than nonwork and saving more attractive than nonsaving. In short, supply-side economics focuses on the effects that tax rates have on relative prices, aggregate supply, and, hence, economic growth.

Three Basic Elements of Supply-side Theory

First, and probably most fundamental, is the idea that changes in (marginal) tax rates are changes in relative prices and, consequently, will always affect choice, the allocation of resources, and real economic activity. Accordingly, changes in tax rates will have important repercussions on people's incentives to supply labor and capital to the market. Tax-induced relative price changes affect choices between (1) work and leisure, (2) consumption and savings, and (3) market activity and nonmarket activity. Consequently, reductions in tax rates—by inducing shifts from leisure to work, from consumption to saving, and from nonmarket activity to market activity—have important impacts on aggregate supply and economic growth. In sum, supply-side economists view changes in tax rates as incentive changes rather than income changes.

A second fundamental element of supply-side economics is the relationship between tax rates and output. Specifically, when tax rates are near zero, output is low because certain public goods which are essential for markets to operate are not being provided. Examples of such goods might include justice (a conducive legal framework), defense, law and order, the maintenance of roads, and primary education. As tax rates rise, these essential public goods and services are provided and economic activity expands. When these public goods are provided, in other words, we see rapid increases in the productive efficiency of capital and labor, and consequently, output.

At this initial stage, the effects of this increased efficiency outweigh any efficiency losses due to higher tax rates. However, as tax rates are increased further, disincentives and inefficiencies due to these higher tax rates begin to become more important. Specifically, these increased tax rates cause the after-tax rewards of saving, investing, and working for taxable income to decline. Consequently, people shift out of these activities into leisure, consumption, tax shelters, and working for nontaxable income. As a result, the market supply of goods and services (aggregate supply) and, hence, economic growth—is less than would otherwise be the case. At the same time, public good-induced improvements in productive efficiency increase at a slower rate (because less essential public goods are provided). Consequently, output gains become smaller and smaller. Eventually, total output peaks and begins to decline as the efficiency gains due to government spending are completely offset by efficiency losses and disincentives due to high tax rates. Additional tax rate increases lead to even further output declines as supplies continue to be withdrawn from production.

This relationship between aggregate market output and tax rates is of primary concern to supply-side economists. It represents the basic



concern of the supply-side view, which is to support those public policies which maximize economic growth.

The fact that tax rate changes affect aggregate supply implies that tax rate changes also have implications for tax revenues. Tax revenue equals the product of the tax rate times the tax base. Since tax rate changes affect aggregate supply, these rate changes also affect the tax base—

“Supply-side economics, then, relates to policies for long-run economic growth and not to policies for smoothing the business cycle.”

sometimes in the opposite direction. This recognition has led to the explicit depiction of the relationship between tax rates and tax revenues known as the Laffer curve. The Laffer curve is essentially a by-product of the above-discussed tax rate/output curve. (The tax rate/tax revenue curve can be derived from the output/tax rate curve by multiplying the tax rate times the output to yield the tax revenue generated at each tax rate.)

A third basic element of supply-side economics is the recognition that the various relationships of changes in tax rates to incentives, factor supplies, output, and tax revenues are long-run relationships. All economists recognize that elasticities become larger the longer the time frame under consideration. Hence, the longer the time frame, the more potent will supply tax cuts become. Supply-side economics, then, relates to policies for long-run economic growth and not to policies for smoothing the business cycle; i.e., it pertains to growth, not stabilization.

Supply-Side: A Theory from Nowhere?

A good many commentators view supply-side economics as a novel response to the demand-side policies that have been employed by various administrations over the past 20 years or so. They often characterize supply-side economics as both a novel theory and as most likely the latest fad

among economists. Supply-side economics, after all, has been referred to as voodoo economics, snake-oil economics, as well as tooth-fairy economics. It has been called ill-conceived. One former Carter economic advisor referred to 1981 as the “Year of the Quack.” Another former advisor to a previous Democratic administration referred to the supply-side tax program as “the most irresponsible fiscal action in modern times.”

These characterizations—many of which were made by well-trained economists—display a short-sighted view of economic history. Supply-side economics is neither novel nor a fad. In fact, it constitutes a re-emergence of classical economics and the classical economic principles of public finance. In particular, the supply-side view represents a return to the dominant orthodox strain of macro public finance analysis which originated with the attacks of Hume, the Physiocrats, Smith, and others on mercantilism. Specifically, each and every one of the fundamental elements described above was stated over and over again by the classical economists.

The Mercantilists

In order to understand the message of the classical economists, we need to understand the circumstances under which they wrote. The period prior to 1750, for example, can be characterized as one dominated by mercantilist economic policies—primarily various forms of governmental intervention and control of the economy. This intervention took the form of strict regulation of markets and guilds, quotas, licensing for export and import trade, royal industries, public works, paternalism, the subsidization of certain industries, grants of monopoly charters and patents, and colonial restrictions. Special interest groups could obtain governmental favors such as price fixing and even exclusion of competitors. High tariffs and other taxes (such as transportation tolls, church taxes, and excise taxes) were rampant.

Moreover, mercantilists viewed wealth as a zero-sum game. Wealth to the mercantilist was something gained at the expense of someone else. As a consequence, mercantilists were more concerned with the transfer as opposed to the creation of wealth. In short, the mercantilist period was characterized by high tax rates, a high degree of government regulation, and sluggish economic growth.

High tax rates, a high degree of government regulation, and sluggish economic growth—does

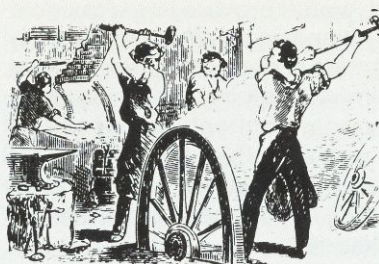
this sound familiar? Recently, several commentators have equated Reaganomics with turning-back-the-clock. Yet, it was policies of government regulation and high tax rates that were associated with the low growth and low standards of living commonplace before the period of *laissez faire*.

The Classical Economists

It was in this mercantilist environment that the writings of David Hume, the Physiocrats, and Adam Smith took root and flourished. Responding to high tax rates and government intervention, they began to piece together the basic elements of what is now known as supply-side economics. The Physiocrats, for example, acknowledged a relationship between tax rates and output. They indicated that if the state and church were to appropriate more than one third of the income of the landed proprietors, net product would decline. David Hume recognized this relationship as well as the tax rate/tax revenue relationship, especially for tariffs.

Adam Smith, however, was the first economist who put it all together. Smith, building on the writings of the Physiocrats and Hume as well as on philosophers such as Locke and Montesquieu, presented a tax-related scheme that fully incorporated all of the supply-side principles cited above. Rather than being concerned with the transfer of wealth as were the mercantilists, Smith was most concerned with the production or creation of wealth. To Smith, wealth consisted of real goods and services rather than the stock of gold, and a nation was rich or poor according to its annual production of goods and services.¹ Smith's focus on aggregate supply formed the basis of his primary theme, namely, the nature and causes of wealth and economic growth. This is evident in the full title of his classic, **An Inquiry into the Nature and Causes of the Wealth of Nations**. Indeed, this pervasive concern for economic growth dominated every aspect of classical economics.²

Smith argued that in order to increase economic growth, emphasis needed to be placed upon increasing aggregate supply and production rather than on increasing the monetary gold stock (the mercantilist prescription). According to Smith, increases in aggregate supply necessarily



implied increases in the supply of labor and capital. In the **Wealth of Nations**, he stressed the importance of incentives in eliciting increases in labor and capital. Smith explicitly stated that wage increases would always increase the supply of labor. Taxes on wages, he said, were "absurd and destructive," and high taxes would "obstruct the industry of people" as well as promote tax avoidance activities such as smuggling.

Smith also showed that taxes on capital and profits would discourage saving-investing activity and promote an outmigration of capital and, hence, adversely affect economic growth. In sum, Smith recognized that changes in tax rates had important effects on incentives and affected the choices between work and nonwork, saving and consumption, and market and nonmarket activity.

Finally, Smith also clearly recognized the essentials of the relationship between taxes and output described above. One passage in the **Wealth of Nations** merits particular attention in that Smith explicitly states his intentions:

"That the mercantile system (and its high rates of taxation) has not been very favorable to the revenue of the great body of the people, to the annual produce of the land and labour of the country, I have endeavored to show in... this inquiry. It seems not to have been more favorable to the revenue of the sovereign, so far at least as that revenue depends upon the duties of customs."³

Smith also clearly and repeatedly stated the Laffer view that when tax rates are high, tax revenues and tax rates can move in opposite directions. He continually asserted, for example, that high tariffs discouraged import consumption, promoted smuggling, and worked to diminish government revenue. More moderate tax rates,

¹ Thomas Sowell, "Adam Smith in Theory and Practice," **Adam Smith and Modern Political Economy**, edited by Gerald P. O'Driscoll, Jr., Iowa State University Press, Ames, Iowa, p. 5.

² *Ibid.*, p. 13.

³ Adam Smith, **An Inquiry into the Nature and Causes of the Wealth of Nations**, edited by Edwin Cannan, University of Chicago Press, Chicago, 1976, ii, p. 438.

Smith contended, would provide larger tax revenues. *In sum, Smith endorsed all of the essential elements of supply-side economics outlined above.*

Smith's endorsement of a fully consistent supply-side view was important not only in and of itself but because he was so influential. Virtually all economists of later generations were familiar with his writings and, hence, were influenced by Smith to some degree.⁴

Say's Law

Among those so influenced were two economists, J. B. Say and James Mill. Say and Mill further refined some of Smith's views. In particular, they refined the primacy of aggregate supply into what became known as Say's Law. The central theme of Say's Law is that production and aggregate supply create wealth and economic growth. In other words, there cannot be more real income unless people produce more. The idea underlying Say's Law is quite simple: people produce in order to consume. Workers' or businessmen's buying power consists of their supplying power. Supply or production, then, is the wherewithal or means for demand and the origin of demand lies in production.

The goal of policy, according to Say's Law, should be to foster production and aggregate supply rather than consumption and aggregate demand. If aggregate supply is promoted, demand will take care of itself. Say himself stated this well:

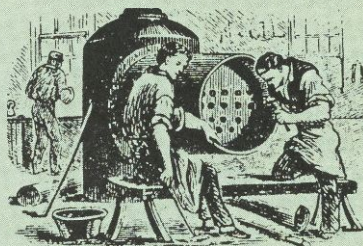
"The encouragement of mere consumption is no benefit to commerce; for the difficulty lies in supplying the means, not in stimulating the desire of consumption; and we have seen, that production alone, furnishes those means. Thus, *is the aim of good government to stimulate production, of bad government to encourage*

⁴ Incidentally, it is interesting to note that the same writers who influenced Smith—namely writers of the classical liberal tradition such as Locke, Montesquieu, and Hume—also influenced the founding fathers of the United States. Many of the above-cited essential features of supply-side economics, for example, can be found in the *Federalist Papers*. In No. 35 of the *Federalist Papers*, Hamilton contends that:

"There is no part of the administration of government that requires extensive information and a thorough knowledge of the principles of political economy so much as the business of taxation. The man who understands those principles best will be least likely to resort to oppressive expedients, or to sacrifice any particular class of citizens to the procurement of revenue. It might be demonstrated that the most productive system of finance will always be the least burdensome."

Similarly, in No. 21, Hamilton describes the relationship between tax rates and tax revenues which is now referred to as the Laffer curve. Elements of supply-side economics, then, were recognized by the founding fathers as well as by Smith.

Say's Law:



"People produce
in order
to consume."

consumption.... It is impossible to deny the conclusion, that the best taxes...are least injurious to reproduction."⁵

As a corollary to fostering aggregate supply, emphasis should be given to the encouragement of factor supplies. This emphasis on aggregate supply, according to Say's Law, is the fundamental ingredient to the creation of wealth and consequently economic growth.

Say's Law was strongly supported by James Mill, David Ricardo, John Stuart Mill, and many others. Supporters of Say's Law all recognized the important role of incentives in fostering the supply of labor, saving, and investment. Both Say and Mill, for example, indicated that increases in wages would always work to increase the supply of labor. Given their pervasive concern for economic growth, these economists supported tax policies which fostered work effort, savings, and

⁵ Jean-Baptiste Say, *A Treatise on Political Economy*, Book III, pp. 92, 196. (emphasis added).

investment, and hence, aggregate supply and production. Supporters of Say's Law recognized that high tax rates would work to destroy the incentives to work, save, and invest and therefore would adversely affect economic growth. John Stuart Mill, for example, stressed that high tax rates would "discourage industry by insufficiency of reward." High tax rates, Mill maintained, would diminish the motive to save and cause both capital and labor to migrate. According to Mill, when tax rates have reached this level, they should be reduced so as to stimulate the supply of labor, capital, and, hence, aggregate supply.

In sum, supporters of Say's Law endorsed all the key elements of supply-side economics outlined above. Say's Law constituted the essence of the supply-side view and formed the basis of much classical thinking on public finance. The fundamentals of supply-side economics, therefore, became well established with the development and elaboration of Say's Law and its implications. Because of its general acceptance, the emphasis on the primacy of aggregate supply and economic growth dominated economic thinking until about World War I.

Contributions to this view made by later economists consisted largely of more lucid clarifications or more elegant restatements of the same principles.

Some Restatements

In clarifying the relationship between tax rates and output, some of these later writers emphasized that high tax rates encouraged people to avoid taxes. They argued that high tax rates adversely affect production and output not only because of shifts from production into leisure (and from savings into consumption), but by encouraging shifts from taxable activity into nontaxable (and often unproductive) activity. This nontaxable activity included illegal activities, such as smuggling, fraud, and evasion, but also included legal activities such as the migration of factors of production. These classical writers repeated over and over again that one sure way to recognize when tax rates are excessive is to identify when a great deal of tax avoidance activity is taking place.

These writers also restated the relationship between tax rates and tax revenues. They declared over and over again that when tax rates were confined to moderate limits, they produced more tax revenue than when rates were excessive. When tax rates increased beyond moderate

levels, tax revenues decreased not only because of decreased production but also because of shifts to tax avoidance activities. Some classical authors were so confident that tax revenues would increase with reduced tax rates that they advocated tax cuts in the face of fiscal deficits.⁶ An example of a practical application of this was the administration of British Prime Minister William Gladstone who advocated cutting taxes in order to *reduce* the deficit.

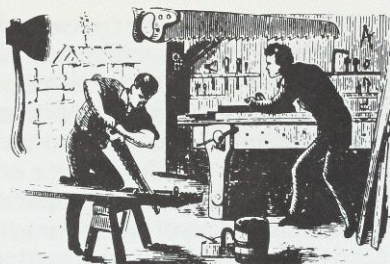
Various writers in the mid-to-late nineteenth century continued to support these views and thus perpetuated supply-side economics. One prominent supply-side supporter was John Stuart Mill. It is well known that all through the second half of the 19th century Mill's **Principles of Political Economy** was the undisputed bible of economists.... As late as 1900, Mill's work was still the basic textbook in elementary courses in both British and American Universities."⁷ This long, unchallenged dominance of Mill's work not only enhanced the prominence of Say's Law but extended credence to the supply-side view in general so that this view remained largely unchallenged by economists until the interwar period.

In addition to being supported by the profession's leading thinkers (like Mill), supply-side theory came to be well accepted by most economists and indeed was regarded as the dominant view of fiscal policy by public finance economists within the academic community. Any review of the period's public finance literature reveals a strong supply-side orientation. Public finance economists of the day placed most emphasis on the following principle: the best tax system is the one which interferes least with economic growth. Thus, the growth aspects of taxation were more important to these writers than any other concern of taxation. Some of the authors of this period actually made explicit empirical estimates of the point at which they believed taxation became exorbitant. One author, for example, indicated that when the sum of state, local, and federal taxation exceeds 12 or 13 percent of private incomes, it brings about a slowdown in economic growth.⁸

⁶ See, for example, D.P. O'Brien, **J.R. McCulloch: A Study in Classical Economics**, p. 263.

⁷ Mark Blaug, **Economic Theory in Retrospect**, p. 180.

⁸ Paul Leroy-Beaulieu, "On Taxation in General" (1906), **Classics in the Theory of Public Finance**, edited by Richard Musgrave and Alan Peacock, p. 164.



In sum, the public finance economists of the late nineteenth and early twentieth centuries fully endorsed the supply-side view. During this period, supply-side economics was the orthodox view among economists and, indeed, dominated macroeconomics so thoroughly that it was virtually never challenged.⁹

The Demise of the Supply-Side View

Events in the interwar period ended the century-long dominance of the supply-side view. Along with the demise of the supply-side view came the rejection of Say's Law. Fiscal considerations such as income distribution and stabilization came to replace economic growth as principal concerns of fiscal policy.

Much of the reason for the dramatic shift in emphasis in fiscal policy relates to the circumstances of the period. First, there was a dramatic collapse of the money supply and of aggregate demand. Since this produced large amounts of idle capacity and unemployment, there was no need to encourage aggregate supply, i.e., excess supplies of labor and capital were readily available. Rather, the proper policy prescription was to stimulate aggregate demand.

Second, because of the banking collapse, monetary policy was seen as entirely impotent. Because of this supposed inability to stimulate demand via traditional channels of monetary policy, it was thought that the stimulation of aggregate demand had to come from fiscal policy. Hence, the primary emphasis of fiscal policy shifted from fostering aggregate supply to stimulating aggregate demand. More generally, emphasis shifted from supply-oriented, long-run economic growth policies to short-run, demand-oriented policies concerned with stabilizing the business cycle, i.e., a shift from growth to stabilization. Paralleling the emergence of this new stabilization function of fiscal policy was a call to use taxation and

spending policies to bring about a "more proper" distribution of income. Instead of aiming primarily to produce growth, then, fiscal policy became a tool to stabilize the economy and redistribute incomes.

The public finance textbooks of the 1930s and 1940s contain ample evidence of this shift in emphasis and the subordination of supply-side views. But the shift occurred not only in textbooks. It also appeared in the substantial increase in the relative size of the public sector vis-a-vis the private sector and in the growth in government spending for "social" purposes. This increased size of government, of course, necessitated increases in tax rates. Since taxation's effects on aggregate supply had been subordinated, however, there was little discussion of the effects of higher tax rates on the supply of labor and capital as well as on output and economic growth.

High tax rates were seen as not necessarily bad. Indeed, it was often contended that high tax rates had little if any adverse effects on the supply of labor. Some economists of this period even asserted that tax rate increases would increase work effort. Moreover, since saving was seen as a leakage from the income-expenditure flow, the "new economics" came to view increases in saving as adversely affecting economic activity. According to this view, output was determined by aggregate demand and not by saving or other factor supplies.

The Re-emergence of Supply-Side Economics

Recently there has been a re-emergence of supply-side views, sparked by economic circumstances all too familiar to everyone: (1) high and rising tax rates, (2) increased government regulation and intervention into the economy, (3) increasing amounts of tax-avoidance activities, and (4) lower rates of economic growth. Indeed, the circumstances of recent years have begun to resemble those conditions of the mercantilist era which induced the classical economists to reject mercantilist economic policies. Like the classical economists centuries earlier, some economists have come to recognize the adverse effects that high tax rates and government intervention can have on incentives, factor supplies, and economic growth. This has led to a re-emergence of supply-side (classical) principles of public finance. Although dormant, then, the supply-side view was not dead.

⁹ W.H. Hutt, *A Rehabilitation of Say's Law*, p.2.

Summary and Conclusions

- (1) Supply-side economics is neither novel nor is it a fad. It is instead well-rooted in classical macroeconomic analysis and, in particular, classical principles of public finance. These views originated in the attacks of the Physiocrats, Hume, Smith, and other classical economists on the policies of mercantilism.
- (2) The approach was further developed and elaborated by such economists as J.B. Say, James Mill, John Stuart Mill, McCulloch, and others.
- (3) The dominance of the supply-side view continued uninterrupted until the interwar period when concerns such as stabilization and redistribution began to receive more emphasis than did the growth orientation of fiscal policy.
- (4) Supply-side economics constitutes a return to the classical principles of public finance.

Although not discussed here, these classical principles of public finance have often been successfully implemented in the past. The administration of William Gladstone, the Mellon tax cuts, the Kennedy tax cuts, and experiences in Puerto Rico, Hong Kong, and elsewhere support this contention. Moreover, recent empirical studies have clearly documented significant incentive responses to changes in marginal tax rates. Given (1) the very substantial precedent for these policies, (2) the fact that these views formed the basis for the policy prescriptions of the classical economists, and (3) the record of successful implementation of these policies, it is evident that supply-side theory cannot be dismissed as "voodoo economics," "quackery," and so forth.

In fact, as the descendant of mainstream, classical economic thought, supply-side economics deserves to be viewed with proper historical perspective. Given the apparent inadequacy of demand-side policies to deal with our current economic dilemma, it is just possible that the supply-siders may have the last laugh.

—Robert E. Keleher

This article is based on a speech presented to the National Association of Business Economists, Fairfield County Chapter, Stamford, Connecticut, Dec. 1, 1981.

The Surge in Bankruptcies: Is the New Law Responsible?

The 1978 Bankruptcy Act, intended to modernize the nation's bankruptcy laws, may have produced instead an unanticipated rise in personal bankruptcies. While a weak economy in 1980-81 had much to do with the rise, this study suggests that as much as three-fourths of the increase in bankruptcy filings may be due to the new law.

Historically, the number of bankruptcy cases filed followed the general pattern of the economy. Filings rose most rapidly when unemployment increased and output and employment declined.¹

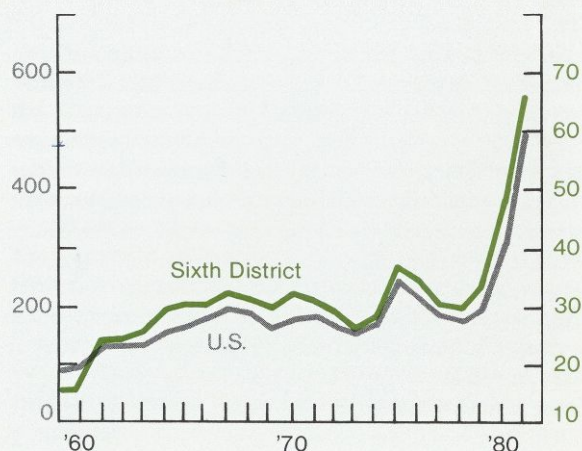
But such conventional wisdom was shattered after the 1978 Bankruptcy Reform Act went into effect in October 1979. During fiscal year 1980, bankruptcy cases rose by a staggering 59 percent in the United states and 44 percent in the Southeast.² In fiscal year 1981, they climbed 43 percent and 35 percent respectively, reaching unprecedented highs of 515,355 nationwide and 72,637 in the Southeast (see Chart 1). The increase during the 1979-81 period exceeded even the rise during 1974 and 1975 when the recession was much more severe and lasted more than twice as long.

The causes and relative importance of factors responsible for the surging bankruptcy rate are debatable. While most will agree that a weak economy in 1980-81 had much to do with it, many bankers, retailers, credit unions, finance companies, and others who provide financing to consumers attribute much of the rise to the Bankruptcy Reform Act.

To a large degree they are correct. This study suggests that as much as three-fourths of the

recent rise in personal bankruptcy filings may be due to the new law. It also reveals some interesting disparities in bankruptcy patterns between the nation and the Southeast, and among individual states in the Southeast.

Chart 1. Personal Bankruptcy Filings



JANUARY 1982, ECONOMIC REVIEW

The Cost of Bankruptcy

Congress adopted the Act in November 1978 as the first major revision of the 1898 Bankruptcy Act in 40 years. Intended to modernize the nation's bankruptcy laws, the 1978 act may have produced instead an unanticipated rise in personal bankruptcies. If so, the repercussions could be severe not only for those directly involved but even for those not directly involved. Like various other business expenses, costs incurred by lenders through bankruptcy may be passed forward indirectly to the buying public in higher prices. Lenders may become more restrictive in extending new credit. Still others not able to pass the cost along may lay off workers or see their profits reduced.

The magnitude of the cost associated with bankruptcy is large. In 1980, for instance, the nation's bankruptcy courts relieved consumers of \$3.2 billion in personal debt, about \$14 for every man, woman, and child in the United States. This amounted to 8.4 percent of the net change in consumer installment credit outstanding in 1979. In 1977, the most recent year for which financial data on bankruptcy cost are available by state, creditors in the Sixth District states lost as much as \$232.6 million. Less than 9 percent of all credit and only 3 percent of unsecured credit allowed by the courts was subsequently repaid. In Georgia alone, some \$57.6 million in business and personal debt was erased by the state's district courts. That computes to \$18.34 per Georgian over 21 years old. Table 1 shows direct financial costs associated with bankruptcy for other southeastern states.

Cyclical Patterns in Bankruptcy Filings

The fact that bankruptcy cases surged nationwide after the new code went into effect is widely recognized. In contrast, little is known about the new code's effect on cases filed on a state or regional basis. Are southern businesses and individuals seeking relief from undesirable debt to the same degree as their national counterparts? How has faster economic growth in the Sunbelt states affected bankruptcies here relative to the rest of the United States? Since most regional economic experts would agree that the Sunbelt region has been growing more rapidly than Snowbelt states, examining bankruptcy trends in the faster-growing Southeast could help to separate

The New Code

Why is it believed that the new bankruptcy code helped encourage the rush of filings? The belief centers on what many consider overly generous federal exemptions provided for in the code. Historically, the dollar value of debtors' assets that could be exempted from claims by creditors was left to the states. States varied widely in terms of the dollar amount of exemptions for homes, automobiles, personal items, and tools of the debtors' trade. In an effort to make exemptions more uniform across the country, the new code established federal exemptions which, in most cases, were much higher than those previously allowed in state laws. The new code allowed an individual debtor to exempt:

- ☐ up to \$7,500 in value, in real or personal property that the debtor or a dependent of the debtor (spouse included) uses as a principal place of residence. For joint petitions, this exemption amounts to \$15,000.
- ☐ up to \$400 for any additional property other than the principal place of residence.
- ☐ up to \$1,200 for one motor vehicle.
- ☐ a ceiling of \$200 on any single item of household furnishings, household goods, wearing apparel, appliances, books, animals, crops, or musical instruments. Conceivably, this could amount to \$200 per chair, per place setting, per appliance, etc.
- ☐ up to \$500 for jewelry.

It also exempted from creditors' claims the debtors' right to receive social security, unemployment compensation, local public assistance, veteran benefits and alimony support.

For those who do not own a home, the \$7,500 homestead exemption could be used to exempt other assets. Along with the \$400 miscellaneous property exemption, renters were granted up to \$7,900 in exemptions against nonresidential property.

In an apparent backlash against the generosity of those exemptions, more than 30 states have exercised their privilege of overriding the federal exemptions with their own. A number of others have similar legislation pending. Ironically, though, bankruptcy filings have continued to rise briskly even in states such as Florida, Georgia and Tennessee, which have imposed somewhat more restrictive exemptions. While over 30 states have replaced the federal exemptions with their own, in every case the new laws raised the amount of allowable exemptions.

Table 1. Direct Costs of Bankruptcy- U.S. and Sixth District States, 1977

| | Ala. | Fla. | Ga. | La. | Miss. | Tenn. | District States | U.S. |
|--|--------|--------|--------|--------|-------|--------|-----------------|-----------|
| Number of Cases | 394 | 631 | 404 | 1,425 | 165 | 333 | 3,352 | 30,850 |
| Total claims allowed (\$ 000) | 13,396 | 78,044 | 62,496 | 55,486 | 8,268 | 37,230 | 254,938 | 1,534,135 |
| Payments to creditors (\$ 000) | 1,935 | 5,228 | 4,857 | 5,486 | 399 | 4,474 | 22,380 | 166,389 |
| Percent of liabilities paid | 14.5 | 6.7 | 7.8 | 9.9 | 4.8 | | 8.8 | 10.8 |
| Unsecured claims allowed (\$ 000) | 11,662 | 70,781 | 57,494 | 50,007 | 7,642 | 32,574 | 230,159 | 1,358,751 |
| Payments to unsecured creditors (\$ 000) | 844 | 2,069 | 1,651 | 1,538 | 122 | 1,079 | 7,304 | 61,109 |
| Percent of unsecured credit paid | 7.2 | 2.9 | 2.9 | 3.1 | 1.6 | 3.3 | 3.2 | 4.5 |

Source: **Tables of Bankruptcy Statistics**, Administrative Office of the United States Courts, 1977.

the effects of economic weakness and the new code on bankruptcy filings.

In short, after standardizing bankruptcy filings from representative yardsticks of economic performance—growth of employment, personal income, population, and so forth—is there still an unexplained uptrend in bankruptcy filings in the Southeast and the United States? Moreover, has this unexplained residual increased over time and especially for the period after the new code went into effect?

To try to answer these questions, we explored the relationship between conventional economic measures and cases filed prior to and after the new code. Our hypothesis was that the new code caused a surge in bankruptcy filings. That hypothesis is supported by the unexplained variation among the states in the number of filings, a variation that increased significantly after the new law went into effect.

Prior to the fiscal year for which the new bankruptcy code went into effect, the average annual growth rate of personal bankruptcies was slowing. For instance, there was an average of over 49,000 personal bankruptcy cases filed during the 1950s. In contrast, the average grew to 154,000 per year in the 1960s, an increase of over 300 percent from the '50s. Alternatively, there was a 30 percent increase per year in average annual personal bankruptcies. During the 1970s, the yearly volume rose to 184,000—a 20 percent increase from the 1960s but a significant deceleration to only 2 percent per year.

The sharp increase in 1980 and 1981 could reverse the downtrend, however. In the fiscal year ending June 30, 1980, which includes only nine months for which the new code was in effect, about 315,000 personal bankruptcies were filed nationally. Bankruptcy cases filed in fiscal 1980 exceeded the 1979 figure by 60 percent. Personal bankruptcies jumped another 43 percent in 1981 to almost 450,000 cases, more than twice the number filed in 1979 (see Chart 1).

Stronger economic growth helped to slow the rise in personal bankruptcies in the Southeast. An average of about 28,000 personal bankruptcies were filed per year in the 1960s compared to 31,000 per year during the 1970s. These represent a 13 percent increase from 1960s to the 1970s compared to 20 percent for the nation. After the new bankruptcy code took effect, personal bankruptcies leaped to 48,000 in fiscal 1980 and 65,000 in 1981. The 1980 figure was 44 percent higher than the 1979 number and the 65,000 cases filed in 1981 were 36 percent higher than 1980 and also more than twice the number of filings in 1979 (see Table 2).

Business bankruptcy cases also have taken an upturn over the past two decades. For example, an average of about 16,000 business cases were filed per year in the 1960s in the United States. In the 1970s, that number rose to almost 25,000 per year. Business bankruptcies increased by 57 percent from the 1960s to the 1970s,³ but jumped 55 percent in 1980 and 43 percent in 1981 to almost 66,000. Business filings more than doubled

in the Southeast from the 1960s to the 1970s (see Table 3). Still, the increases in the last two years have been significantly less in the Southeast than for the nation in general.⁴

The cyclical nature of bankruptcies has been pronounced over the last four major recessions. Filings rose during each recession. The sharp

increase in the number of cases filed in the 1974-75 period, experienced both nationwide and in the Southeast, attests to the severity of that recession. The number of business and personal cases filed rose from 173,000 in 1973 to over 254,000 in 1975 nationwide—a 47 percent increase.

BANKRUPTCY FILINGS: U.S. AND SOUTHEAST

We compiled annual bankruptcy statistics for the United States and southeastern states for 1959-81. Data are for the fiscal years ending June 30, the fiscal years for the Office of Administrative Courts from which most of the data came. Prior to October 1, 1979, husband-wife cases were treated as separate filings.

Table 2. Personal Bankruptcies Filed in the United States and Southeast, 1959-81
(12-month periods ending June 30)

| | Number of Cases Filed | | Percent Change | |
|-------|-----------------------|--------------------|----------------|--------------------|
| | United States | Sixth Dist. States | United States | Sixth Dist. States |
| 1959 | 88,943 | 16,299 | — | — |
| 1960 | 97,750 | 16,759 | 9.90 | 2.82 |
| 1961 | 131,402 | 24,142 | 34.43 | 44.05 |
| 1962 | 132,125 | 24,595 | 0.55 | 1.88 |
| 1963 | 139,191 | 26,861 | 5.35 | 9.21 |
| 1964 | 155,209 | 29,701 | 11.51 | 10.57 |
| 1965 | 163,413 | 30,568 | 5.29 | 2.92 |
| 1966 | 175,924 | 30,749 | 7.66 | 0.59 |
| 1967 | 191,729 | 32,630 | 8.98 | 6.12 |
| 1968 | 181,266 | 31,266 | - 5.46 | - 4.18 |
| 1969 | 169,500 | 29,102 | - 6.49 | - 6.92 |
| 1970 | 178,202 | 32,109 | 5.13 | 10.33 |
| 1971 | 182,249 | 31,623 | 2.27 | - 1.51 |
| 1972 | 164,737 | 28,143 | - 9.61 | -11.01 |
| 1973 | 155,707 | 26,504 | - 5.48 | - 5.82 |
| 1974 | 168,767 | 28,824 | 8.39 | 8.75 |
| 1975 | 224,354 | 37,694 | 32.94 | 30.77 |
| 1976 | 211,348 | 34,222 | - 5.80 | - 9.21 |
| 1977 | 182,210 | 30,919 | -13.79 | - 9.65 |
| 1978 | 172,423 | 29,860 | - 5.37 | - 3.43 |
| 1979 | 196,976 | 33,460 | 14.24 | 12.06 |
| 1980* | 314,875 | 48,275 | 59.86 | 44.28 |
| 1981* | 449,645 | 65,407 | 42.80 | 35.49 |

*Joint petitions filed on or after October 1st 1980 counted twice to make data consistent for all years.

Source: **Tables of Bankruptcy Statistics**, Administrative Office of the United States Courts, 1959-80, and the Federal Reserve Bank of Atlanta.

Table 3. Business Bankruptcies Filed in the United States and Southeast, 1959-81
(12-month periods ending June 30)

| | Number of Cases Filed | | Percent Change | |
|-------|-----------------------|--------------------|----------------|--------------------|
| | United States | Sixth Dist. States | United States | Sixth Dist. States |
| 1959 | 11,729 | 969 | — | — |
| 1960 | 12,184 | 1,086 | 4.73 | 12.07 |
| 1961 | 15,241 | 1,530 | 24.07 | 40.88 |
| 1962 | 15,655 | 1,398 | 2.72 | - 8.63 |
| 1963 | 16,302 | 1,399 | 4.13 | 0.07 |
| 1964 | 16,510 | 1,422 | 1.28 | 1.64 |
| 1965 | 16,910 | 1,450 | 2.42 | 1.97 |
| 1966 | 16,430 | 1,627 | - 2.84 | 12.21 |
| 1967 | 16,600 | 1,686 | 1.04 | 3.63 |
| 1968 | 16,545 | 1,708 | - 0.33 | 1.31 |
| 1969 | 15,430 | 1,706 | - 6.74 | - 0.12 |
| 1970 | 16,197 | 1,792 | 4.97 | 5.04 |
| 1971 | 19,103 | 2,204 | 17.94 | 22.99 |
| 1972 | 18,132 | 1,967 | - 5.08 | -10.75 |
| 1973 | 17,490 | 1,890 | - 3.54 | - 3.92 |
| 1974 | 20,746 | 2,288 | 18.62 | 21.06 |
| 1975 | 30,130 | 3,937 | 45.23 | 72.07 |
| 1976 | 35,201 | 4,595 | 16.83 | 16.71 |
| 1977 | 32,189 | 4,503 | - 8.56 | - 2.00 |
| 1978 | 30,528 | 4,265 | - 5.16 | - 5.29 |
| 1979 | 29,500 | 3,938 | - 3.37 | - 7.67 |
| 1980* | 45,841 | 5,709 | 55.39 | 44.97 |
| 1981* | 65,710 | 7,230 | 43.34 | 26.64 |

*Joint petitions filed on or after October 1st 1980 counted twice to make data consistent for all years.

Source: **Tables of Bankruptcy Statistics**, Administrative Office of the United States Courts, 1959-80, and the Federal Reserve Bank of Atlanta.

The Southeast echoed that dramatic increase. Filings in the region rose from over 28,000 in 1973 to almost 42,000 in 1975—also a 47 percent rise. Thus, southerners were also financially strapped by the prolonged recession and no less reluctant to seek relief through the courts than non-Sunbelt residents.

In terms of severity, the 1974-75 recession was much more severe than the 1979-80 recession, yet bankruptcy cases filed rose much more sharply in the more recent period. Nationwide, cases filed rose 78 percent from 1979 to 1980 compared to 47 percent in 1974-75. In the Southeast, filings rose 58 percent in 1979-80 compared with 47 percent in the earlier recession.

It is evident that factors other than the severity of the economic downturn are responsible for the enormous increase in bankruptcies. As we have seen, an aggregate overview overlooks distinctions between those cases filed by businesses versus those filed by individuals. Personal bankruptcies make up the lion's share of total filings nationally, constituting nearly nine-tenths of all

Table 4. 1980 Population and Personal Bankruptcies in the Sixth District

| | 1980 Population | % of Southeast | Personal Bankruptcy Cases Filed | % of Southeast |
|--------------------|--------------------|-------------------|---------------------------------------|-------------------|
| Ala. | 3,870,251 | 12.9 | 9,539 | 19.8 |
| Fla. | 9,579,963 | 31.8 | 5,715 | 11.8 |
| Ga. | 5,404,384 | 18.0 | 10,197 | 21.1 |
| La. | 4,199,542 | 14.0 | 5,216 | 10.8 |
| Miss. | 2,511,491 | 8.3 | 4,043 | 8.4 |
| Tenn. | 4,545,590 | 15.1 | 13,565 | 28.1 |
| District States | 30,111,221 | 100.0 | 48,275 | 100.0 |

cases filed during fiscal 1981. In the Southeast, personal bankruptcies also accounted for about nine-tenths of all cases.

State Trends Vary Widely

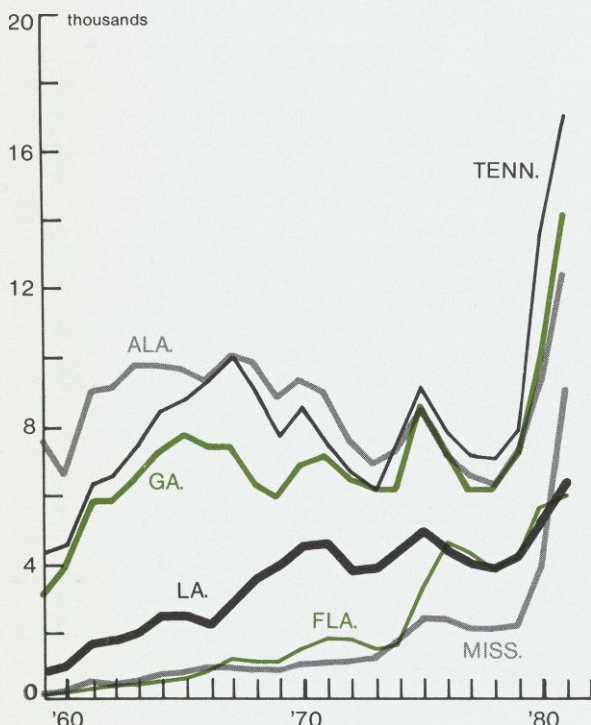
Trends in overall bankruptcies never capture important differences among the states. The number of cases filed rose 26 percent in Tennessee, for instance, more than three times the 7.7 percent rise in Florida in 1980.

One would normally expect personal bankruptcies to vary directly with the number of debtors within a state. Unfortunately, the number of debtors is unavailable on a state-by-state basis. The second best alternative is population. Table 4 shows 1980 population and bankruptcies for the six southeastern states as well as the percentage distribution of these two measures.

The disproportionate incidence of personal bankruptcies persists. Although Tennesseans constituted only 15 percent of the total population in the Southeast, they filed 28 percent of the region's bankruptcy cases in 1980. In contrast, nearly one in three southerners lived in Florida that year, but Floridians accounted for only about one in nine of the cases filed in the Southeast. Louisiana also has a below-average incidence of personal bankruptcies, making up 14 percent of the 1980 population in the Southeast but constituting only 11 percent of its filings.

What other factors might explain the variation in state bankruptcy rates? In a 1980 survey of

Chart 2. Personal Bankruptcy Filings



**Table 5. Personal Bankruptcy Filings,
Sixth District States, 1959-81**

(12-month periods ending June 30)

| | Ala. | Fla. | Ga. | La. | Miss. | Tenn. |
|------|--------|-------|--------|-------|-------|--------|
| 1959 | 7,658 | 168 | 3,134 | 840 | 165 | 4,334 |
| 1960 | 6,756 | 214 | 3,944 | 1,091 | 245 | 4,509 |
| 1961 | 9,182 | 312 | 5,971 | 1,738 | 571 | 6,368 |
| 1962 | 9,240 | 445 | 5,973 | 1,822 | 431 | 6,684 |
| 1963 | 9,818 | 496 | 6,509 | 2,089 | 533 | 7,416 |
| 1964 | 9,827 | 596 | 7,395 | 2,547 | 797 | 8,539 |
| 1965 | 9,767 | 660 | 7,870 | 2,541 | 891 | 8,839 |
| 1966 | 9,449 | 929 | 7,500 | 2,379 | 1,013 | 9,479 |
| 1967 | 10,104 | 1,204 | 7,407 | 2,802 | 1,044 | 10,069 |
| 1968 | 9,959 | 1,165 | 6,427 | 3,620 | 983 | 9,112 |
| 1969 | 8,998 | 1,192 | 6,012 | 4,037 | 971 | 7,892 |
| 1970 | 9,456 | 1,409 | 6,928 | 4,598 | 1,167 | 8,551 |
| 1971 | 9,089 | 1,877 | 7,194 | 4,637 | 1,276 | 7,550 |
| 1972 | 7,738 | 1,857 | 6,556 | 3,867 | 1,361 | 6,764 |
| 1973 | 7,021 | 1,581 | 6,243 | 3,960 | 1,407 | 6,292 |
| 1974 | 7,366 | 1,633 | 6,246 | 4,334 | 1,737 | 7,508 |
| 1975 | 8,711 | 3,332 | 8,796 | 5,073 | 2,635 | 9,147 |
| 1976 | 7,280 | 4,705 | 7,348 | 4,497 | 2,585 | 7,807 |
| 1977 | 6,640 | 4,372 | 6,269 | 4,074 | 2,274 | 7,290 |
| 1978 | 6,460 | 3,937 | 6,216 | 3,978 | 2,236 | 7,033 |
| 1979 | 7,292 | 4,318 | 7,248 | 4,238 | 2,392 | 7,972 |
| 1980 | 9,539 | 5,715 | 10,197 | 5,216 | 4,043 | 13,565 |
| 1981 | 12,408 | 6,049 | 14,149 | 6,545 | 9,167 | 17,089 |

Source: **Tables of Bankruptcy Statistics**, Administrative Office of the United States Courts, 1959-80, and the Federal Reserve Bank of Atlanta.

**Table 6. Business Bankruptcy Filings
Sixth District States, 1959-81**

(12-month periods ending June 30)

| | Ala. | Fla. | Ga. | La. | Miss. | Tenn. |
|------|-------|-------|-------|-------|-------|-------|
| 1959 | 109 | 299 | 200 | 157 | 56 | 148 |
| 1960 | 117 | 275 | 265 | 241 | 62 | 135 |
| 1961 | 140 | 465 | 295 | 331 | 88 | 211 |
| 1962 | 160 | 353 | 282 | 317 | 93 | 193 |
| 1963 | 170 | 369 | 250 | 321 | 60 | 229 |
| 1964 | 201 | 305 | 229 | 377 | 82 | 228 |
| 1965 | 210 | 298 | 286 | 363 | 76 | 217 |
| 1966 | 222 | 311 | 362 | 407 | 92 | 233 |
| 1967 | 227 | 310 | 349 | 471 | 103 | 226 |
| 1968 | 255 | 251 | 381 | 461 | 88 | 272 |
| 1969 | 212 | 290 | 277 | 524 | 83 | 320 |
| 1970 | 242 | 264 | 304 | 545 | 118 | 319 |
| 1971 | 243 | 392 | 484 | 538 | 150 | 397 |
| 1972 | 248 | 359 | 463 | 401 | 155 | 341 |
| 1973 | 217 | 356 | 427 | 420 | 153 | 317 |
| 1974 | 251 | 480 | 558 | 466 | 187 | 346 |
| 1975 | 326 | 996 | 977 | 613 | 316 | 709 |
| 1976 | 412 | 1,269 | 1,163 | 685 | 309 | 757 |
| 1977 | 405 | 1,216 | 1,221 | 611 | 316 | 734 |
| 1978 | 424 | 1,059 | 1,098 | 632 | 306 | 746 |
| 1979 | 492 | 986 | 846 | 606 | 262 | 746 |
| 1980 | 1,090 | 1,198 | 1,157 | 843 | 163 | 1,258 |
| 1981 | 1,371 | 1,395 | 1,469 | 1,075 | 316 | 1,604 |

Source: **Tables of Bankruptcy Statistics**, Administrative Office of the United States Courts, 1959-80, and the Federal Reserve Bank of Atlanta.

1,645 individuals and families who had filed bankruptcy, Andrew Brimmer found that 57 percent of the sample consisted of persons 34 years of age and under.⁵ In contrast, this age group constituted only 40 percent of the population 18 years old and over. Moreover, the 18-44 year old group made up 56 percent of the working age population but 83 percent of the bankruptcy cases in the sample. The finding is not surprising in view of the fact that a disproportionate share of consumer credit is extended to this younger group. Moreover, any measure of debt burden one selects is usually higher for young households.

Therefore, it may be helpful to examine differences in age structure of a state's population as a plausible explanation of why per capita bankruptcies differ between states. That is to say, a state whose working-age population contains a large concentration of young households can be expected to experience a higher incidence of personal bankruptcies, *ceteris paribus*, than a

state whose population consists of a low concentration of young households.

Although varying strengths and weaknesses of the states' economies also are important reasons for differences in incidence of personal bankruptcies, it is also clear that age structure is important. For instance, for every thousand residents in Florida 394 were of age 20-39 in 1980, and there were only 81 personal bankruptcies per hundred thousand residents. In Tennessee, the other hand, per thousand residents there were 468 people in the 20-39 years old group and 435 personal bankruptcies per hundred thousand population.

State-to-state differences in the incidence of bankruptcies are clearly related to varying economies during the period. Florida's economy wasn't nearly as hard hit by the 1979-80 recession as, say, Alabama or Tennessee. Louisiana's economy was buoyed by the strength of its petroleum and natural gas explorations.

Table 7. Estimates of Components of Change in Personal Bankruptcies in the U.S. and Southeast

| | 1974-75 | | | 1979-80 | | | | |
|---------------|------------------------|--------|----------|------------------------|-------|----------|----------|-------------------|
| | Actual | Trend | Cyclical | Actual | Trend | Cyclical | New Code | % Due To New Code |
| | <i>Number of Cases</i> | | | <i>Number of Cases</i> | | | | |
| Alabama | 1,690 | -194 | 1,884 | 2,247 | -90 | 1,884 | 453 | 20.2 |
| Florida | 3,124 | 1,278 | 1,846 | 1,397 | 917 | 1,846 | -1,366 | 0.0 |
| Georgia | 2,553 | 254 | 2,299 | 2,949 | 140 | 2,299 | 510 | 17.3 |
| Louisiana | 1,113 | 584 | 529 | 978 | 428 | 529 | 21 | 2.2 |
| Mississippi | 1,228 | 407 | 821 | 1,651 | 378 | 821 | 452 | 27.4 |
| Tennessee | 2,855 | 203 | 2,652 | 5,593 | 109 | 2,652 | 2,832 | 50.6 |
| District | 11,190 | 1,461 | 9,729 | 14,815 | 828 | 9,729 | 4,258 | 28.7 |
| United States | 68,647 | 10,485 | 58,162 | 117,899 | 6,122 | 58,162 | 53,615 | 45.5 |

Source: **Tables of Bankruptcy Statistics**, Administrative Office of the United States Courts, 1959-80, and the Federal Reserve Bank of Atlanta.

One widely used measure of relative performance of the state economies is the level of unemployment. Bankruptcies, we find, are more consistent with a state's share of the region's unemployed than with population. Yet the overall unemployment level or rate can be misleading. Duration of unemployment is at least as important as incidence. Prolonged periods of unemployment can deplete financial assets and force a household into bankruptcy. Unfortunately, current unemployment duration data do not exist on a state level.

However, even after considering the relative economic health of the various southeastern states, the interstate differences in bankruptcies persist. Although bankruptcies seem to correlate more closely to unemployment than to population, bankruptcy patterns still differ significantly from unemployment patterns.

States may, however, differ markedly in the degree of cyclical vulnerability. Some states have a higher proportion of their work force in cyclically sensitive industries than do others. Another variable is that blue collar workers in construction and manufacturing file bankruptcy in greater numbers than do white collar workers. Not surprisingly, the share of Tennessee's private nonfarm work force in goods-producing industries (manufacturing mining and construction) is 35 percent, higher than any other southeastern state. Florida on the contrary, has the region's least concentration of workers in these three sectors. In 1980, only one in five Florida workers was in goods-producing industries.

How Much of The Increase Was Due to The New Code?

Had the 1959-79 trend rate of bankruptcy filings continued through 1980, there would have been roughly 4,400 additional personal bankruptcies filed that year in the United States. Therefore, the 24,000 additional cases filed in 1979, the 118,000 in 1980, and 135,000 in 1981 were well above trend.

However, not all the additional cases filed in 1979-81 can be attributed to the 1978 Reform Act. The data are for the fiscal year ending June 30. Since the new law took effect only in October 1979, bankruptcies filed in fiscal 1979 cannot be blamed on the new law. That increase represents the effect of an overheated economy with double-digit inflation. Although the number of cases filed in fiscal 1980 and 1981 does include the period for which the new code was in effect, it also includes a period of recession. The task, of course, is to isolate the new code's effect from the recession's effect. (see Box 2)

Regardless of the assumptions one makes about the severity of the 1980 recession, the new code had a significant influence on the additional bankruptcy cases filed both nationally and in the Southeast. For instance, assuming that the 1980 recession was equivalent in severity to the 1974-75 contraction, then only about 58,000 of the almost 118,000 additional cases filed in fiscal 1980 can be attributed to the 1980 recession.

(Table 7 continued)

1979-81

| Actual | Trend | Cyclical | New Code | % Due To New Code |
|------------------------|--------|----------|----------|-------------------|
| <i>Number of Cases</i> | | | | |
| 5,116 | -180 | 1,884 | 3,412 | 66.7 |
| 1,731 | 1,988 | 1,846 | -2,103 | 0.0 |
| 6,901 | 283 | 2,299 | 4,319 | 62.6 |
| 2,307 | 885 | 529 | 893 | 38.7 |
| 6,775 | 801 | 821 | 5,153 | 76.1 |
| 9,117 | 219 | 2,652 | 6,246 | 68.5 |
| 31,947 | 1,694 | 9,729 | 20,524 | 64.2 |
| 252,699 | 12,420 | 58,162 | 182,087 | 72.1 |

That leaves over 53,000 cases unexplained by either trend or recession and apparently due to the new code. Thus, our assumptions about recession severity persuade us to attribute about 45.5 percent of the additional cases filed in fiscal 1980 to the new code. If the 1980 recession is assumed to have been equal in impact to the 1970-71 recession, then 92 percent are attributable to the new code. Finally, if the 1980 recession's impact is believed to have been equivalent to the 1960-61 recession, then 73 percent can be attributed to the law.

We also applied the same procedure to the personal bankruptcy data for the southeastern states. The findings were interesting, but not surprising. Although the new code added materially to the additional volume of personal bankruptcy filings in the Southeast, the relative contribution was substantially less than its effect for the United States in general. For instance, while our estimates lead us to conclude that the 1979 code was responsible for roughly 45.5 percent of the additional personal bankruptcies filed nationally in 1980, only 28.7 percent of the additional cases filed in the Southeast can be attributed to the new code. In Tennessee, the contribution of the new code to personal bankruptcies (50.6 percent) was above the national average. In contrast, the new code is believed to have been overshadowed by strong economic growth in Florida. Strong growth in Florida held the rise in bankruptcies in 1980 below trend. Less than one-fifth (17.3

percent) of Georgia's additional bankruptcies can be blamed on the new code (see Table 7).

However, more recent data suggest that the law had a more significant influence on personal bankruptcies for the two-year period after it went into effect than it had on filings during the first nine months. For instance, three-fourths of the cases filed nationally and almost two-thirds of those filed in the Southeast over the eight quarters from July 1, 1979, to June 30, 1981, can be blamed on the law (see Table 7). These proportions are substantially higher than the 46 percent in the United States and 29 percent in the Southeast we attribute to the new code during its first nine months. This is not a surprise but is consistent with a generally upward-sloping learning curve. As more individuals become aware of the new law's contents, they become more likely to file.

We also recognized that recessions do not affect individual states uniformly. That is, our measure of the relative impact of the new code on the rise in personal bankruptcy in each state rests on the assumption that the 1980 recession was equally severe vis-a-vis the 1974-75 recession in each state and in the nation. If this assumption is more realistic in some states than it is in others, then the relative effect of the new law can be distorted. To account for this variation, we compared the duration and severity of the 1980 recession to the 1974-75 recession and measured the new code's effect on bankruptcies (see Box 2).

The new results raise the estimated impact of the new code substantially in all states as well as the U.S. For instance, more explicit account of the relative weaknesses of the Mississippi economy in 1980-81 compared to 1974-75 lowered the contribution of the recession and raised the residual effect (presumably due to the new code) from 76 percent to almost 80 percent. Our earlier assumption of equal severity was clearly inappropriate for Mississippi. The new code's contribution to the increase in personal bankruptcies in Florida was left at no effect under both assumptions. But even after taking into more explicit recognition the relative weakness of the state economies in 1980 vis-a-vis 1974-75, we still find that the code had less impact on the rise in personal bankruptcies in the Southeast than in the nation. In 1980-81, while 82 percent of the above trend increase in personal bankruptcies could be attributed to the new code in the U.S., 73 percent of the rise in the Southeast could be blamed on the new code.

BOX 2

To separate the new law's effect on the personal bankruptcy rate from the recession's effect, we used regression analysis. First, we estimated a trend effect for the period 1959-79. Then we used these results to project the number of personal bankruptcies in 1980 and 1981 that would have been consistent with the 1959-79 trend. The trend number of additional cases was subtracted from actual additional cases in 1980 and 1981 to obtain the detrended estimate. The latter measures both the effect of the new law and the cyclical effect.

To separate these two influences, several assumptions concerning the severity of the 1980 recession were necessary. First, we assumed that the 1980 recession was as severe in its influence on personal bankruptcy filings as its 1974-75 predecessor. Therefore, the number of cases filed in 1974-75 over the number predicted by our trend estimate provides

an estimate of the cyclical component for 1974-75. Indeed, if the 1980 downturn was as severe as the 1974-75 recession in terms of its bankruptcy effect, then subtracting the cyclical component of the increase in filings in 1974-75 from the detrended 1980-81 estimate leaves a residual that we attribute to the law.

But there may be disagreement over our assumption that the 1980 recession was as severe as 1974-75. To account for this possibility, we made the same calculation assuming that the 1980 downturn was comparable to the 1970-71 recession. Finally, we repeated the process, assuming that the recession was comparable to the 1960-61 recession.

To more explicitly measure the recession's impact versus the new code's effect on personal bankruptcies, we used several broad indicators for relative duration and severity of the 1980 recession vis-a-vis the 1974-75 recession: (1) duration (the number of months from peak to trough in nonfarm employment), (2) severity (percent change in nonfarm and manufacturing employment from peak to trough), and (3) the

**Table 8. Cyclical Patterns of Manufacturing Employment in Two Recessions
United States and Southeastern States**

(Manufacturing Employment 000's)

| | Duration (months) | Peak | Trough | Change (amount) | Change (percent) |
|----------------------|----------------------|--------|--------|--------------------|---------------------|
| Alabama | | | | | |
| 4/74-4/75 | 12 | 359.3 | 313.3 | - 46.0 | -12.8 |
| 1/80-7/80 | 6 | 375.1 | 344.4 | - 30.7 | - 8.2 |
| Florida | | | | | |
| 12/73-6/75 | 18 | 383.7 | 335.4 | - 48.3 | -12.6 |
| 2/80-7/80 | 5 | 458.7 | 449.0 | - 9.7 | - 2.1 |
| Georgia | | | | | |
| 12/73-3/75 | 15 | 501.3 | 420.1 | -81.2 | -16.2 |
| 11/79-6/80 | 7 | 531.8 | 503.8 | -28.0 | - 5.3 |
| Louisiana | | | | | |
| 3/74-7/75 | 16 | 193.7 | 183.9 | - 9.8 | - 5.1 |
| 10/79-7/80 | 9 | 214.6 | 209.3 | - 5.3 | - 2.5 |
| Mississippi | | | | | |
| 12/73-4/75 | 16 | 225.6 | 192.7 | - 32.9 | -14.6 |
| 6/79-7/80 | 13 | 237.8 | 213.4 | - 24.4 | -10.3 |
| Tennessee | | | | | |
| 1/74-4/75 | 15 | 527.0 | 447.0 | - 80.0 | -15.2 |
| 1/79-7/80 | 18 | 530.1 | 484.7 | - 45.4 | - 8.6 |
| United States | | | | | |
| 12/73-7/75 | 19 | 20,239 | 18,115 | -2,244 | -11.0 |
| 6/79-7/80 | 13 | 21,132 | 19,828 | -1,304 | - 6.2 |

Source: Unpublished data provided by State Department of Labor and **Employment and Earnings**, Bureau of Labor Statistics (various issues).



FINANCE

STATISTICAL SUPPLEMENT

| | DEC 1981 | NOV 1981 | DEC 1980 | ANN. RATE OF CHG. | | DEC 1981 | NOV 1981 | DEC 1980 | ANN. RATE OF CHG. |
|--------------------------|-------------|-------------|-------------|----------------------------|-----------------------|-------------|-------------|-------------|----------------------------|
| \$ millions | | | | | | | | | |
| UNITED STATES | | | | | | | | | |
| Commercial Bank Deposits | 1,088,890 | 1,070,782 | 1,017,230 | + 8 | Savings & Loans | | | | |
| Demand | 297,864 | 294,713 | 331,626 | - 11 | Total Deposits | 515,450 | 514,893 | 500,985 | + 3 |
| NOW | 49,767 | 48,136 | 0 | | NOW | 7,412 | 7,698 | 0 | |
| Savings | 146,733 | 146,611 | 166,274 | - 13 | Savings | 91,468 | 91,366 | 104,240 | - 13 |
| Time | 619,246 | 610,316 | 526,103 | + 19 | Time | 416,303 | 416,323 | 394,288 | + 6 |
| Credit Union Deposits | 39,825 | 39,443 | 34,870 | + 15 | | OCT | SEPT | DEC | |
| Share Drafts | 2,489 | 2,437 | 1,641 | + 56 | Mortgages Outstanding | 510,009 | 509,544 | 494,179 | + 4 |
| Savings & Time | 34,984 | 34,800 | 30,093 | + 18 | Mortgage Commitments | 15,661 | 15,935 | 16,021 | - 3 |
| SOUTHEAST | | | | | | | | | |
| Commercial Bank Deposits | 116,501 | 114,882 | 107,549 | + 9 | Savings & Loans | | | | |
| Demand | 34,335 | 33,989 | 39,157 | - 13 | Total Deposits | 75,560 | 75,660 | 72,600 | + 4 |
| NOW | 6,392 | 6,122 | 0 | | NOW | 1,223 | 1,153 | 0 | |
| Savings | 14,530 | 14,551 | 16,578 | - 13 | Savings | 11,537 | 11,656 | 13,165 | - 13 |
| Time | 64,093 | 63,782 | 53,704 | + 21 | Time | 62,760 | 62,811 | 58,912 | + 7 |
| Credit Union Deposits | 3,998 | 3,962 | 3,209 | + 27 | | OCT | SEPT | DEC | |
| Share Drafts | 269 | 264 | 192 | + 44 | Mortgages Outstanding | 74,463 | 74,381 | 71,065 | + 5 |
| Savings & Time | 3,472 | 3,455 | 2,797 | + 26 | Mortgage Commitments | 3,555 | 3,472 | 3,652 | - 3 |
| ALABAMA | | | | | | | | | |
| Commercial Bank Deposits | 13,267 | 13,209 | 12,280 | + 9 | Savings & Loans | | | | |
| Demand | 3,448 | 3,491 | 3,972 | - 14 | Total Deposits | 4,370 | 4,364 | 4,265 | + 3 |
| NOW | 570 | 547 | 0 | | NOW | 64 | 61 | 0 | |
| Savings | 1,521 | 1,536 | 1,754 | - 14 | Savings | 570 | 561 | 690 | - 19 |
| Time | 8,077 | 8,092 | 6,746 | + 21 | Time | 3,760 | 3,768 | 3,575 | + 6 |
| Credit Union Deposits | 699 | 704 | 521 | + 37 | | OCT | SEPT | DEC | |
| Share Drafts | 52 | 53 | 41 | + 29 | Mortgages Outstanding | 4,009 | 4,013 | 3,947 | + 2 |
| Savings & Time | 632 | 638 | 479 | + 35 | Mortgage Commitments | 61 | 71 | 136 | - 66 |
| FLORIDA | | | | | | | | | |
| Commercial Bank Deposits | 38,318 | 37,506 | 36,141 | + 7 | Savings & Loans | | | | |
| Demand | 12,265 | 11,978 | 14,577 | - 17 | Total Deposits | 45,696 | 45,802 | 43,996 | + 4 |
| NOW | 2,784 | 2,647 | 0 | | NOW | 860 | 803 | 0 | |
| Savings | 6,268 | 6,245 | 7,333 | - 16 | Savings | 7,715 | 7,836 | 8,774 | - 13 |
| Time | 17,758 | 17,575 | 14,471 | + 25 | Time | 36,992 | 37,012 | 34,698 | + 7 |
| Credit Union Deposits | 1,813 | 1,792 | 1,491 | + 23 | | OCT | SEPT | DEC | |
| Share Drafts | 148 | 146 | 106 | + 43 | Mortgages Outstanding | 45,470 | 45,373 | 42,742 | + 8 |
| Savings & Time | 1,435 | 1,426 | 1,177 | + 24 | Mortgage Commitments | 3,103 | 3,004 | 2,984 | + 5 |
| GEORGIA | | | | | | | | | |
| Commercial Bank Deposits | 16,078 | 15,943 | 14,550 | + 11 | Savings & Loans | | | | |
| Demand | 5,993 | 5,999 | 6,793 | - 13 | Total Deposits | 9,603 | 9,642 | 9,237 | + 4 |
| NOW | 925 | 911 | 0 | | NOW | 126 | 122 | 0 | |
| Savings | 1,562 | 1,582 | 1,683 | - 8 | Savings | 1,158 | 1,163 | 1,398 | - 19 |
| Time | 8,538 | 8,505 | 7,011 | + 24 | Time | 8,347 | 8,383 | 7,835 | + 7 |
| Credit Union Deposits | 729 | 726 | 543 | + 37 | | OCT | SEPT | DEC | |
| Share Drafts | 22 | 22 | 12 | + 91 | Mortgages Outstanding | 9,444 | 9,457 | 9,332 | + 1 |
| Savings & Time | 685 | 688 | 517 | + 35 | Mortgage Commitments | 123 | 137 | 183 | - 39 |
| LOUISIANA | | | | | | | | | |
| Commercial Bank Deposits | 20,966 | 20,728 | 18,690 | + 13 | Savings & Loans | | | | |
| Demand | 6,010 | 5,999 | 6,461 | - 8 | Total Deposits | 7,410 | 7,376 | 6,865 | + 9 |
| NOW | 861 | 824 | 0 | | NOW | 72 | 69 | 0 | |
| Savings | 2,360 | 2,353 | 2,529 | - 7 | Savings | 1,192 | 1,178 | 1,257 | - 6 |
| Time | 12,181 | 12,175 | 10,093 | + 22 | Time | 6,165 | 6,158 | 5,617 | + 11 |
| Credit Union Deposits | 112 | 97 | 57 | +105 | | OCT | SEPT | DEC | |
| Share Drafts | 11 | 7 | 4 | +190 | Mortgages Outstanding | 7,116 | 7,104 | 6,777 | + 6 |
| Savings & Time | 105 | 90 | 52 | +111 | Mortgage Commitments | 196 | 186 | 221 | - 14 |
| MISSISSIPPI | | | | | | | | | |
| Commercial Bank Deposits | 9,653 | 9,527 | 8,759 | + 11 | Savings & Loans | | | | |
| Demand | 2,323 | 2,358 | 2,639 | - 13 | Total Deposits | 2,385 | 2,390 | 2,332 | + 2 |
| NOW | 470 | 451 | 0 | | NOW | 33 | 31 | 0 | |
| Savings | 722 | 724 | 842 | - 15 | Savings | 233 | 232 | 262 | - 12 |
| Time | 6,328 | 6,278 | 5,451 | + 17 | Time | 2,128 | 2,138 | 2,067 | + 3 |
| Credit Union Deposits | N.A. | N.A. | N.A. | | | OCT | SEPT | DEC | |
| Share Drafts | N.A. | N.A. | N.A. | | Mortgages Outstanding | 2,207 | 2,210 | 2,182 | + 1 |
| Savings & Time | N.A. | N.A. | N.A. | | Mortgage Commitments | 18 | 21 | 58 | - 83 |
| TENNESSEE | | | | | | | | | |
| Commercial Bank Deposits | 18,217 | 17,968 | 17,128 | + 7 | Savings & Loans | | | | |
| Demand | 4,295 | 4,162 | 4,716 | - 10 | Total Deposits | 6,095 | 6,086 | 5,904 | + 4 |
| NOW | 780 | 741 | 0 | | NOW | 69 | 65 | 0 | |
| Savings | 2,096 | 2,110 | 2,437 | - 15 | Savings | 669 | 687 | 784 | - 16 |
| Time | 11,210 | 11,157 | 9,931 | + 14 | Time | 5,368 | 5,352 | 5,120 | + 5 |
| Credit Union Deposits | 645 | 643 | 597 | + 9 | | OCT | SEPT | DEC | |
| Share Drafts | 36 | 36 | 29 | + 26 | Mortgages Outstanding | 6,217 | 6,224 | 6,085 | + 3 |
| Savings & Time | 615 | 613 | 572 | + 8 | Mortgage Commitments | 54 | 53 | 70 | - 27 |

Notes: All deposit data are extracted from the Federal Reserve Report of Transaction Accounts, other Deposits and Vault Cash (FR2900), and are reported for the average of the week ending the 1st Wednesday of the month. This data, reported by institutions with over \$15 million in deposits as of December 31, 1979, represents 95% of deposits in the six state area. The annual rate of change is based on most recent data over December 31, 1980 base, annualized. Savings and loan mortgage data are from the Federal Home Loan Bank Board Selected Balance Sheet Data. The Southeast data represent the total of the six states. Subcategories were chosen on a selective basis and do not add to total. N.A. = fewer than four institutions reporting.



EMPLOYMENT

| | OCT 1981 | SEPT 1981 | OCT 1980 | ANN. % CHG. | | OCT 1981 | SEPT 1981 | OCT 1980 | ANN. % CHG. |
|-------------------------------|-------------|--------------|-------------|-------------------|----------------------------|-------------|--------------|-------------|-------------------|
| UNITED STATES | | | | | | | | | |
| Civilian Labor Force - thous. | 106,926 | 105,964 | 105,410 | + 1 | Nonfarm Employment- thous. | 92,332 | 92,079 | 91,330 | + 1 |
| Total Employed - thous. | 98,902 | 98,277 | 97,930 | + 1 | Manufacturing | 20,350 | 20,608 | 20,300 | + 0 |
| Total Unemployed - thous. | 8,024 | 7,687 | 7,480 | + 7 | Construction | 4,483 | 4,511 | 4,700 | - 5 |
| Unemployment Rate - % SA | 8.0 | 7.5 | 7.6 | | Trade | 20,993 | 20,926 | 20,710 | + 1 |
| Insured Unemployment - thous. | N.A. | N.A. | N.A. | | Government | 15,902 | 15,461 | 16,250 | - 2 |
| Insured Unempl. Rate - % | N.A. | N.A. | N.A. | | Services | 18,877 | 18,829 | 17,950 | + 5 |
| Mfg. Avg. Wkly. Hours | 39.5 | 39.5 | 39.8 | - 1 | Fin., Ins., & Real Est. | 5,337 | 5,353 | 5,200 | + 3 |
| Mfg. Avg. Wkly. Earn. - \$ | 322 | 322 | 298 | + 8 | Trans. Com. & Pub. Util. | 5,230 | 5,227 | 5,180 | + 1 |
| SOUTHEAST | | | | | | | | | |
| Civilian Labor Force - thous. | 13,238 | 13,146 | 12,861 | + 3 | Nonfarm Employment- thous. | 11,495 | 11,471 | 11,297 | + 2 |
| Total Employed - thous. | 12,172 | 12,105 | 11,951 | + 2 | Manufacturing | 2,302 | 2,317 | 2,270 | + 1 |
| Total Unemployed - thous. | 1,069 | 1,042 | 910 | +17 | Construction | 720 | 723 | 723 | - 0 |
| Unemployment Rate - % SA | 8.4 | 8.3 | 7.3 | | Trade | 2,643 | 2,635 | 2,620 | + 1 |
| Insured Unemployment - thous. | N.A. | N.A. | N.A. | | Government | 2,205 | 2,169 | 2,192 | + 1 |
| Insured Unempl. Rate - % | N.A. | N.A. | N.A. | | Services | 2,166 | 2,163 | 2,066 | + 5 |
| Mfg. Avg. Wkly. Hours | 40.1 | 40.1 | 40.5 | - 1 | Fin., Ins., & Real Est. | 625 | 626 | 614 | + 2 |
| Mfg. Avg. Wkly. Earn. - \$ | 265 | 265 | 260 | + 2 | Trans. Com. & Pub. Util. | 687 | 686 | 681 | + 1 |
| ALABAMA | | | | | | | | | |
| Civilian Labor Force - thous. | 1,641 | 1,628 | 1,664 | - 1 | Nonfarm Employment- thous. | 1,351 | 1,350 | 1,358 | - 1 |
| Total Employed - thous. | 1,465 | 1,469 | 1,516 | - 3 | Manufacturing | 354 | 358 | 358 | - 1 |
| Total Unemployed - thous. | 179 | 159 | 147 | +22 | Construction | 70 | 70 | 71 | - 1 |
| Unemployment Rate - % SA | 11.4 | 10.2 | 9.3 | | Trade | 272 | 272 | 274 | - 1 |
| Insured Unemployment - thous. | N.A. | N.A. | N.A. | | Government | 299 | 294 | 301 | - 1 |
| Insured Unempl. Rate - % | N.A. | N.A. | N.A. | | Services | 210 | 209 | 207 | + 1 |
| Mfg. Avg. Wkly. Hours | 40.1 | 39.9 | 40.2 | - 0 | Fin., Ins., & Real Est. | 58 | 58 | 59 | - 2 |
| Mfg. Avg. Wkly. Earn. - \$ | 285 | 288 | 267 | + 7 | Trans. Com. & Pub. Util. | 71 | 71 | 71 | 0 |
| FLORIDA | | | | | | | | | |
| Civilian Labor Force - thous. | 4,192 | 4,135 | 3,935 | + 7 | Nonfarm Employment- thous. | 3,767 | 3,755 | 3,607 | + 4 |
| Total Employed - thous. | 3,864 | 3,803 | 3,657 | + 6 | Manufacturing | 472 | 475 | 461 | + 2 |
| Total Unemployed - thous. | 328 | 332 | 278 | +18 | Construction | 280 | 282 | 276 | + 1 |
| Unemployment Rate - % SA | 7.3 | 7.3 | 6.5 | | Trade | 979 | 973 | 953 | + 3 |
| Insured Unemployment - thous. | N.A. | N.A. | N.A. | | Government | 648 | 638 | 627 | + 3 |
| Insured Unempl. Rate - % | N.A. | N.A. | N.A. | | Services | 887 | 886 | 822 | + 8 |
| Mfg. Avg. Wkly. Hours | 40.0 | 39.9 | 41.1 | - 3 | Fin., Ins., & Real Est. | 268 | 268 | 257 | + 4 |
| Mfg. Avg. Wkly. Earn. - \$ | 271 | 270 | 251 | + 8 | Trans. Com. & Pub. Util. | 223 | 223 | 219 | + 2 |
| GEORGIA | | | | | | | | | |
| Civilian Labor Force - thous. | 2,479 | 2,464 | 2,416 | + 3 | Nonfarm Employment- thous. | 2,168 | 2,160 | 2,164 | + 0 |
| Total Employed - thous. | 2,322 | 2,312 | 2,264 | + 3 | Manufacturing | 518 | 521 | 516 | + 0 |
| Total Unemployed - thous. | 157 | 152 | 153 | + 3 | Construction | 98 | 98 | 105 | - 7 |
| Unemployment Rate - % SA | 6.3 | 6.4 | 6.3 | | Trade | 490 | 489 | 498 | - 2 |
| Insured Unemployment - thous. | N.A. | N.A. | N.A. | | Government | 440 | 429 | 438 | + 0 |
| Insured Unempl. Rate - % | N.A. | N.A. | N.A. | | Services | 360 | 360 | 348 | + 3 |
| Mfg. Avg. Wkly. Hours | 39.9 | 40.1 | 40.2 | - 1 | Fin., Ins., & Real Est. | 114 | 114 | 113 | + 1 |
| Mfg. Avg. Wkly. Earn. - \$ | 263 | 259 | 241 | + 9 | Trans. Com. & Pub. Util. | 141 | 141 | 139 | + 1 |
| LOUISIANA | | | | | | | | | |
| Civilian Labor Force - thous. | 1,804 | 1,807 | 1,771 | + 2 | Nonfarm Employment- thous. | 1,649 | 1,649 | 1,599 | + 3 |
| Total Employed - thous. | 1,662 | 1,660 | 1,652 | + 1 | Manufacturing | 214 | 217 | 215 | - 0 |
| Total Unemployed - thous. | 142 | 146 | 119 | +19 | Construction | 157 | 159 | 149 | + 5 |
| Unemployment Rate - % SA | 8.0 | 8.4 | 6.9 | | Trade | 368 | 367 | 359 | + 3 |
| Insured Unemployment - thous. | N.A. | N.A. | N.A. | | Government | 326 | 323 | 312 | + 4 |
| Insured Unempl. Rate - % | N.A. | N.A. | N.A. | | Services | 285 | 285 | 274 | + 4 |
| Mfg. Avg. Wkly. Hours | 41.7 | 41.6 | 41.6 | + 0 | Fin., Ins., & Real Est. | 76 | 76 | 75 | + 1 |
| Mfg. Avg. Wkly. Earn. - \$ | 359 | 360 | 334 | + 7 | Trans. Com. & Pub. Util. | 128 | 128 | 126 | + 2 |
| MISSISSIPPI | | | | | | | | | |
| Civilian Labor Force - thous. | 1,025 | 1,020 | 1,039 | - 1 | Nonfarm Employment- thous. | 825 | 825 | 834 | - 1 |
| Total Employed - thous. | 941 | 935 | 965 | - 2 | Manufacturing | 219 | 221 | 219 | 0 |
| Total Unemployed - thous. | 84 | 85 | 74 | +14 | Construction | 41 | 42 | 45 | - 9 |
| Unemployment Rate - % SA | 8.8 | 8.8 | 7.5 | | Trade | 166 | 167 | 165 | + 1 |
| Insured Unemployment - thous. | N.A. | N.A. | N.A. | | Government | 190 | 189 | 196 | - 3 |
| Insured Unempl. Rate - % | N.A. | N.A. | N.A. | | Services | 124 | 123 | 123 | + 1 |
| Mfg. Avg. Wkly. Hours | 39.4 | 39.3 | 39.7 | - 1 | Fin., Ins., & Real Est. | 33 | 33 | 33 | 0 |
| Mfg. Avg. Wkly. Earn. - \$ | 241 | 239 | 220 | +10 | Trans. Com. & Pub. Util. | 42 | 41 | 42 | 0 |
| TENNESSEE | | | | | | | | | |
| Civilian Labor Force - thous. | 2,097 | 2,093 | 2,036 | + 3 | Nonfarm Employment- thous. | 1,727 | 1,733 | 1,735 | - 0 |
| Total Employed - thous. | 1,919 | 1,925 | 1,896 | + 1 | Manufacturing | 516 | 525 | 503 | + 3 |
| Total Unemployed - thous. | 179 | 168 | 140 | +28 | Construction | 73 | 73 | 77 | - 5 |
| Unemployment Rate - % SA | 9.1 | 8.7 | 7.5 | | Trade | 368 | 368 | 372 | - 1 |
| Insured Unemployment - thous. | N.A. | N.A. | N.A. | | Government | 301 | 297 | 318 | - 5 |
| Insured Unempl. Rate - % | N.A. | N.A. | N.A. | | Services | 300 | 299 | 293 | + 2 |
| Mfg. Avg. Wkly. Hours | 39.9 | 39.6 | 40.0 | - 0 | Fin., Ins., & Real Est. | 76 | 76 | 78 | - 3 |
| Mfg. Avg. Wkly. Earn. - \$ | 271 | 272 | 250 | + 8 | Trans. Com. & Pub. Util. | 82 | 82 | 84 | - 2 |

Notes: All labor force data are from Bureau of Labor Statistics reports supplied by state agencies.
Only the unemployment rate data are seasonally adjusted.
The Southeast data represent the total of the six states.
The annual percent change calculation is based on the most recent data over prior year.



CONSTRUCTION

| | OCT 1981 | SEPT 1981 | OCT 1980 | ANN. % CHG. | | OCT 1981 | SEPT 1981 | OCT 1980 | ANN. % CHG. |
|---------------------------------|-------------|--------------|-------------|-------------------|------------------------------|-------------|--------------|-------------|-------------------|
| 12-Month Cumulative Rate | | | | | | | | | |
| UNITED STATES | | | | | | | | | |
| Total Construction Contracts | | | | | Residential Contracts | | | | |
| Value - \$ mil. | 151,494 | 152,969 | 145,498 | + 4 | Value - \$ mil. | 63,932 | 65,939 | 61,148 | + 5 |
| Nonresidential Contracts | | | | | Number of Units - Thous. | 1,219.8 | 1,277.2 | 1,310.4 | - 7 |
| Value - \$ mil. | 58,641 | 58,366 | 50,412 | + 16 | | | | | |
| Sq. Ft. - mil. | 1,196.8 | 1,203.8 | 1,186.4 | + 1 | Residential Permits - Thous. | | | | |
| Nonbuilding Contracts | | | | | Number single-family | 602.2 | 642.6 | 701.8 | - 14 |
| Value - \$ mil. | 28,920 | 28,664 | 33,939 | - 15 | Number multi-family | 439.0 | 459.6 | 464.2 | - 5 |
| SOUTHEAST | | | | | | | | | |
| Total Construction Contracts | | | | | Residential Contracts | | | | |
| Value - \$ mil. | 26,486 | 27,065 | 25,339 | + 5 | Value - \$ mil. | 13,242 | 13,644 | 12,378 | + 7 |
| Nonresidential Contracts | | | | | Number of Units - Thous. | 286.7 | 299.7 | 300.0 | - 4 |
| Value - \$ mil. | 8,442 | 8,551 | 7,284 | + 16 | | | | | |
| Sq. Ft. - mil. | 193.9 | 194.7 | 182.0 | + 7 | Residential Permits - Thous. | | | | |
| Nonbuilding Contracts | | | | | Number single-family | 129.6 | 139.5 | 151.9 | - 15 |
| Value - \$ mil. | 4,801 | 4,870 | 5,677 | - 15 | Number multi-family | 112.2 | 118.9 | 115.9 | - 3 |
| ALABAMA | | | | | | | | | |
| Total Construction Contracts | | | | | Residential Contracts | | | | |
| Value - \$ mil. | 1,746 | 1,778 | 1,886 | - 7 | Value - \$ mil. | 882 | 932 | 858 | + 3 |
| Nonresidential Contracts | | | | | Number of Units - Thous. | 22.8 | 24.5 | 24.3 | - 6 |
| Value - \$ mil. | 516 | 499 | 559 | - 8 | | | | | |
| Sq. Ft. - mil. | 12.6 | 11.9 | 14.0 | - 10 | Residential Permits - Thous. | | | | |
| Nonbuilding Contracts | | | | | Number single-family | 6.3 | 7.1 | 8.7 | - 28 |
| Value - \$ mil. | 348 | 347 | 469 | - 26 | Number multi-family | 7.3 | 8.0 | 6.3 | + 16 |
| FLORIDA | | | | | | | | | |
| Total Construction Contracts | | | | | Residential Contracts | | | | |
| Value - \$ mil. | 12,960 | 13,156 | 12,506 | + 4 | Value - \$ mil. | 7,557 | 7,776 | 6,978 | + 8 |
| Nonresidential Contracts | | | | | Number of Units - Thous. | 162.5 | 169.7 | 167.2 | - 3 |
| Value - \$ mil. | 3,374 | 3,734 | 2,922 | + 15 | | | | | |
| Sq. Ft. - mil. | 91.9 | 92.4 | 78.7 | + 17 | Residential Permits - Thous. | | | | |
| Nonbuilding Contracts | | | | | Number single-family | 78.5 | 84.2 | 87.4 | - 10 |
| Value - \$ mil. | 1,669 | 1,630 | 2,605 | - 36 | Number multi-family | 81.0 | 85.0 | 80.7 | + 3 |
| GEORGIA | | | | | | | | | |
| Total Construction Contracts | | | | | Residential Contracts | | | | |
| Value - \$ mil. | 3,962 | 4,082 | 3,797 | + 4 | Value - \$ mil. | 1,854 | 1,891 | 1,746 | + 6 |
| Nonresidential Contracts | | | | | Number of Units - Thous. | 40.0 | 41.6 | 43.7 | - 8 |
| Value - \$ mil. | 1,207 | 1,245 | 1,301 | - 7 | | | | | |
| Sq. Ft. - mil. | 33.7 | 34.5 | 35.8 | - 6 | Residential Permits - Thous. | | | | |
| Nonbuilding Contracts | | | | | Number single-family | 22.1 | 23.8 | 26.7 | - 17 |
| Value - \$ mil. | 902 | 947 | 750 | + 20 | Number multi-family | 8.3 | 9.3 | 8.4 | - 1 |
| LOUISIANA | | | | | | | | | |
| Total Construction Contracts | | | | | Residential Contracts | | | | |
| Value - \$ mil. | 3,534 | 3,648 | 3,225 | + 10 | Value - \$ mil. | 1,353 | 1,384 | 1,079 | + 25 |
| Nonresidential Contracts | | | | | Number of Units - Thous. | 26.4 | 27.1 | 23.2 | + 14 |
| Value - \$ mil. | 1,312 | 1,376 | 1,192 | + 10 | | | | | |
| Sq. Ft. - mil. | 24.1 | 24.8 | 18.2 | + 32 | Residential Permits - Thous. | | | | |
| Nonbuilding Contracts | | | | | Number single-family | 10.5 | 10.9 | 11.4 | - 8 |
| Value - \$ mil. | 869 | 888 | 954 | - 9 | Number multi-family | 8.4 | 9.1 | 7.7 | + 9 |
| MISSISSIPPI | | | | | | | | | |
| Total Construction Contracts | | | | | Residential Contracts | | | | |
| Value - \$ mil. | 1,700 | 1,725 | 1,197 | + 42 | Value - \$ mil. | 569 | 583 | 567 | + 0 |
| Nonresidential Contracts | | | | | Number of Units - Thous. | 13.1 | 13.6 | 14.3 | - 8 |
| Value - \$ mil. | 645 | 620 | 307 | +110 | | | | | |
| Sq. Ft. - mil. | 7.9 | 7.6 | 8.8 | - 10 | Residential Permits - Thous. | | | | |
| Nonbuilding Contracts | | | | | Number single-family | 3.8 | 4.1 | 4.9 | - 22 |
| Value - \$ mil. | 485 | 521 | 323 | + 50 | Number multi-family | 2.7 | 3.0 | 4.2 | - 36 |
| TENNESSEE | | | | | | | | | |
| Total Construction Contracts | | | | | Residential Contracts | | | | |
| Value - \$ mil. | 2,583 | 2,678 | 2,728 | - 5 | Value - \$ mil. | 1,026 | 1,079 | 1,150 | - 11 |
| Nonresidential Contracts | | | | | Number of Units - Thous. | 21.9 | 23.3 | 27.4 | - 20 |
| Value - \$ mil. | 1,028 | 1,062 | 1,003 | + 2 | | | | | |
| Sq. Ft. - mil. | 23.7 | 23.6 | 26.5 | - 11 | Residential Permits - Thous. | | | | |
| Nonbuilding Contracts | | | | | Number single-family | 8.5 | 9.3 | 12.8 | - 34 |
| Value - \$ mil. | 529 | 537 | 575 | - 8 | Number multi-family | 4.3 | 4.5 | 8.5 | - 49 |

Notes: Contracts are calculated from the F. W. Dodge Construction Potentials. Permits are calculated from the Bureau of the Census, Housing Units Authorized By Building Permits and Public Contracts. The Southeast data represent the total of the six states. The annual percent change calculation is based on the most recent month over prior year.



GENERAL

| | OCT 1981 | SEPT 1981 | OCT 1980 | ANN. % CHG. | | OCT 1981 | SEPT 1981 | OCT 1980 | ANN. % CHG. |
|---|--------------|---------------|--------------|-------------------|---|-------------|--------------|-------------|-------------------|
| UNITED STATES | | | | | | | | | |
| Personal Income-\$ bil. SAAR (Dates: 2Q, 1Q, 2Q) | 2,340.5 | 2,292.5 | 2,088.5 | +12 | Agriculture | | | | |
| Retail Sales - \$ bil.- SA | 87.2 | 88.5 | 81.5 | + 7 | Prices Rec'd by Farmers Index (1967=100) | 130.0 | 134.0 | 142.0 | - 8 |
| Plane Passenger Arrivals (thous.) | N.A. | N.A. | N.A. | | Broiler Placements (thous.) | 72,745 | 77,721 | 74,392 | - 2 |
| Petroleum Prod. (thous. bls.) | 8,618.3 | 8,640.2 | 8,613.8 | + 0 | Calf Prices (\$ per cwt.) | 60.40 | 61.80 | 74.80 | -19 |
| Consumer Price Index 1967=100 (Nov.) | 280.7 | 279.9 | 256.2 | +10 | Broiler Prices (\$ per lb.) | 25.9 | 26.8 | 31.7 | -18 |
| | | | | | Soybean Prices (\$ per bu.) | 6.08 | 6.29 | 7.82 | -22 |
| | | | | | Broiler Feed Cost (\$ per ton) | 214 | 222 | 228 | - 6 |
| SOUTHEAST | | | | | | | | | |
| Personal Income-\$ bil. SAAR (Dates: 2Q, 1Q, 2Q) | 272.8 | 266.8 | 239.9 | +14 | Agriculture | | | | |
| Taxable Sales - \$ bil. | N.A. | N.A. | N.A. | | Prices Rec'd by Farmers Index (1967=100) | 112.7 | 117.5 | 132.0 | -15 |
| Plane Passenger Arrivals (thous.) | 3,815.5 | 3,383.3 | 3,885.7 | - 2 | Broiler Placements (thous.) | 144,564 | 122,893 | 115,424 | +25 |
| Petroleum Prod. (thous. bls.) | 1,417.4 | 1,421.3 | 1,544.0 | - 8 | Calf Prices (\$ per cwt.) | 53.33 | 58.08 | 69.30 | -23 |
| Consumer Price Index 1967=100 | N.A. | N.A. | N.A. | | Broiler Prices (\$ per lb.) | 24.8 | 25.8 | 31.4 | -21 |
| | | | | | Soybean Prices (\$ per bu.) | 6.13 | 6.43 | 7.92 | -23 |
| | | | | | Broiler Feed Cost (\$ per ton) | 239 | 219 | 247 | - 3 |
| ALABAMA | | | | | | | | | |
| Personal Income-\$ bil. SAAR (Dates: 2Q, 1Q, 2Q) | 31.4 | 31.1 | 28.3 | +11 | Agriculture | | | | |
| Taxable Sales - \$ bil. | N.A. | N.A. | N.A. | | Farm Cash Receipts - \$ mil. (Dates: FEB, FEB) | 1,237 | - | 1,326 | -7 |
| Plane Passenger Arrivals (thous.) | 110.5 | 99.9 | 120.7 | - 8 | Broiler Placements (thous.) | 45,608 | 39,080 | 38,578 | +18 |
| Petroleum Prod. (thous. bls.) | 60.0 | 60.5 | 55.0 | + 9 | Calf Prices (\$ per cwt.) | 54.30 | 51.50 | 65.20 | -17 |
| Consumer Price Index 1967=100 | N.A. | N.A. | N.A. | | Broiler Prices (\$ per lb.) | 24.0 | 25.0 | 30.5 | -21 |
| | | | | | Soybean Prices (\$ per bu.) | 6.19 | 6.32 | 7.69 | -20 |
| | | | | | Broiler Feed Cost (\$ per ton) | 215 | 235 | 225 | - 4 |
| FLORIDA | | | | | | | | | |
| Personal Income-\$ bil. SAAR (Dates: 2Q, 1Q, 2Q) | 98.3 | 95.3 | 84.7 | +16 | Agriculture | | | | |
| Taxable Sales - \$ mil. | 66,070 | 65,301 | 57,136 | +16 | Farm Cash Receipts - \$ mil. (Dates: FEB, FEB) | 3,070 | - | 3,422 | -10 |
| Plane Passenger Arrivals (thous.) | 1,662.8 | 1,425.3 | 1,620.6 | + 3 | Broiler Placements (thous.) | 9,306 | 7,201 | 7,359 | 26 |
| Petroleum Prod. (thous. bls.) | 95.0 | 97.4 | 114.6 | -17 | Calf Prices (\$ per cwt.) | 57.80 | 62.30 | 70.30 | -18 |
| Consumer Price Index - Miami Nov. 1977 = 100 | NOV 153.6 | SEPT 150.2 | NOV 133.9 | +15 | Broiler Prices (\$ per lb.) | 24.5 | 25.5 | 30.5 | -20 |
| | | | | | Soybean Prices (\$ per bu.) | 6.19 | 6.32 | 7.69 | -20 |
| | | | | | Broiler Feed Cost (\$ per ton) | 220 | 230 | 230 | - 4 |
| GEORGIA | | | | | | | | | |
| Personal Income-\$ bil. SAAR (Dates: 2Q, 1Q, 2Q) | 47.6 | 46.8 | 42.2 | +13 | Agriculture | | | | |
| Taxable Sales - \$ bil. | N.A. | N.A. | N.A. | | Farm Cash Receipts - \$ mil. (Dates: FEB, FEB) | 2,107 | - | 1,948 | + 8 |
| Plane Passenger Arrivals (thous.) | 1,581.5 | 1,454.2 | 1,654.6 | - 4 | Broiler Placements (thous.) | 57,509 | 49,250 | 42,888 | +34 |
| Petroleum Prod. (thous. bls.) | N.A. | N.A. | N.A. | | Calf Prices (\$ per cwt.) | 50.30 | 56.40 | 63.00 | -20 |
| Consumer Price Index - Atlanta 1967 = 100 | OCT 281.5 | AUG 276.1 | OCT 250.2 | +13 | Broiler Prices (\$ per lb.) | 24.5 | 25.5 | 31.5 | -22 |
| | | | | | Soybean Prices (\$ per bu.) | 6.18 | 6.34 | 7.76 | -20 |
| | | | | | Broiler Feed Cost (\$ per ton) | 200 | 210 | 225 | -11 |
| LOUISIANA | | | | | | | | | |
| Personal Income-\$ bil. SAAR (Dates: 2Q, 1Q, 2Q) | 39.1 | 38.1 | 34.0 | +15 | Agriculture | | | | |
| Taxable Sales - \$ bil. | N.A. | N.A. | N.A. | | Farm Cash Receipts - \$ mil. (Dates: FEB, FEB) | 922 | - | 834 | +11 |
| Plane Passenger Arrivals (thous.) | 276.4 | 237.1 | 293.0 | - 6 | Broiler Placements (thous.) | N.A. | N.A. | N.A. | |
| Petroleum Prod. (thous. bls.) | 1,167.0 | 1,168.0 | 1,254.0 | - 7 | Calf Prices (\$ per cwt.) | 58.50 | 60.60 | 69.00 | -15 |
| Consumer Price Index 1967 = 100 | N.A. | N.A. | N.A. | | Broiler Prices (\$ per lb.) | 26.0 | 27.0 | 32.5 | -20 |
| | | | | | Soybean Prices (\$ per bu.) | 6.36 | 6.52 | 8.15 | -22 |
| | | | | | Broiler Feed Cost (\$ per ton) | 245 | 245 | 235 | + 4 |
| MISSISSIPPI | | | | | | | | | |
| Personal Income-\$ bil. SAAR (Dates: 2Q, 1Q, 2Q) | 17.7 | 17.4 | 16.0 | +11 | Agriculture | | | | |
| Taxable Sales - \$ bil. | N.A. | N.A. | N.A. | | Farm Cash Receipts - \$ mil. (Dates: FEB, FEB) | 1,193 | - | 1,156 | + 3 |
| Plane Passenger Arrivals (thous.) | 32.4 | 32.1 | 33.4 | - 3 | Broiler Placements (thous.) | 26,244 | 22,296 | 21,647 | +21 |
| Petroleum Prod. (thous. bls.) | 95.4 | 95.4 | 98.5 | - 3 | Calf Prices (\$ per cwt.) | 56.40 | 60.50 | 71.60 | -21 |
| Consumer Price Index 1967 = 100 | N.A. | N.A. | N.A. | | Broiler Prices (\$ per lb.) | 26.5 | 27.5 | 33.0 | -20 |
| | | | | | Soybean Prices (\$ per bu.) | 5.85 | 6.44 | 7.87 | -26 |
| | | | | | Broiler Feed Cost (\$ per ton) | 200 | 205 | 210 | - 5 |
| TENNESSEE | | | | | | | | | |
| Personal Income-\$ bil. SAAR (Dates: 2Q, 1Q, 2Q) | 38.8 | 38.1 | 35.0 | +11 | Agriculture | | | | |
| Taxable Sales - \$ bil. | N.A. | N.A. | N.A. | | Farm Cash Receipts - \$ mil. (Dates: FEB, FEB) | 1,068 | - | 1,093 | - 2 |
| Plane Passenger Arrivals (thous.) | 151.9 | 135.6 | 163.4 | - 7 | Broiler Placements (thous.) | 5,897 | 5,066 | 4,952 | +19 |
| Petroleum Prod. (thous. bls.) | N.A. | N.A. | N.A. | | Calf Prices (\$ per cwt.) | 53.70 | 57.00 | 74.20 | -28 |
| Consumer Price Index 1967 = 100 | N.A. | N.A. | N.A. | | Broiler Prices (\$ per lb.) | 23.0 | 25.0 | 30.0 | -23 |
| | | | | | Soybean Prices (\$ per bu.) | 6.18 | 6.45 | 8.09 | -24 |
| | | | | | Broiler Feed Cost (\$ per ton) | 187 | 195 | 215 | -13 |

Notes:

Personal Income data supplied by U. S. Department of Commerce. Taxable Sales are reported as a 12-month cumulative total. Plane Passenger Arrivals are collected from 26 airports. Petroleum Production data supplied by U. S. Bureau of Mines. Consumer Price Index data supplied by Bureau of Labor Statistics. Agriculture data supplied by U. S. Department of Agriculture. Farm Cash Receipts data are reported as cumulative for the calendar year through the month shown. Broiler placements are an average weekly rate. The Southeast data represent the total of the six states. N.A. = not available. The annual percent change calculation is based on most recent data over prior year.

percentage points by which the state and national unemployment rates rose during the two recessions.

Although all indicators we examined were useful in determining relative duration and severity of the 1980 recession in the states and U. S., some were superior to others. Movements in manufacturing employment and unemployment rates, for example provided good measures of cyclical changes in business conditions. Since our task was to measure relative and not absolute severity, changes in manufacturing employment are especially appropriate. A state's unemployment rate is an accurate reflection of the strength of its overall economy. The ranking of the six southeastern states relative to each other and the U. S., in general, is consistent with popular views concerning the severity of the 1980 recession in the Southeast.

Tables 8 and 9 show timing, duration, and severity of the 1980 recession vis-a-vis the 1974-75 recession in the U. S. and each of the six southeastern states. The earlier assumption of equal relative severity was clearly inappropriate in

measuring the impact of the new code. The relative severity actually varied substantially between the states. For instance, the 1980 recession, according to our measure, was 71 percent as bad in Mississippi as the 1974-75 recession was, but in Florida the last recession was only 17 percent as severe as the 1974-75 recession. (Table 10).

The 1980 recession's effect on personal bankruptcies was measured as follows. We calculated a relative severity index for each of the six states, measured by the relative declines in manufacturing employment during the 1980 and 1974-75 recession. The product of the estimated cyclical effect in 1974-75 and the relative severity index served as our measure of the cyclical component of the 1980 rise in personal bankruptcies. The cyclical and trend rise in filings were then subtracted from the total rise in filings during 1980 to obtain the effect of the new code. The relative contribution of the new code was then calculated as the ratio of the new code estimate to actual increases in personal bankruptcies filed (see Table 12).

Table 9. The Cyclical Patterns of Unemployment Rates During Recessions

| Business Cycle | Duration (months) | Peak | Trough | Change (percentage points) |
|----------------------|----------------------|------|--------|-------------------------------|
| Alabama | | | | |
| 11/73-3/75 | 16 | 4.4 | 8.2 | +3.8 |
| 1/79-7/80 | 8 | 7.2 | 10.1 | +2.9 |
| Florida | | | | |
| 10/73-5/75 | 19 | 3.5 | 11.8 | +8.3 |
| 1/80-7/80 | 6 | 5.0 | 7.2 | +2.2 |
| Georgia | | | | |
| 11/73-3/75 | 16 | 4.0 | 9.4 | +5.4 |
| 10/79-7/80 | 9 | 5.0 | 7.2 | +2.2 |
| Louisiana | | | | |
| 11/73-2/75 | 15 | 6.4 | 7.7 | +1.3 |
| 10/79-11/80 | 13 | 6.3 | 7.2 | +0.9 |
| Mississippi | | | | |
| 11/73-7/75 | 20 | 3.8 | 9.6 | +5.8 |
| 10/79-7/80 | 9 | 5.5 | 8.3 | +2.8 |
| Tennessee | | | | |
| 11/73-4/75 | 17 | 3.9 | 9.3 | +5.4 |
| 12/79-7/80 | 7 | 5.9 | 8.3 | +2.4 |
| District | | | | |
| 11/73-6/75 | 19 | 4.5 | 8.9 | +4.4 |
| 10/79-7/80 | 9 | 6.0 | 7.9 | +1.9 |
| United States | | | | |
| 10/73-5/75 | 19 | 4.6 | 9.0 | +4.4 |
| 2/80-7/80 | 5 | 6.2 | 7.6 | +1.4 |

Source: Unpublished data provided by state labor departments.

Table 10. Behavior of Manufacturing Employment Over Recessions 1974-74 and 1980, Southeast and United States
(percentage change from peak to trough)

| | 1980 | 1974-75 | 1980/ 1974-75 |
|---------------|-------|---------|------------------|
| Mississippi | -10.3 | -14.6 | 70.6 |
| Alabama | - 8.2 | -12.8 | 64.1 |
| Tennessee | - 8.6 | -15.2 | 56.7 |
| Louisiana | - 2.5 | - 5.1 | 49.0 |
| Georgia | - 5.3 | -16.2 | 32.7 |
| Florida | - 2.1 | -12.6 | 16.7 |
| United States | - 6.2 | -11.0 | 56.4 |

Source: Federal Reserve Bank of Atlanta.

Table 11. Behavior of Unemployment Rates During Recessions 1974-75 and 1980, Southeast and United States
(percentage point changes)

| | 1980 | 1974-75 | 1980/ 1974-75 |
|---------------|------|---------|------------------|
| Alabama | 2.9 | 3.8 | 76.3 |
| Louisiana | 0.9 | 1.3 | 69.2 |
| Mississippi | 2.8 | 5.8 | 48.0 |
| Tennessee | 2.4 | 5.4 | 44.4 |
| Georgia | 2.2 | 5.4 | 40.7 |
| Florida | 2.2 | 8.3 | 26.5 |
| United States | 1.4 | 4.4 | 31.8 |

Source: Federal Reserve Bank of Atlanta.

Table 12. Relative Contribution of Bankruptcy Reform Act of 1978 to the 1980-1981 Rise in Personal Bankruptcies in U.S. and Southeast
(percent)

| | Equal Severity ^(a) | Unequal Severity ^(b) |
|-----------------|----------------------------------|------------------------------------|
| Alabama | 66.7 | 78.0 |
| Florida | 0.0 | 0.0 |
| Georgia | 62.6 | 85.0 |
| Louisiana | 38.7 | 50.4 |
| Mississippi | 76.1 | 79.6 |
| Tennessee | 68.5 | 81.1 |
| District States | 64.2 | 72.8 |
| United States | 72.1 | 82.1 |

Note: (a) Equal Severity assumes that 1980 recession was equally severe as the 1974-75 recession.

(b) Unequal severity was derived using relative percent declines in manufacturing employment.

Only in Georgia is the new code estimated to have a more significant effect than the nation in general. See Table 12 for the new code's effect on additional filings in other states under the unequal security assumption.

Conclusions

Our study suggests three general conclusions. First, the new code added significantly to the annual volume of personal bankruptcies filed in the U. S. in general and the Southeast. This conclusion is reached regardless of the assumption one makes regarding the relative severity of the 1980 recession vis-a-vis its predecessors.

Second, the relative influence of the new law was less important in the Southeast than for the U. S. as a whole. Assuming that the 1980 recession was equal in severity to the 1974-75 recession, about two-thirds of all personal bankruptcy cases filed between July 1, 1979, and June 30, 1981 in the Southeast can be attributed directly to liberalization of exemptions in the 1978 Bankruptcy Reform Act, as opposed to three-fourths of the cases filed nationwide.

Third, the new code's influence became more pronounced the longer it was in effect. Although the new code was responsible for almost 29 percent of the increase in personal cases filed in 1979-80 in the Southeast and about 46 percent of the increased cases filed nationally during the same period, it was responsible for over 64 percent of the cases filed in the Southeast and 72 percent of the cases filed nationally in the four-quarter period ending June 30, 1981. Finally, when we examined the relative severity of the 1980 recession on a state by state basis, the results raised the estimated impact of the new code on personal bankruptcies considerably.

—Charlie Carter

¹ Therefore it was common practice for creditors to adjust lending policies according to the economy's general health, refraining from lending when the economy weakened and expanding when economic conditions improved. Adjusting the price of credit via more stringent credit policies (refusing loans to prospective borrowers who otherwise would have been considered credit-worthy) is also frequently used by creditors in times of economic weakness.

² For our purposes, the term "Southeast" is used synonymously with Sixth District and include all of the states of Alabama, Florida, Georgia, Louisiana, Mississippi and Tennessee.

³ Faster growth in the number of business cases from the 1960s to the 1970s could reflect the faster growth in the number of firms in the Sunbelt states.

⁴ Business cases filed in the Southeast rose 45 percent in 1980 and 27 percent in 1981.

⁵ Andrew F. Brimmer, "Public Policy and the Economic Implications of Personal Bankruptcies," Statement before the Subcommittee on Courts, Senate Judiciary Committee, April 3, 1981.

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Southeastern Oil Industry Booming Again

New government programs and rising oil prices have sparked renewed activity in the Southeast's oil industry, which supplies about one-fifth of U.S. crude oil production. The boom promises substantial benefits in employment, taxes, and lease income for the region's oil and gas centers.

Despite the recent decline in U. S. oil imports, the economy remains heavily dependent on imported oil. The ending of price controls and the introduction of energy-oriented government programs have stimulated production. A major reason for the recent surge in oil and gas exploration is the increased price firms are receiving for their oil-related products. For the same reason, enhanced oil recovery techniques and sub-marginal oil fields have also become more attractive. Even though the development of other energy sources, such as coal, are expected to decrease the nation's dependence on oil, domestic production appears unable to keep up with demand. The ratio of new reserves to production has turned up since the low of 38 percent reached in 1976, but we are still not discovering as much new oil as we are pumping.

Production of crude oil in the Southeast dropped by almost one-third from 1974-80. The number of producing wells and the volume of proven oil reserves also declined. Despite these signs of exhaustion, the Southeast's oil industry appears to be getting its second wind.

A New Burst of Activity

The rising value of oil and gas reserves is fostering record drilling activity in the Southeast (see Table 1). For example, footage drilled in Louisiana was up over 11 percent in 1980 from 1979. Preliminary indications are that 1981 will see drilling activity continue to increase in the Southeast. Most of the region's activity is in development wells (wells drilled in known productive areas) as opposed to exploratory wells (see Chart 1).

The search for new oil and gas has turned to deeper levels and more forbidding environments. The effort will require premium-priced equipment and services; therefore, the oil services industries should continue to enjoy rapid expansion over the coming decade as demand for equipment expands.

The oil services industry includes companies that build offshore drilling rigs and others that interpret well drilling or geophysical survey data. Platform orders are running strong in light of recent record offshore lease sales in Alabama and Louisiana. Fabricating capacity is being expanded at facilities in Louisiana and Mississippi. The

Table 1. Footage Drilled, New Wells by District States (1000 Ft.)

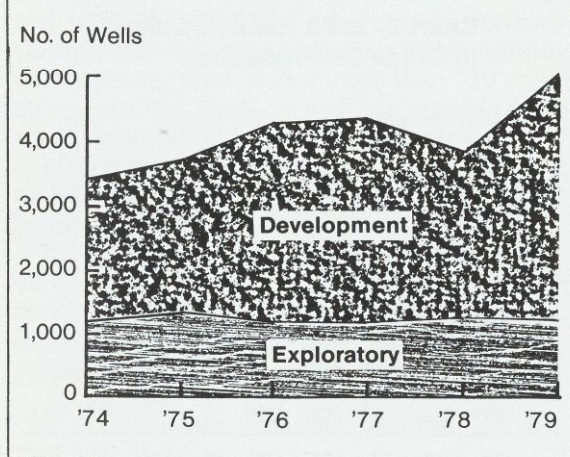
| | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | Percent Change 1973-1980 |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|--------------------------------|
| Alabama | 1,025.9 | 985.8 | 1,373.9 | 1,393.4 | 1,237.5 | 1,112.7 | 1,433.0 | 1,312.0 | 27.9 |
| Florida | 678.4 | 639.4 | 630.3 | 272.8 | 304.6 | 382.0 | 395.1 | 158.0 | -76.7 |
| Louisiana | 21,585.9 | 24,163.6 | 21,893.8 | 24,494.9 | 27,615.7 | 29,752.9 | 29,087.8 | 32,474.0 | 50.4 |
| Mississippi | 3,181.2 | 3,572.6 | 3,586.3 | 3,764.0 | 4,676.2 | 4,329.3 | 4,728.1 | 5,404.0 | 69.9 |
| Tennessee | 166.4 | 304.2 | 434.1 | 411.3 | 409.2 | 342.8 | 343.6 | 316.0 | 89.9 |
| District | 26,637.8 | 29,665.6 | 27,918.4 | 30,336.4 | 34,243.2 | 35,919.7 | 35,987.6 | 39,664.0 | 48.9 |

Source: "Twentieth Century Petroleum Statistics," De Golyer and MacNaughton, 1981.

long leadtimes for platform delivery that plagued the industry in 1974 and 1975 have been reduced.

Another indication of the industry's bright prospects has been the recent surge in lease sales in the region. Louisiana collected over twice the lease and royalty payments from state-owned properties in 1980 as in 1979. Alabama and Louisiana set records in the sale of offshore leases. Alabama's Department of Conservation and Natural Resources collected \$449.2 million recently for 13 leases, covering 55,054 acres in and around Mobile Bay—the highest yet for a Gulf Coast state.

Chart 1. District Oil and Gas Wells

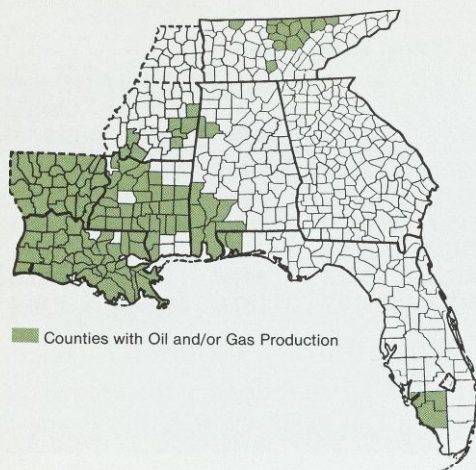


Louisiana can boast of two unique recent developments dealing with the transportation and storage of petroleum. One is the LOOP (Louisiana Offshore Oil Port). The \$700-million port south of New Orleans is a joint venture of five oil firms. Inland ports are not dredged deep enough to accept deep draft tankers—the offshore port was designed as a means to take advantage of the massive capacity of the large tankers. It will handle about 25 percent of all oil imported by the U. S., unloading about 330 ships a year. Before construction of the LOOP, oil companies were required to unload the very large crude carriers (VLCCs) outside U. S. territorial waters into smaller tankers to reach refineries up the Mississippi River.

With LOOP, the crude will be pumped from the VLCCs through 19 miles of undersea pipe to a shore facility which will boost the flow another 28 miles to a 4-million-barrel-capacity underground salt dome storage complex. The oil then will be pushed into a pipeline called "Capline," a large oil pipeline running from St. James, Louisiana, to Patoka, Illinois. The LOOP and connecting Capline will supply crude oil to more than 25 percent of the nation's refineries.¹ The New Orleans Chamber of Commerce projects the "Superport" will eventually bring 30,000 jobs to south Louisiana, both from direct employment and from ancillary industry employment and will attract \$5.6 billion in industrial investment.

¹Chemical Week, May 20, 1981, p.9.

MAP 1



Counties with Oil and/or Gas Production

The second unique project is the Strategic Petroleum Reserve (SPR). The first phase of the SPR program called for the construction of five salt dome storage complexes and a marine terminal along the Louisiana-Texas Gulf Coast. The oil can be sent to the Capline if desired. Over \$900 million has been spent on the project so far. The reserve has a capacity of 750 million barrels of oil. The SPR operation is directed from a control center in New Orleans.

Where the Oil Is

Production of crude oil in the Southeast slipped during the past seven years, thanks mainly to declining production in the older producing states of Mississippi and Louisiana (see Tables 2 and 4). Despite this decline, Louisiana still ranks first in the Sixth Federal Reserve District, producing 82 percent of the region's oil. The newer fields of Alabama and Florida have shown large percentage increases in production, with Florida surpassing Mississippi in 1977 to rank as the District's second largest producer (see Chart 2). Georgia produces no oil as yet and Tennessee produces very little (see Map 1). The Southeast supplied 18 percent of U. S. crude production in 1980, down from 26 percent in 1974. The dramatic sevenfold increase in Alaskan crude production from 1974 to 1980 boosted U. S. output during the period, cutting into the Southeast's share of national production.

Despite the region's healthy oil industry, the Southeast remains a net importer of petroleum,

consuming roughly 14 percent of total U.S. consumption (foreign and domestic). Only Louisiana produces more oil than it uses. Florida, for example, produced an amount equal to one-sixth of the petroleum consumed in the state in 1979. The important tourism and agricultural industries have kept consumption high in the region.

Mississippi and Alabama rank tenth and seventeenth respectively in crude oil production in the country (see Chart 2). Mississippi ranks third in District crude production, following Louisiana and Florida. The Black Warrior Basin covering Mississippi and Alabama has yielded nearly 50 new-field wildcat wells (wells drilled in an area of no previous production) since 1976. Since the Basin has still not been fully explored, the probability of new oil and gas discoveries is high. Over 50 oil fields are actively producing oil in the lower Mississippi area. During the 50s and 60s, exploration peaked, and drilling has slowed since then. Recent discoveries are not as long-lived as earlier finds. The average production span is now seven years and a few have ceased production after only one year.²

Tennessee is the new "hot spot" for oil exploration in the Appalachian area. More wildcat wells were drilled in Tennessee in 1978 than in Ohio, Pennsylvania, and West Virginia combined. Oil and gas production in Appalachia is small, but growing. Wells there are shallow, 5,000 or so feet deep compared to Oklahoma's 15,000 feet or

²Oil and Gas Journal, June 2, 1980, p. 163.

Chart 2. 1979 Rank of States in Crude Oil Production

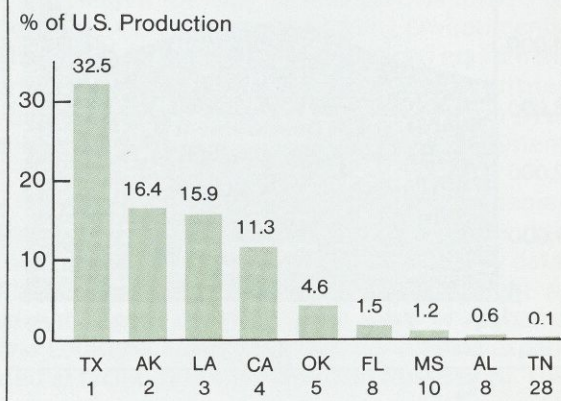


Table 2. Crude Oil Production by District States
(Thousands of Barrels)

| | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | Percent Change 1974-1980 |
|--------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------------------------|
| Alabama | 13,323 | 13,477 | 14,706 | 18,252 | 19,829 | 19,178 | 21,911 | 64.4 |
| Florida | 36,351 | 41,877 | 44,460 | 46,641 | 47,536 | 47,170 | 42,846 | 17.9 |
| Louisiana | 737,324 | 650,840 | 606,501 | 562,905 | 532,740 | 494,462 | 466,964 | - 36.7 |
| Mississippi | 50,779 | 46,614 | 46,072 | 43,022 | 42,024 | 38,286 | 36,533 | - 28.1 |
| Tennessee | 769 | 682 | 598 | 820 | 593 | 552 | 742 | - 3.5 |
| District | 838,546 | 753,490 | 712,337 | 671,640 | 642,722 | 599,648 | 568,996 | - 32.1 |
| U.S. | 3,202,585 | 3,056,779 | 2,976,180 | 3,009,265 | 3,178,216 | 3,114,553 | 3,146,519 | - 1.8 |

Source: "Basic Petroleum Data Book," Volume 1, Number 1, American Petroleum Institute.

more. Drilling costs, ranging from \$50,00 to \$100,000, are much less expensive than in most other areas in the country. Although the first oil was found in Tennessee in 1866, rough terrain and isolated drilling areas held down exploratory drilling in the area until recently. The shallowness of the wells cut down on typical high investment costs, opening the way for the less well capitalized wildcatters. Tennessee has more unexplored acreage than any other Appalachian state. Most of the drilling is occurring in an area known as the Eastern Overthrust Belt, a 900-mile-long, 40- to 100-mile wide strip through the Appalachian Basin and extending into Alabama and Georgia(see Map 2).³

Although Georgia produces no oil as yet, oil and gas exploration is at its highest level ever. A number of companies have been conducting preliminary surveys, buying leases, and drilling test wells. Most of the activity is in northwest Georgia in the Eastern Overthrust Belt. Although oil companies have drilled more than 130 exploratory wells in Georgia as well as a number off the coast in the Atlantic Ocean, profitable quantities of oil or gas have not been found so far. The state offers a \$250,000 prize for finding Georgia's first producing oil well.

The oil explorers also have reason to be interested in south Georgia. New geologic information reveals that the earth's continents may have shifted their positions drastically over several million years, with portions of northern Africa

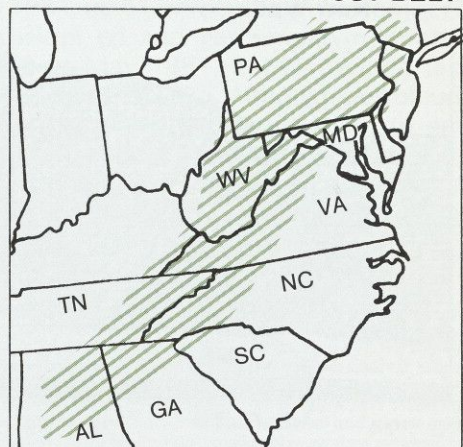
breaking off from what is now south Georgia. Rock samples taken underground in south Georgia appear to have an affinity with the rocks found in oil-rich north Africa.⁴

Florida is considered a wildcat region by oil companies. Exploratory drilling is very risky in Florida, and there are environmental restraints. In the 1970s, several oil companies spent millions of dollars bidding on offshore oil leases to drill near Panama City and Fort Walton Beach, but no oil was found. The Jay oil field in the Florida Panhandle accounts for about 87 percent of Florida's oil production. The Jay field was discov-

⁴Atlanta Constitution, March 11, 1980, p. 12A.

MAP 2

THE EASTERN OVERTHRUST BELT



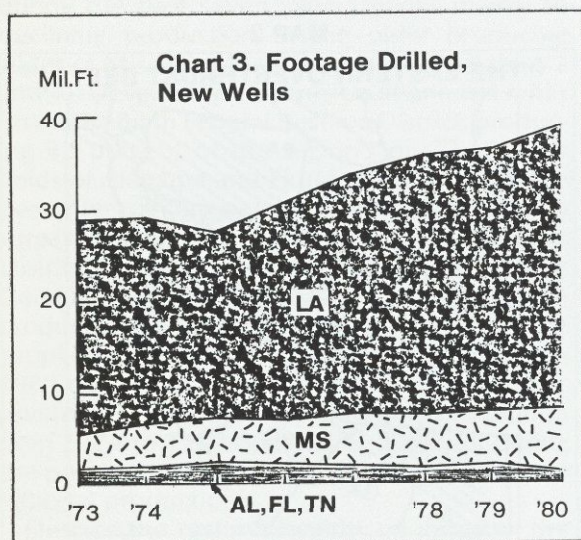
³Dun's Review, May 1980, p.41.

ered in 1970 and peaked nine years later, but is expected to yield petroleum beyond the end of the century. Exxon Company U.S.A. plans to spend about \$80 million on an enhanced recovery project in The Jay-Little Escambia Creek field. The project calls for injecting water and nitrogen into wells and is the largest enhanced recovery project of its kind.⁵

Louisiana is the nation's third largest petroleum-producing state, supplying 15.9 percent of the country's crude oil in 1979. The Mississippi and its tributary rivers give Louisiana the most miles of navigable waterways of any state in the country, an important consideration for the petrochemicals industry. Most of the petrochemical industry is located on the Louisiana-Texas Gulf Coast. A 1979 survey showed 20 refineries and 42 chemical plants recently completed, under construction, or proposed in that area.

Offshore activity continues strong. In the last quarter of a century, approximately 14,000 wells have been drilled off the Louisiana coast. From 1954 through 1979, waters off the Louisiana coast yielded 69.7 percent of all the offshore oil produced in the United States. The likelihood of a large increase in oil production is not good, but gas production is advancing strongly due to the lucrative deep Tuscaloosa Gas Trend. The gas-bearing belt is known to stretch 200 miles across Louisiana and is one of the hottest U.S. drilling areas today.

⁵Florida Trend, May 1980, p.32.



Source: Twentieth Century Petroleum Statistics, DeGolyer and MacNaughton.

Table 3. State and Local Severance and Production Taxes Paid in 1980

| | (Thous. of Dollars) |
|----------------|---------------------|
| Alabama | 30,019 |
| Florida | 74,698 |
| Louisiana | 513,151 |
| Mississippi | 69,011 |
| Tennessee | 378 |
| District Total | 687,257 |

Source: State Department of Revenue and Taxation

Natural Gas

The region's richest natural gas area is the Tuscaloosa Trend. Although the Trend was first identified geologically in Alabama, its major portion is located in Louisiana. The success ratio is unusually high there, with more than one producing gas well for every three wildcats drilled. The Trend, which lies in the feeding area of the big pipelines to eastern markets, is an energy frontier because of its depth. While nearly all the oil and gas wells in the U. S. are at depths of 5,000 feet or less, the Tuscaloosa is a repository of natural gas at 16,000 to 20,000 feet or more.⁶

Economic Benefits from Oil and Gas

Clearly, an important indicator of the Southeast's petroleum industry's value is the state and local severance taxes paid by companies for the privilege of removing the resource. States in the Sixth Federal Reserve District received approximately \$687 million in taxes from this source in 1980, nearly 17 percent of the U.S. total for these taxes. Most of these funds are used for education and for expenses of operating local governments. Table 3 compares the tax receipts of the various states, illustrating how the Louisiana economy (primarily the southern portion) is bolstered by the petroleum industry. During the decade of the 1970s, this tax produced more than \$3.8 billion for Louisiana. The state abolished its property tax eight years ago and in 1980 gave its residents an across-the-board 36 percent cut in state income taxes—both cases permitted by oil and gas revenues.⁷

⁶Forbes, April 30, 1979, p.66.

⁷Louisiana Oil and Gas Facts, 18th Edition, p. 1.

Table 4. Extent and Economic Value of Industry

| | Ala. | Fla. | La. | Miss. | Tenn. | U.S. |
|--|------|------|--------|-------|-------|---------|
| First recorded production of crude oil (year) | 1944 | 1943 | 1902 | 1889 | 1860 | 1859 |
| Percent of total land area productive or leased (as of 1/1/81) | 27.6 | 8.7 | 55.5 | 26.3 | 24.6 | 21.2 |
| Year of highest production of crude oil | 1980 | 1978 | 1971 | 1970 | 1977 | 1970 |
| Number of producing crude oil wells (as of 1/1/81) | 669 | 120 | 26,014 | 2,631 | 441 | 543,510 |

Source: "The Oil-Producing Industry in Your State," Independent Petroleum Association of America, 1981.

Significant economic impact is also generated by lease and royalty income to landowners in the District. It would be difficult to determine lease income for the District as a whole because, like real estate, "acreage" is a matter of location. In active areas such as Louisiana's Tuscaloosa Gas Trend, leases can cost as much as \$700 an acre, while in areas with less proven resources, such as northwest Georgia, drilling rights are going for \$1 to \$10 per acre. Drilling rights are obtained either by lease auctions by the states or federal government or by private transactions with the companies or individuals owning the land.

As might be expected, the major oil companies have the heftiest amounts of undeveloped lands or leaseholds. However, small exploration companies—whose knowledge of where to lease lands exceeds their supply of capital for drilling—also have important acreage holdings. In 1980, 28 percent of the land area of the Sixth District was under lease or producing oil or gas (see Table 4 and Map 1).

Most leases have three- to five-year terms, with an option to renew if oil or gas is found. When and if production begins, a lease usually calls for a royalty payment to the landowner from one-eighth to one-sixth of the value of production. We can roughly approximate royalty payments in the District by multiplying the value at the well of crude oil produced by each state by the minimum royalty percentage. Using this method, royalty income to southeastern landowners surpassed \$1 billion in 1979.

Because the oil industry is highly mechanized, it uses vast sums of capital and generates a widespread economic impact. Nevertheless, it directly provides relatively few jobs. Only 5.5 percent of Louisiana's nonfarm workers were employed directly in oil production in May of 1981; yet, petroleum payrolls from *all sources* totaled over \$1.5 billion in the Pelican State in 1980.⁸

Employment in Louisiana and Mississippi was up sharply between the beginning of the Arab oil embargo in November of 1973 and May 1981. These two states supply nearly 90 percent of all petroleum produced in the District and have 97 percent of the producing oil wells. Louisiana oil and natural gas employment grew to 88,900 in May 1981, up 81 percent from November 1973. Mississippi oil and gas employment stood at 10,000 in May 1981, a 141 percent increase from November 1973. Although petroleum production requires the largest share of employment and is concentrated in Louisiana, employment in petroleum retailing is close behind and,

⁸Separate employment data for the oil and natural gas industries are not available under the 1972 Standard Industrial Classification coding system; however, since crude oil and natural gas often come from the same well only to be separated at the wellhead, the figures are valuable for this study of petroleum. The crude petroleum and natural gas industry includes establishments primarily engaged in operating oil and gas field properties. Such activities include exploration for crude petroleum and natural gas, drilling, completing and equipping wells, operation of separators, emulsion breakers, desilting equipment, and all other activities incident to making oil and gas marketable.

as would be expected, is spread more evenly throughout the region.

Petroleum production workers are relatively few compared to employees in other southern industries, but they exert a disproportionate influence on a state's economy by pulling in quite high wages. According to the latest industry wage survey by the Bureau of Labor Statistics, in 1977 the average hourly earnings of a Louisiana petroleum driller was \$7.66. Hourly earnings for workers in the food and kindred products sector averaged \$4.74 for the same period, and apparel and textile product workers only received \$3.77 per hour.

Conclusion

After several years of decline, the Southeast's petroleum industry is showing new life. Drilling is booming, orders for platforms are running strong, and lease sales are up. In addition, the new LOOP pipeline system and the strategic petroleum reserve are stimulating business in the industry. The impact of the revival should be felt not only in the major petroleum-producing areas but also throughout the region.

—David M. Avery
and Gene D. Sullivan

The Costs of Slowing Inflation: Four Views

Supply-side theory, unlike Keynesianism, asserts that inflation can be reduced without slower economic growth and greater unemployment. Supply-siders also do not always agree with monetarists and rational expectations theorists, although all three views advocate non-activist policies by the federal government.

Since President Reagan announced his four-part program for economic recovery in February, a spirited debate has flared over the potential impact of that blueprint on the nation. Can the program accomplish what the administration says it can, through its combination of reductions in the growth of federal spending, tax cuts for both individuals and businesses, regulatory reform and slow and steady money growth?¹ Can any program simultaneously drive down a superheated inflation rate while stimulating output at the fastest annual growth rate in three decades?

The debate transcends mere academic jousting, since the administration's program is based largely on the premises of one of the contending theories, supply-side economics—although it contains strong overtones of other theories as well.

Clearly, the stakes are high. If the ambitious venture pays off as administration economists project, the nation's inflation rate will be slashed and the economy will prosper. But if it fails, just as clearly, millions of jobs and billions of dollars in production may be lost.

Outspoken in the debate are economists expounding at least four theories: Keynesians, who emphasize the importance of demand in the economy; the supply-siders, who feel that the Keynesians have erred in failing to consider the importance of the supply, or production, side of the economy; monetarists, who consider money growth the key factor in cooling or fueling inflation,

and proponents of the rational expectations point of view, who emphasize the importance of people's expectations in shaping what actually happens within an economy.

Those various theorists hold widely differing outlooks on what makes the nation's economic machine run, and the form of overhaul needed to get a sputtering economy purring again. Despite their contradictory views, however, some of the theorists find themselves in surprising agreement on many significant points. That irony helps explain why the administration's program does not represent "pure" supply-side thinking, but incorporates aspects of both monetarism and rational expectations theory as well.

Yet, even when advocates of the contradictory positions concur on the likely impact of an action, they may remain worlds apart on whether that impact will take place over the short term or only over the long run.

One factor adding to the urgency of the debate is the amazingly prompt support the program gained in the Congress early on, although more recent budget-cutting provisions have encountered growing resistance. Within six months after the program was announced, the Congress passed legislation granting the President most of his spending and tax cut proposals. The spending bill, titled the Omnibus Budget Reconciliation Act of 1981, provides for spending cuts estimated to total about \$140 billion over the next three years, even after allowing for a defense buildup.²

¹ For a detailed discussion of the entire economic program, see the articles by James Barth in the September and October issues of the Federal Reserve Bank of Atlanta *Economic Review*.

² See "Omnibus Budget Reconciliation Act of 1981," Conference Report, Books 1 and 2, U.S. Government Printing Office, Washington, D.C. July 29, 1981.

The Economic Recovery Tax Act of 1981, as the tax bill is titled, will reduce federal revenues by an estimated \$280 billion over the same years, fiscal 1982 through 1984.³

The President also has made significant progress on the other two parts of his economic program. Numerous federal regulatory changes have been approved which the administration estimates can give consumers and businesses a sizeable one-time saving as well as smaller but still substantial savings each and every year.

What's more, the Federal Reserve, whose policy of monetary restraint has been consistent with that of the administration, has helped slow the growth of the money supply to about 2 percent during the first half of 1981, from an explosive 13 percent for the second half of 1980. (It has experienced some difficulty achieving steady growth.)

Despite its accomplishments, the administration expects to fall short of its goal of a balanced budget by 1984.⁴

The administration's critics not only feel justified in doubting earlier claims that the budget could be balanced as early as 1984, but they dispute the administration's forecasts for substantially reduced inflation together with sizeable increases in real GNP by 1984.

“...the crucial factor separating the four groups is not whether inflation can be reduced, but whether it can be reduced at little or no cost.”

The skeptics contend that, if the administration does succeed in bringing the inflation rate down as much as predicted, then real output growth

will fall short of administration forecasts. On the other hand, they argue, if the administration achieves its goal for real output growth, then inflation will remain higher than predicted. In either case, they contend, a balanced budget by 1984 appears out of the question.

Let's take a look at the supply-side premises and those of its three competitors, comparing their similarities as well as their differences. In doing so, we hope to shed some light on the controversy that to date has generated more heat than illumination. We will see that the crucial factor separating the four groups is not whether inflation can be reduced, but whether it can be reduced at little or no cost. As we outline the basic economic assumptions underlying these four views, perhaps the lay reader will be better able to match economists (and himself) with the appropriate labels.

A. Supply-Siders and Inflation

The tax cuts for individuals and business represent a clear victory for supply-side economists. According to supply-siders, cuts in marginal tax rates stimulate saving, investment, productivity and economic growth.⁵ All of these positive developments, furthermore, are expected to reduce inflation. Cuts in marginal tax rates for individuals will increase the after-tax rate of return to saving, so individuals are expected to save more. Tax relief measures for businesses are expected to produce additional investment in productive plant and equipment. With more plant and equipment, labor productivity should increase. The increased saving by individuals not only will be available to finance the additional business investment, but also to finance the federal government deficits expected to occur during the first few years because of reduced revenue from the tax cuts.

Spending cuts will lessen the size of the deficit resulting from the cuts in tax rates, thereby reducing the amount of private saving that is needed to finance the deficit. Cuts in marginal tax rates also should increase the after-tax real wage from working, theoretically inducing more individuals to work and encouraging those already employed to work more hours. In that way, the tax cuts are expected to increase employment.

³ See "Economic Recovery Tax Act of 1981," Conference Report, August 1, 1981. Some of the major provisions in the tax bill include the reduction of individual income marginal tax rates by 5 percent on October 1, 1981, 10 percent on July 1, 1982, and 10 percent on July 1, 1983. The top marginal tax rate is reduced to 50 percent on January 1, 1982, from the current 70 percent rate. Furthermore, starting in 1985, annual adjustments will be made in the personal exemption, zero-bracket amount and income brackets to offset so-called "bracket creep" caused by inflation. Business tax relief includes faster write-off of capital expenditures over 3, 5, and 10 years for various kinds of equipment, rather than over the so-called useful life of an asset.

⁴ See "Mid-Session Review of the Budget," Executive Office of the President, Office of the Management and Budget, Washington, D.C., July 15, 1981, p.67.

⁵ For a more detailed discussion of supply-side economics, see James Barth, "The Reagan Program for Economic Recovery: Economic Rationale," Federal Reserve Bank of Atlanta *Economic Review*, September 1981, and the references cited therein.

Chart 1. Inflation and Unemployment Rates
The Historical Pattern and the Reagan Plan^o



*The shaded areas represent recessionary periods.
 Source: U.S. Treasury Department

Chart 1 shows the past inflation and unemployment rates as well as the administration's forecasts. Clearly the administration expects to reduce inflation and unemployment rates simultaneously. Thus, in the administration's view, the expected cost (in terms of foregone output or increased unemployment) of reducing inflation is zero.⁶

According to supply-side economics, the tax cuts should spur the growth of both labor productivity and employment, thereby providing for a greater output of goods and services. If the rates of growth in money and velocity (the turnover rate of money) do not increase, then clearly the rate of inflation will decline. Thus, according to supply-side economics, the tax cuts alone should reduce inflation.

But will the growth rates in money and monetary velocity remain constant? According to supply-siders, this is not an unreasonable assumption in the long run, especially since the Federal Reserve has apparently adopted a slow and steady money growth policy. In the short run, supply-siders expect fluctuations in the growth rates of both money and velocity, but these fluctuations should be small and relatively unimportant. If the growth

rate in money were to increase rather than decrease as the administration proposes, it could outweigh the tax cuts' positive effects on inflation.⁷

On the basis of supply-side economics, then, the key part of the administration's program for economic recovery is the tax cuts. These cuts, by themselves, are expected to spur real output growth, improve productivity, and stimulate employment (or reduce unemployment) while simultaneously reducing the rate of inflation. All these developments, however, will take time. Supply-siders view tax cuts not as a short-run stabilization device, but as a device to produce longer-run improvements in output and labor productivity.

B. Keynesians and Inflation

The traditional Keynesian view of the impact of tax and spending cuts is quite different. The tax cuts, according to this view, will increase after-tax or disposable income. With more take home pay, people are likely to spend more out of current income. Increased consumption increases the demand for goods and services.⁸ This will drive up prices and, assuming that nominal wages fail to respond fully and immediately, real wages will fall. With lower real wages, firms will hire more workers. The increased employment, in turn, will increase real output and income.

From the Keynesian perspective, higher incomes and prices will cause people to demand more money to finance their increased transactions. But if the money supply does not increase, this will lead to an increase in velocity as well as to higher interest rates as demand for money increases.

The financing of the federal deficit, moreover, will help drive up interest rates. If the administration sells government bonds to finance the deficit as it states it will do, it will have to pay higher rates of interest to induce the public to hold the additional securities. The higher interest rates will reduce interest-sensitive consumer

⁶ As Norman Ture (currently a Treasury Department official and supply-sider) has stated, "Supply-side economics rejects outright any so-called 'Phillips-curve' relationships between inflation and unemployment. By the same token, it rejects the view that price-level stability can be purchased only at the cost of unacceptably high level of unemployment, or that acceptable growth in employment depends on pursuit of fiscal and monetary policies which are likely to spur inflation" ("Forecasting the Supply Side of the Economy") Joint Economic Committee, May 21, 1980, p.61).

⁷ This possibility helps explain why some supply-siders are calling for a return to the gold standard. Some contend that only under a gold standard is it possible to achieve the goal of slow and steady money growth as well as the credibility necessary for this policy to reduce the inflation rate quickly and painlessly.

⁸ In other words, even though government purchases are assumed to have a greater impact per dollar on income taxes, the net impact of both the tax and spending cuts is expected to be expansionary.

and business spending, including investment in productive plant and equipment.

But, according to Keynesians, this "crowding out" is unlikely to be complete.⁹ Offsetting the negative effects on investment are the positive effects of increased consumer purchases of goods and services. Any resulting increase in investment, in turn, eventually should stimulate productivity growth.¹⁰

Ultimately, these tax and spending cuts would increase the growth rates of labor productivity, employment and velocity. If the growth rate of money remained constant, the net effect of these opposing growth rates would be higher inflation, at least in the short run.¹¹

The growth rate of money, however, is unlikely to remain constant. Indeed, the administration expects the Federal Reserve gradually to reduce money growth. According to traditional Keynesians, such a tight monetary policy will clash with the expansionary fiscal policy. Slower money growth, they say, will drive up interest rates, reducing private investment spending on plant and equipment. Thus, instead of higher productivity growth, the result will be slower productivity growth.

By reducing aggregate demand, slower money growth leads to reduced inflation. Since Keynesians assume that the growth in nominal wages will not slow down by the same amount as inflation, real wages will grow faster. This will induce firms to hire fewer workers, so employment will grow more slowly, if at all.¹²

The net effect of slower money growth, according to Keynesians, is a reduction in the inflation rate at the cost of slower output growth.¹³

What if fiscal policy is expansionary while monetary policy is contractionary? According to

Keynesians, tax and spending cuts increase inflation but also increase output growth. Slower money growth reduces inflation but also reduces output growth. Depending upon the actual amount by which the Federal Reserve slows money growth, therefore, tax and spending cuts can lead to more inflation and greater output growth or to less inflation and slower output growth. But regardless of the money growth that actually occurs, Keynesians do not expect the reduction in inflation and the growth in output that the administration predicts. To Keynesians, inflation can be reduced only by incurring the cost of slower output growth and increased unemployment.¹⁴ Thus to Keynesians, unlike supply-siders, the initial impacts of tax and spending cuts will be on demand, not supply. It is not possible, according to Keynesians, simultaneously to reduce inflation and unemployment.

C. Monetarists and Inflation

Monetarism, on the other hand, is more compatible with supply-side theory, largely because monetarists, more than Keynesians, distinguish between short-and long-run effects of fiscal and

**"Monetarists...argue that
when money growth is reduced,
the inflation rate also falls."**

monetary actions.¹⁵ They agree that the deficits resulting from the tax and spending cuts, if bond financed, will do essentially what the Keynesians predict. Inflation will be increased, they say, but so will output growth. However, they consider these effects far less important than those associated with monetary actions.

Furthermore, they expect the output and employment effects to be just short-run, disappearing as complete crowding out takes place. Monetary actions, on the other hand, have both short- and long-run effects. But the short-run effects include both price and output changes, whereas the long-run effects include just price changes. This

⁹ Even when one includes the secondary effects of increases in both consumption and the demand for money due to the greater wealth resulting from bond-financed deficits, Keynesians contend that crowding out is less than complete so that tax and spending cuts will increase aggregate demand.

¹⁰ Standard Keynesian analysis is usually concerned with the short run, a period of time in which the capital stock is assumed to be fixed. In this case, changes in investment are assumed to affect only aggregate demand, not labor productivity. For purposes of comparison with supply-side economics, however, investment changes will be permitted to affect labor productivity. These particular effects, however, should be considered as taking place in the long run, not short run.

¹¹ Once again, it should be emphasized that traditional Keynesian economics concentrated almost entirely on aggregate demand. Increases in investment therefore should be viewed as increasing potential rather than actual labor productivity during the horizon considered relevant for Keynesian analysis. The short run, in turn, was meant to include business cycles but not long-term or trend growth in economic activity.

¹² Notice that the slower growth in employment will depress business sales and thus further dampen investment.

¹³ Recall that changes in actual labor productivity are assumed to occur in the long run. Changes in employment, however, are assumed to occur in both the short and long runs.

¹⁴ As Robert Solow (a Keynesian economist at MIT) has stated, "squeezing the inflation of the 1970s out of the system in the conventional way is such a long and painful process" ("What We Know and Don't Know About Inflation," *Technology Review*, January 1979, p. 44).

¹⁵ The distinction between short and long runs made in this subsection is based upon whether "money illusion" exists or not. This will become clear below.

means, according to monetarists, that decreased money growth will reduce inflation but at the cost of slower output growth. Yet they see this as only a short-run effect. In the long run, output growth will return to its initial rate, reducing inflation permanently at no cost.

Monetarists, explaining the difference between short and long-run effects of slower money growth on inflation, argue that when money growth is reduced, the inflation rate also falls. In the short run, Keynesians argue, it is reasonable to assume that nominal wages do not fall as rapidly as prices. Thus, real wages grow faster and employment growth is reduced—increasing unemployment and slowing output growth. But, they argue, workers base their decisions on real, not nominal, wages. Although workers may have initially been “fooled” into believing that falling prices also represented a decline in real wages, this “money illusion” will not persist. In the long run, any unemployed workers will compete for available jobs by bidding down nominal wages until the real wage is restored to its original level. Thus, accelerations or decelerations in money growth only generate short-run output growth effects.¹⁶

Monetarists argue that reduced money growth coupled with tax and spending cuts will most likely lead to short-run decreases in the growth rate of employment. They expect velocity growth to increase, but too little to offset the reduced money growth. Growth in labor productivity would remain essentially unaffected. Therefore, they expect the net effect of these changes to be reduced inflation.

In the long run, they believe employment and velocity will return to their original growth rates, with the inflation rate permanently lower. According to monetarists, therefore, the cost of reducing inflation is short-run slower output and increased unemployment.¹⁷ In contrast, Keynesians argue

**“According to monetarists,
therefore, the cost of reducing
inflation is short-run slower
output and increased
unemployment.”**

that this cost, though it may diminish, persists into the long run. Supply-siders, on the other hand, contend that the slower output growth and increased unemployment need not occur because of the tax rate cuts.

D. Rational Expectations and Inflation

According to the rational expectations view of inflation, more than the other three views, one must distinguish carefully between anticipated and unanticipated economic policy actions. Adherents argue that only unanticipated policy actions affect real variables, such as output growth and unemployment. Thus, to the extent that policy actions are anticipated, they have no impact upon growth rates in real output and employment.

Assume, for example, that the Federal Reserve announces it is going to reduce money growth to a slow and steady rate and that the public believes the announcement. What will happen? First, people will expect lower inflation. Lower price expectations will induce them to settle for lower nominal wages. So long as the actual inflation rate falls by the same amount as expected, real wages remain unaffected.¹⁸ Business firms therefore have no incentive to alter employment, leaving real output unaffected.

But will the actual inflation rate be reduced by as much as announced? This depends upon whether the Federal Reserve fulfills its promise. If it doesn't, and the money supply grows slower but not as slow as anticipated, then actual inflation will be reduced but not by as much as expected. Nominal wages will fall further than prices do, so that real wages will fall. At least temporarily, employers will hire more workers

¹⁶ Another way to state this is that, in the short run, the expected inflation rate may differ from the actual rate. But in the long run the two will become equal. The unemployment rate that prevails when this occurs is referred to as the “natural” rate of unemployment. Attempts to reduce the unemployment rate below the natural rate through activist macroeconomic stabilization policies can be successful only in the short run, unless one continuously accelerates upwards the inflation rate.

¹⁷ As monetarist Jerry Jordan of the Council of Economic Advisors has stated, a policy that “sharply curtails monetary growth over the next few years... would reduce inflation, but it also would be accompanied by slow growth of output and employment. . . .” If accompanied by a goal of limiting government spending as a percent of GNP to less than 20 percent, Jordan says “we would hear a lot of complaining about the ‘loss of output’ . . . , but the patience would ultimately pay-off in a vigorous investment-led expansion” (“Monetary Policy, Fiscal Policy and Interest Rates,” in Shadow Open Market Committee, Policy Statement and Position Papers, September 21-22, 1980, pp. 56,59).

¹⁸ Keynesians and monetarists do not ignore the distinction between actual and expected inflation. However, unlike rational expectations theorists, these groups do not assume that expectations are formed “rationally” or that expectations have to be correct on average. Price expectations are typically assumed to be adaptive which means they are based solely upon past prices. As a result, nominal wages do not fully adjust to actual price changes, so real wages change with all price changes.

“...the only factors which can affect real output, according to rational expectations theorists, are expectational errors, due to uncertainty or lack of complete information.”

and real output will rise. Thus, the only factors which can affect real output, according to rational expectations theorists, are expectational errors, due to uncertainty or lack of complete information.¹⁹

What about the impact of tax and spending cuts on inflation and output? Based upon the rational expectations view, if taxes are cut and the resulting deficit is bond-financed, there need not be any effects on output and employment. If the deficit ultimately is financed through the public sale of securities and people fully anticipate this action, then private saving will increase by the same amount as the resulting deficit. (The amount people invest in government securities is counted as savings.) This theory assumes that people realize that the issuance of additional government bonds implies a higher future tax liability for which they must save. If they do that, no change in aggregate demand occurs, so prices and real output remain unchanged.

To determine the impact of spending cuts, rational expectations theorists distinguish between temporary and permanent changes in government expenditures. They assume that tax rates will be set to produce the revenues necessary to finance permanent government expenditures. Changes in permanent government spending, therefore, will be associated with corresponding changes in tax rates.²⁰ If permanent spending is decreased, then people will expect tax rates to be permanently reduced. As a result, aggregate demand will be

unaffected because decreased government spending will be offset by increased consumption stimulated by the tax cuts.

Temporary changes in government spending, on the other hand, can affect real economic activity. Consider, for example, increases in spending for wars. Rational expectations theorists maintain that this type of spending will not affect aggregate demand, but will affect aggregate supply. People will realize that the reward for work is temporarily high and thus will work more. As a result, real output will increase temporarily. Thus, temporary changes in government spending generally affect real output and employment, whereas permanent changes do not.

The combination of spending and tax cuts poses something of a dilemma, according to rational expectationists. The tax cuts are extended over three years, not to mention the indexation provision, whereas the spending cuts are for just one year, with *promised* cuts in future years. This confuses people and therefore is disruptive. People do not know whether future spending cuts will be forthcoming as promised, and whether the tax cuts will be permanent. Furthermore, the larger the deficits and the longer they persist, the more concern grows that the Federal Reserve will monetize a portion of them. In sum, rational expectations theorists believe the spending and tax cuts add to uncertainty and make it difficult for a slow and steady monetary policy to reduce inflationary expectations and thus both actual inflation and interest rates.

To summarize the rational expectations view, adherents believe that, over the long run, tax and spending cuts coupled with slower money growth will essentially leave velocity, labor productivity and employment largely unaffected. They believe the rate of inflation will be reduced, however. In the short run, the same results are possible, depending upon whether or not policy actions are fully perceived and anticipated. If they are, then the inflation rate will be reduced at no cost to the economy. If the actions are not fully perceived and anticipated, then the inflation rate will still be reduced, according to this theory, but growth in output and employment may either rise or fall. Whether output and employment effects are positive or negative depends upon the public's expectational errors, which cannot be determined in advance. In other words, rational expectationists, unlike supply-siders, do not say with certainty what the impact of tax and spending cuts will be on the economy.

¹⁹ This theory assumes that only unanticipated money changes affect real output and that these output effects are not due to wage rigidities and/or “money illusion.” Keynesians consider these rigidities and/or illusions as signs of “market failure,” which generates involuntary unemployment. To correct this situation, Keynesians consider activist stabilization policies appropriate. Monetarists, however, generally regard such policies as an additional source of instability due to the uncertain impact and implementation lags associated with macroeconomic stabilization policies.

²⁰ Notice that if all changes in government spending were permanent then the budget would be balanced on average, with surpluses and deficits due to random fluctuations in national income.

Table 1
Post-World War II Annual Growth Rates in Selected Economic Variables

| | Actual | | | | | | Administration Projection | |
|--|---------|---------|---------|---------|---------|---------|------------------------------|---------|
| | 1950-54 | 1955-59 | 1960-64 | 1965-69 | 1970-75 | 1975-79 | 1980 | 1981-86 |
| GNP Deflator | 2.6 | 2.6 | 1.5 | 3.6 | 5.8 | 7.2 | 9.0 | 6.8 |
| Real GNP | 4.7 | 3.2 | 4.0 | 4.4 | 2.8 | 3.6 | -0.2 | 4.0 |
| Real GNP in Private Business Sector | 4.1 | 3.0 | 4.1 | 4.5 | 2.7 | 3.9 | -0.9 | N.A. |
| a. Hours | 0.4 | 0.6 | 0.5 | 2.0 | 1.0 | 2.5 | -0.6 | N.A. |
| b. Output per hour | 3.7 | 2.4 | 3.6 | 2.5 | 1.7 | 1.4 | -0.3 | N.A. |
| Unemployment Rate | 4.0 | 5.0 | 5.7 | 3.8 | 5.4 | 7.0 | 7.1 | 6.5 |

Source: Economic Report of the President, January 1981, and "Mid-Session Review of the Budget, Executive Office of the President, Office of the Management and Budget, Washington, D. C., July 15, 1981.

What is the Cost of Reducing Inflation?

As is quite clear, supply-side theory conflicts with the other economic views (most dramatically with the Keynesians) on inflation. The disagreement, however, is not over whether inflation can be reduced, but whether the cost of doing so will be slower economic growth and greater unemployment. Supply-siders, supporting the administration's economic predictions, contend that there are actually benefits, rather than costs, that result from the tax cuts.

The cuts will provide the necessary incentives to assure faster economic growth and lower unemployment, lessening inflation. Spending cuts, though considered far less important than tax cuts to supply-siders, will assist in reducing the size of the federal deficit and thus lessen inflationary fears. Slow and steady money growth should contribute to reducing inflation without producing any adverse output or employment effects. However, according to some supply-siders, the only way to be sure that monetary growth will be slowed and steadied is to return to a gold standard.²¹

²¹ As Arthur Laffer (a professor of business economics at the University of Southern California and a supply-sider) states, "while restricting the growth of the money supply theoretically could bring inflation under control, practical application is not within reach." He says "the solution to high inflation and high interest rates centers on the willingness of the government to guarantee the value of the currency through free convertibility into gold" (Both Monetary Goals Can Be Met, *Los Angeles Times*, August 25, 1981).

Published administration projections as of mid-summer for inflation, real output growth and unemployment are presented in Table 1. These figures, which are subject to revision at any time, indicate that the inflation rate will drop from an

**"The administration projects
that...roughly one million people
will find work as the
inflation rate drops sharply."**

actual rate of 9.0 percent in 1980 to an annual average of 6.8 percent for the 1981-86 period. They show real output increasing to an annual average growth rate of 4.0 percent during the same period, a big jump from an actual -0.2 percent growth rate in 1980. The unemployment rate is expected to average 6.5 percent, though by 1986 it is expected to be down to 5.5 percent, down from 7.2 percent in 1980.

The other three economic views we have discussed depart significantly from the supply-side view. Where supply-siders consider increased productivity growth resulting from the tax cuts to be quite important, the Keynesians, monetarists and rational expectations theorists do not. These

groups concentrate on short-run (a period of time in which the capital stock is essentially assumed to remain constant) fluctuations in economic activity. In any event, Keynesians expect that any reduction in inflation will only be achieved at a cost of slower economic growth and increased unemployment.²²

If the Federal Reserve retreats from its stated tight policy, then real output would grow faster but at a cost of a smaller reduction, or possibly an increase, in the inflation rate. The important point is that Keynesians do not expect the inflation rate and output growth to move in opposite directions as a result of the tax and spending cuts coupled with slow money growth.

Keynesians doubt the administration's forecast that the inflation rate will drop 2.2 percentage points while output grows at a 4.2 percentage point faster rate (see Table 1). Table 1 shows that the administration expects real output to grow at an annual rate during 1981-86 faster than the average annual growth rate during the previous three decades. To Keynesians, this rapid growth in real output seems inconsistent with the sharp reversal in the inflation rate.

Monetarists also tend to be skeptical of such projections. However, unlike Keynesians, they are relatively unconcerned over any clash between fiscal and monetary actions. To monetarists, the tight monetary policy will be the deciding factor on inflation and real output growth.²³ If the Federal Reserve pursues a slow and steady money growth policy, monetarists believe the inflation rate will decline, but at the cost of slower output growth and unemployment. However, they consider these to be short-run costs, with no long-run costs.

Lastly, rational expectations theorists believe that tax and spending cuts coupled with a proper slowing in money growth can reduce inflation at zero cost—assuming that the promised future spending cuts become a reality quickly or that the public becomes convinced that they will. Of course, while the inflation rate falls, it is possible that real output growth will slow. But they believe it just as likely that the opposite will occur. To this

group, the business cycle is essentially random; whatever happens to output growth and unemployment is not due to any deliberate and systematic fiscal and monetary actions.²⁴ These effects as well as those for the other economic views are summarized in Table 2.

**“Despite their divergent views
about how the economy operates,
the major competing theories
agree that inflation
can be reduced.”**

In addition to knowing about the potential impacts of monetary and fiscal actions, it is important to know the likely magnitudes of these impacts. Keynesians contend that the cost of reducing inflation through monetary and fiscal measures is quite high, whereas the supply-siders contend that there is no cost or at least not an unacceptable cost (see footnote 6). Indeed, supply-siders contend a reduction in inflation is compatible with faster real output growth and declining unemployment. These two economic views therefore provide upper and lower bounds to the expected costs associated with bringing inflation under control.

As far as the upper bound is concerned, according to one prominent Keynesian economist, about one million people will be put out of work for every 1 percent decline in the rate of inflation.²⁵ Since one million jobs represent roughly one percent of the labor force, an extra point of unemployment will cost, based upon the Keynesian estimate, about \$60 billion in real output each year.²⁶

²² Traditional Keynesians focus on the actual spending cuts, not both these cuts and the promised future cuts so as to balance the budget. In contrast, rational expectations theorists place emphasis on both when attempting to assess the likely impact of the current budget and the tax cuts on the economy.

²³ Jerry Jordan does state that “when fiscal policies are expansionary, the impact of restrictive monetary policies falls on saving and investment” (“Monetary Policy, Fiscal Policy and Interest Rates,” p. 58). If correct, the result will be reduced potential output growth.

²⁴ Some economists assume that individuals form expectations rationally, but still find that deliberate and anticipated policy actions affect real variables. Nominal wage contracts and/or informational advantages of the Federal Reserve, for example will enable anticipated as well as unanticipated policy actions to affect real output and employment. However, it is generally assumed that the output and employment costs associated with a tight money policy are substantially below those expected by traditional Keynesians.

²⁵ See Barry Bosworth, “The Carter Administration's Anti-Inflation Program,” in *Inflation and National Survival*, Clarence C. Walton, ed., Proceedings of the Academy of Political Science, Vol. 33, No. 3, New York, 1979, p. 15.

²⁶ See George Perry, “Slowing the Wage-Price Spiral: The Macroeconomic View,” *Curing Chronic Inflation*, The Brookings Institution, Washington, D.C., 1978, pp. 23-25. Also, according to Robert Solow (*Ibid.*, p. 44), “an extra point of unemployment for three years costs the economy about \$180 billion of production. . . .”

FOUR VIEWS OF INFLATION: A SUMMARY

| In order to reduce inflation: | Supply-Side | Keynesian | Monetarist | Rational Expectations |
|------------------------------------|--|---|--|---|
| Money Growth | An important component to reducing inflation is slower money growth. | Slower money growth is not critical to reducing inflation. | A critical factor. Unless money growth falls, inflation will not. | Slower money growth is essential, provided it changes people's expectations. |
| Velocity Growth | Velocity may be erratic under supply-side policies, but will be stable over longer periods. | If money growth is slowed, velocity growth will rise to compensate. | Velocity may accelerate, but not enough to offset reduced money growth. | In the longer run, velocity growth is unaffected by lower inflation. |
| Productivity Growth | For lower inflation, we need faster productivity growth (stimulated by cuts in marginal tax rates and more saving and investment). | A problem. Curtailed money growth will lead to "crowding out" of investment. Slower economic growth will make investment unattractive and productivity will slow. | Essentially unaffected by slower money growth. | Essentially unaffected. |
| Work Effort/ Employment | Employment will rise, stimulated by cuts in marginal tax rates. | A problem. Employment will fall as output growth falls. | Temporary problem. Employment will be reduced temporarily by money deceleration. | Essentially random. |
| Basic Policy Implication | Stable monetary policy critical; employment increases will produce lower unemployment at same time as inflation abates. | Inflation can only be reduced by curbing output and employment. | Inflation can be reduced by lowering money growth, provided we are willing to put up with temporary reductions in economic growth and higher unemployment. | If expectations of inflation and money growth can be changed, inflation can be reduced at no cost in output and employment. |

By contrast, the administration projects that the inflation rate will decline by 8.3 percentage points while the unemployment rate *falls* by 1

percentage point. In other words, roughly one million people will find work as the inflation rate drops sharply.

Summary

These figures suggest the substantial differences between Keynesians and supply-siders regarding the costs associated with anti-inflation policies. Rational expectations theorists offer some indirect support for the supply-side position by contending that the Keynesian estimates of the length of time and the costs of stopping inflation in terms of foregone output(...)are erroneous.²⁷ Instead, this group argues that it is possible to halt inflation without any cost in terms of foregone output.²⁸ Given these widely varying estimates, it is no wonder that there is so much concern about the Reagan program's impact on the economy.

Despite their divergent views about how the economy operates, the major competing theories agree that inflation can be reduced. However, whether one can stop inflation abruptly and painlessly is another matter. Keynesians say the prospect for this happening is nil, whereas supply-siders believe it highly probable. The differences between these two views are not just conceptual, since administration economic policy is being based largely upon supply-side premises. If this policy is successful, inflation will be reduced and the economy will prosper. Yet if it fails, jobs and production will suffer.

It is worth repeating that supply-siders emphasize the initial impact of monetary and fiscal measures on aggregate supply, while Keynesians, monetarists and rational expectations theorists emphasize the initial impact of these actions on aggregate demand. Supply-siders consider productivity a key channel through which monetary and fiscal actions affect economic growth and inflation. The other three groups concentrate on analyzing business cycles. They assume that in the short run the capital stock is fixed and so place little emphasis upon the impact of monetary

and fiscal measures on productivity growth through this channel.

By emphasizing productivity growth, supply-side economics appears to be largely a long run view of how the economy operates. But how does this square with the administration's short run forecast?

First, supply-siders contend that tax cuts provide the incentives necessary to increase the supply of labor, an essential input for the short run production of goods and services. The other economic views do not dispute that this is possible, but contend that the supply of labor just as likely may decrease.

Second, supply-siders appear to adopt the rational expectations view of the broader impact of monetary and fiscal measures on aggregate demand, interest rates and inflation. They tend to hold their own view regarding the impact of monetary and fiscal actions on aggregate supply and then adopt the rational expectations view of these policies' impact on aggregate demand. Thus, supply-siders seem more in agreement with rational expectations theorists than with either monetarists or Keynesians.

However, their disagreements with monetarists are relatively minor when compared to those with Keynesians. Generally speaking, unlike Keynesians, supply-siders, monetarists and rational expectations theorists all advocate non-activist stabilization policies by the federal government and the Federal Reserve and the allocation of a smaller share of GNP to the government, providing more resources to the private sector and thus a greater opportunity for the market system to function more efficiently.

—James R. Barth

²⁷ See Thomas J. Sargent, "The Ends of Four Big Inflations," NBER Conference Paper No. 90, August 1980, p. 2.

²⁸ *Ibid.* Peter M. Garber ("Transition from Inflation to Price Stability," March 1981), however, reaches substantially different conclusions than Sargent for at least one country. For a comprehensive and critical assessment of the rational expectations view, see P.A.V.B. Swamy, J. R. Barth and P. A. Tinsley, "The Rational Expectations Approach to Economic Modelling," Special Studies Paper No. 143, Federal Reserve Board, July 1980 and forthcoming in the *Journal of Economic Dynamics and Control*.

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Cost-of-Living: Why the Differences?

Regional differences in cost-of-living significantly influence migration patterns. Empirical analysis shows that population density and size, per capita income, and right-to-work laws play major roles in determining an area's cost-of-living.

As anyone who has moved recently from Birmingham to Los Angeles knows all too well, the cost of living in different areas of the country can vary tremendously. Recent research has revealed that these geographic living-cost differences are so large that they significantly influence migration patterns within the United States.¹ Although researchers have long been interested in why people migrate, most empirical studies have concentrated on such factors as unemployment rates, per capita income, and median income. Theoretically, cost of living differences

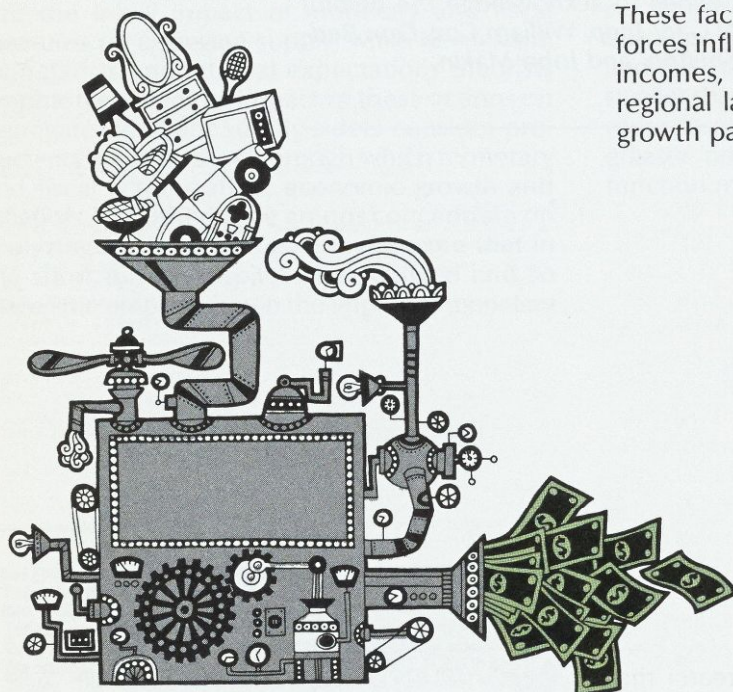
were believed to play a role in migration decisions, but, until recently, few empirical studies had been done.

The fact that people's decisions to migrate are strongly affected by living costs is extremely important because, given the stability of both birth rates and death rates, internal migration is likely to be the major influence on changes in regional and inter-regional labor markets and long-term economic growth patterns in the United States.

Since these cost-of-living differences play such an important role, it may be very helpful to both researchers and policy makers to understand the fundamental factors behind these differences. These factors, in turn, provide insights into the forces influencing geographic differences in real incomes, the functioning of regional and inter-regional labor markets, and regional economic growth patterns.²

Causes of Living Cost Differentials

Many factors contribute to living-cost differentials. This study examines the following: population density, population size, per capita income, the presence (or absence) of right-to-work laws, and utilities bills (for heating and air conditioning the home). To determine whether these factors in actuality lead to living-cost differentials, data on these variables were gathered for 38 SMSA.³ These 38 areas represent all the SMSAs for which geographically comparable living-cost data are available; although such living-cost data were also available for Durham, North Carolina, this area was



omitted from the study due to a lack of other needed data.⁴ In this study, the "cost of living" indicates the average annual cost of living for a four-person family living on an intermediate urban budget.

Statistical analysis of the determinants of geographic living-cost differentials was undertaken for the years 1974, 1976, and 1978; the results are summarized in Table 1. Specifically, the study found evidence supporting the following propositions:

1. The greater the population density in an SMSA, the greater the amount of congestion within the SMSA. With greater congestion, transit costs, marketing costs, and other cost factors which directly or indirectly influence the overall cost of living in an area will increase. Hence, a greater population density tends to elevate living costs.
2. At the same time, within a given SMSA, there may be "agglomeration" or "urbanization" benefits associated with a larger population size. Walter Isard has argued that areas subject to agglomeration economies have "access to a larger pool of skilled labor ... and fuller use of specialized and auxiliary industrial and repair facilities."⁵ Thus, we would expect areas with larger populations to have lower production costs and hence a lower overall cost of living.
3. The higher the per capita income level in an SMSA, the higher the average level of demand for goods and services in that area. In turn, a greater demand for goods and services implies a higher average commodity-price structure in the SMSA.
4. The existence in an area of right-to-work laws prohibiting the "union shop" implies a labor-market environment with less union power and thus less labor-market pressure to increase labor costs.⁶ So far, 20 states have enacted "right-to-work laws" to make compulsory union membership, and hence the union shop, illegal. To the extent that right-to-work legislation leads to lower labor costs and hence to lower production costs, there is likely to be a tendency for final commodity prices to be lower.⁷
5. Geographic living-cost differentials also could be significantly attributed to differences in heating and air conditioning costs. Clearly, the higher the annual costs of heating plus air conditioning the home, the greater the cost of living. Since there is no reason to

believe that heating costs plus air conditioning costs will be geographically uniform, the costs of heating plus air conditioning **must** be included in any analysis of geographic living cost differentials.⁸

Thus, it appears that the greater an area's population size (not density), the lower the area's cost of living. On the other hand, the greater an area's population *density* (not size), the higher the cost of living. Of course, a rise in population size in an area will raise population density unless the population growth is offset by an expansion of the area's geographic size. If population size and density both increase, the evidence indicates that the effects of the density increase will predominate. Thus, the overall cost of living should rise (see Table 1). Next, the greater the per capita income in an area, the higher the cost of living in that area. Right-to-work laws appear to lower the overall cost of living (by about seven to eight percent, judging from the overall results in Table 1).⁹ One possible implication of this finding is that areas with right-to-work laws are likely to be areas with lower living costs and hence greater attractiveness to migrants. Thus, areas with right-to-work laws are likely to benefit and grow from net in-migration.

¹ See R.J. Cebula, *The Determinants of Human Migration* (Lexington, Massachusetts: Lexington Books, 1979); S.M. Renas, "An Empirical Note on the Tieout-Tullock Hypothesis: A Comment," *Quarterly Journal of Economics*, May 1980, pp/619-623; or J. Werthein, "A Note on Migration Determinants," *Review of Business and Economic Research*, Winter 1980, pp. 106-108.

² This is argued in D.A. West, J.R. Hamilton, and R.A. Loomis, "A Conceptual Framework for Guiding Policy-Related Research on Migration," *Land Economics*, February 1976, pp.66-76.

³ Atlanta, GA; Austin, TX; Bakersfield, CA; Baltimore, MD; Baton Rouge, LA; Boston, MA; Buffalo, NY; Champaign-Urbana, IL; Cedar Rapids, IA; Chicago, IL; Northwestern IN; Cincinnati, OH-IN-KY; Cleveland, OH; Dallas, TX; Dayton, OH; Denver, CO; Detroit, MI; Greenbay, WI; Hartford, CT; Honolulu, HI; Houston, TX; Indianapolis, IN; Kansas City, MO-KS; Lancaster, PA; Los Angeles-Long Beach, CA; Milwaukee, WI; Minneapolis-St. Paul, MN; Nashville, TN; New York, NY-Northeastern NJ; Orlando, FL; Philadelphia, PA-NJ; Pittsburgh, PA; Portland, ME; St. Louis, MO; San Diego, CA; San Francisco-Oakland, CA; Seattle-Everett, WA; Washington, DC-MD-VA, Wichita, KS.

⁴ The data sources for this study are as follows: *Statistical Abstract of the United States, 1975* (Table 694 and Section 34); *City and County Data Book, 1977* (Table 3) and *Statistical Abstract of the United States, 1977* (Table 777); and *State and Metropolitan Area Data Book, 1979* (Table B).

⁵ W. Isard, *Location and Space Economy*, (Cambridge, Massachusetts: The MIT Press, 1956), p. 182.

⁶ "Labor costs" here include more than just wages. If firms do not anticipate strong wage demands, for example, they may be more willing to invest on plant and equipment. Thus, the right-to-work laws help create an environment in which wages tend to be lower.

⁷ To test unionization rates directly as a factor in cost-of-living differences would be difficult because of problems with aggregation biases and simultaneity biases. The issue of direct causality here is an interesting one which has corollaries in much of the Phillips-curve and rational expectations literature. Ultimately, it should be tested for possible/probable simultaneity, a prospect which would involve a much larger project than the present study.

⁸ If data are available.

Table 1. Ordinary Least Squares Estimations of Equation 9, 1974, 1976, 1978**

| | Constant | | | | | DF | R ² | F-ratio |
|-------------|------------|----------------------------|---------------------------|---------------------------|----------------------------|----|----------------|---------|
| 1974 COLi = | + 8711.49 | - 701.82*(Ri) (240.88) | + .61338*(Di) (.13921) | - .26977*(Pi) (.08028) | + 1.05714*(Yi) (.19939) | 33 | .79 | 27.716 |
| 1976 COLi = | + 12218.99 | - 1173.26*(Ri) (338.17) | + .82892*(Di) (.22147) | - .28612*(Pi) (.12514) | + .83502*(Yi) (.31551) | 33 | .65 | 11.851 |
| 1978 COLi = | + 17271.95 | - 1481.87*(Ri) (435.87) | + .87635*(Di) (.29671) | - .25352*(Pi) (.10925) | + .79192*(Yi) (.29980) | 33 | .68 | 12.054 |

*Statistically significant at the .01 level, one-tailed test.

**OLS estimates for equations 6, 7, and 8 are available from the Information Center, Federal Reserve Bank of Atlanta, P.O. Box 1731, Atlanta, Ga. 30301.

—Richard J. Cebula

APPENDIX

The Basic Model

Geographic living-cost differentials are likely to be a function of numerous factors besides right-to-work legislation. To allow for such factors, the following model is postulated:

$$1. \text{COLi} = \text{COLi}(\text{Ri}, \text{Di}, \text{Pi}, \text{Yi})$$

where COLi = the average annual cost of living for a four-person family living on an intermediate budget in SMSAi

Ri = a dummy variable which indicates the existence of right-to-work legislation in the state where SMSAi is principally located (the variable assumes a value of "1" if there is right-to-work legislation and a value of "0" otherwise).

Di = the population density in SMSAi in terms of the number of persons per square mile

Pi = the total population in SMSAi

Yi = the per capita income level in SMSAi

in accord with our hypothesis, we argued that:

$$2. \frac{\partial \text{COLi}}{\partial \text{Ri}} < 0$$

Next, we hypothesized that the greater the population density in SMSAi, the greater the amount of congestion within the SMSA. With greater congestion, it is argued that transit costs, marketing costs, transfer diseconomies, and other such cost factors which influence the overall cost of living in an area will increase. Moreover, the greater the population density in an area, the greater the upward pressure on the cost of housing and land is likely to be. Hence, it is argued that:

$$3. \frac{\partial \text{COLi}}{\partial \text{Di}} < 0$$

Next, we hypothesized that within a given SMSA there may be "agglomeration" (urbanization) economies associated with a larger population size. As Isard (2, p.182) argues, areas subject to agglomeration (urbanization) economies have "access to a larger pool of skilled labor...and fuller use of specialized and auxiliary industrial and repair facilities." Thus, *ceteris paribus*, we would expect areas with larger populations to be characterized by lower production costs and hence by a lower overall cost-of-living:

$$4. \frac{\partial \text{COLi}}{\partial \text{Pi}} < 0$$

Finally, this study contends that the income variable (per capita income) may be viewed as a proxy for an array of demand-side factors. It is argued that the greater the per capita income level in an SMSA, the greater the average level of demand for goods and services implies, *ceteris paribus*, a higher average (overall) commodity-price structure:

$$5. \frac{\partial \text{COL}_i}{\partial Y_i} < 0$$

The Empirical Specifications and the Data

To investigate the living-cost impact of right-to-work legislation, as well as the impact of variables D_i , P_i , and Y_i , this paper estimates the following four regressions for each of the three years studied:¹

$$6. \text{COL}_i = a_0 + a_1 R_i + \mu_1$$

$$7. \text{COL}_i = b_0 + b_1 R_i + b_2 D_i + \mu_2$$

$$8. \text{COL}_i = c_0 + c_1 R_i + c_2 D_i + c_3 P_i + \mu_3$$

$$9. \text{COL}_i = d_0 + d_1 R_i + d_2 D_i + d_3 P_i + d_4 Y_i + \mu_4$$

where a_0, b_0, c_0, d_0 = constants

$\mu_1, \mu_2, \mu_3, \mu_4$ = error terms

For the three years studied, 1974, 1976, and 1978, respectively, we observe that:

COL = as above, for 1974, 1976, and 1978, respectively,

R_i = as above

D_i = as above, for 1973, 1975, and 1977, respectively

P_i = as above, for 1973, 1975, and 1977, respectively

Y_i = as above, for 1972, 1974, and 1975, respectively

¹ The regressions are expressed in linear terms. A log-linear specification would have precluded the use of the dummy variable (R_i). Moreover, there was no apparent *a priori* reason to adopt a log-linear equation in lieu of the linear form.

Empirical Results

The OLS estimations of equation (9) for the years 1974, 1976, and 1978, are summarized in Table 1. We also calculated the zero-order correlation coefficients among the independent variables for 1974, 1976, and 1978.

For 1974, in all of the regressions, the F-ratios are significant at the .01 level. Of the ten coefficients estimated, only one fails to be significant at the .01 level. In the last regression, where all four independent variables are included and found to be significant at the .01 level, the R^2 has a value of .79, so that the model explains nearly four-fifths of the variation in the cost of living in 1974.

For 1976, all of the F-ratios are significant at the .01 level. Of the ten coefficients estimated, nine are significant at the .01 level. In the last regression, where all four exogenous variables are significant at the .01 level, the R^2 is .65, so that the model explains nearly two-thirds of the variation in the cost of living for 1976.

The general pattern of results appears once again in 1978. All of the F-ratios are significant at the .01 level. In addition, nine of the ten estimated coefficients are significant at the .01 level. Finally, the R^2 of .68 in the last regression, where—as in 1974 and 1976—all the independent variables are significant at the .01 level, implies that the model explains nearly seven-tenths of the variation in the cost of living in 1978.

The only case where there is a high degree of multicollinearity in the model is that involving population size (P_i) and population density (D_i). As noted earlier, however, this high degree of correlation is to be expected. Moreover, in view of the high significance levels for the coefficients on both P_i and D_i in all three of the OLS estimates of equation (9), this degree of correlation should not be an issue of concern.

The findings exhibit a remarkably consistent pattern. As shown in the OLS estimate for equation (9) in all three years, all four independent variables—when in the same equation—are statistically significant at the .01 level with the expected sign. Thus, both higher per capita income levels tend to elevate the cost of living, whereas both higher population size and the existence of right-to-work legislation act to lower the cost of living. These conclusions are derived for all the three years studied, 1974, 1976, and 1978.

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