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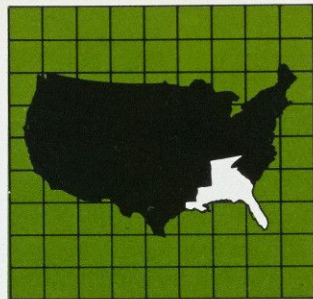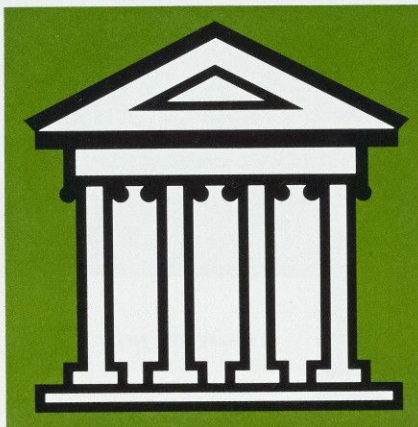
AUGUST 1985

BANK SAFETY A Regulator's View

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FEDERAL RESERVE BANK OF ATLANTA

Bank Safety
Risks and Responsibilities

Robert P. Forrestal

If the federal government continues to shoulder the risk of loss when major banks fail, regulators will demand a larger voice in bank operations, says the Atlanta Fed's president. He questions whether the private sector shouldn't accept greater responsibility for disciplining banks that gamble too boldly.

Federal Regulation

Market Discipline

Over the last few years, the government has sought to reduce its influence over many areas of the economy. This trend is particularly noticeable in banking, with the deregulation of interest payments on deposits and a lowering of the barriers to interstate banking. Furthermore, many in financial services are strongly advocating additional deregulation, especially a relaxation of limitations on the types of products that banking organizations can offer.

Yet the groundswell to deregulate banking is countered by pressure to reregulate the system. Some of this pressure clearly originates from institutions eager to reerect barriers that once protected them from competition. However, concern over an increasing number of bank failures adds momentum to the reregulation movement. More banks failed last year than at any time since the 1930s and we appear headed toward another record this year. The Federal Deposit Insurance Corporation (FDIC) and its counterpart agency, the Federal Savings and Loan Insurance Corporation (FSLIC), have absorbed huge losses because of the incompetent, corrupt or just unfortunate management of some federally insured institutions.

The faulty management decisions that contribute to many of the failures among federally insured institutions spark considerable concern because they pose a twofold financial and structural threat. Although the FDIC and FSLIC maintain several-billion-dollar funds provided by the institutions themselves to protect deposits, a massive run could drain their resources if the government did not step in to replenish them. Theoretically, at least, insurance funds could be exhausted. This could force Congress or the Federal Reserve to provide supplementary funding to preserve the public's confidence in the nation's financial institutions and to assure the stability of the system.

Furthermore, in the public mind, a large financial institution is regarded with a mixture of awe and respect. A crisis that demonstrates the fallibility of such an institution and its management undermines the public faith essential to a stable financial system. A serious loss of public confidence affects more than deposits at the troubled institution; it may spread to sound institutions through deposit withdrawals

or through correspondent relations among the institutions themselves.

The argument that banking should be reregulated to reduce the number of failures raises some disturbing questions about bank soundness. Is deregulation responsible for the rash of failures? Have bankers, their directors, and stockholders abdicated responsibility for bank safety to the regulators? If so, what can the regulators do to induce more discipline in the private sector?

Our analysis indicates that the increasing number of bank failures is not attributable to deregulation. Nevertheless, it suggests that the current regulatory scheme contains a significant flaw that removes much of the incentive for banks to control their own risk exposure. Steps can be taken to increase private-sector discipline. Unfortunately, I doubt these steps will be sufficient in the short run to avert pressure for increased government intervention.

I will examine causes of the recent increase in bank failures, discuss some general principles for evaluating reform measures, and evaluate some proposals to increase private-sector discipline.

Failures Create Concern

Bank safety has concerned people for many years, but only lately has the issue become so visible. For many years, the banking system was stable. From 1946 to 1981 just over six banks failed each year, representing less than 0.1 percent of the banks operating during these years and a smaller proportion of bank assets.[1]

Yet failures have surged since 1981, reaching 79 last year, about .5 percent of the nation's FDIC-insured banks. Fifty-two banks failed during the first half of 1985.

Deregulation offers part of the reason for concern about bank safety. At one time, most banks seemed guaranteed a profit; their markets were protected by restrictions on entry, and their cost of funds was kept low by limitations on deposit rates. Now the entry controls are eroding and the deposit rate controls are largely gone. Banks must operate with a smaller margin for error.[2]

However, while deregulation alone should have prompted a review of bank safety, it cannot explain the intense current interest in the issue. The problems created by deregulation thus far are small; few recent failures are caused

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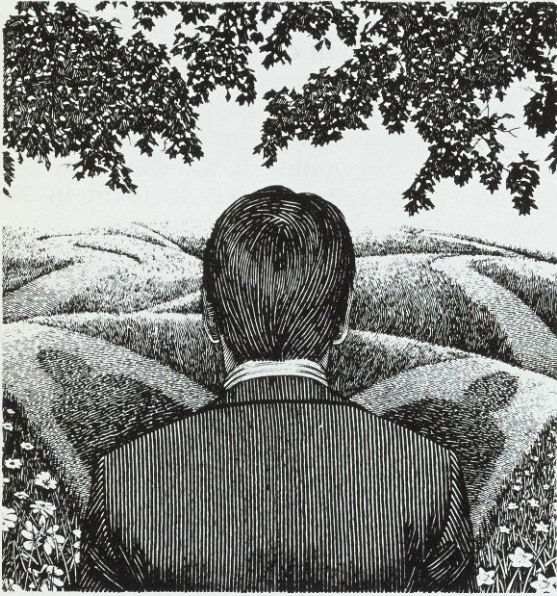
Our policies achieved some notable successes; the rate of inflation has fallen dramatically and the public's fear of ever-increasing inflation has been reduced substantially. The public now worries about adjusting to disinflation.

Success in the battle against inflation has caused pain. Our economy in 1981 and 1982 operated well below capacity and unemployment rose to a postwar high. The recent recovery and expansion have led to great improvements, though we must continue to reduce unemployment. But the problems of those who bet on inflation and absorbed significant losses linger. Some energy firms and countries that thought oil prices could only go up find themselves overextended as energy prices continue to drop.[4] Farmers who bought land on the assumption that agricultural prices were riding an eternal escalator now face the risk of losing their land.[5] Finance ministers in foreign countries once solicited by bankers urging them to accept additional loans now find they must squeeze their economies to repay those loans.[6] Financial institutions that lent to these and numerous other borrowers are forced to accept slower repayments, lower interest rates, and higher loan write-offs.

The difficult adjustment to disinflation as well as uncertainties about the impact of deregulation help explain today's concern about bank safety. Yet the problems are deeper because a serious conflict exists in our present system. The federal government has assumed a major portion of the costs of bank failure but is in no position to assume—nor should it necessarily assume—a corresponding responsibility for controlling bank risk-taking. This weakness was demonstrated in spectacular fashion by the crisis at Chicago's Continental Illinois National Bank and Trust Company.[7] Problems at Empire Savings and Loan (a thrift in Texas that the FSLIC initially estimated would cost the government $295 million) and other institutions add an emphatic exclamation to Continental's message.[8]

In the 1930s, the government decided to insure deposits for a good reason—to restore and maintain depositor confidence in banks following the disastrous panic of the Great Depression. Our government sought to end the deposit runs that spread to sound banks and destabilized the banking system periodically from the founding of the nation to the 1930s. Insurance covering deposits up to a

directly by it. The rapid inflation in the 1970s and the shift to disinflation have contributed substantially more to current problems.

Inflationary pressures during the 1970s were significant, especially the run-up in energy and food prices. During that period we seemed willing to live with higher inflation if that was the price we paid for lower unemployment. We now know such a trade-off works only so long as people underestimate future inflation.[3]

In the late 1970s, however, inflationary expectations caught up with actual inflation. Everyone began to expect continuing high inflation and they rearranged their financial affairs accordingly. Individuals, corporations, and even countries took on new debt. Lenders, including financial institutions, relaxed their credit standards, believing that inflation would bail them out of any future problems. Policymakers recognized that inflation was causing serious dislocations in the economy with unacceptable results. They further realized that, if anti-inflationary action were deferred any longer, the cost would be higher later. Thus, beginning in October 1979 the Federal Reserve embarked on new policies dedicated to slowing the rate of inflation.

limited amount (currently $100,000) was intended to protect small, unsophisticated depositors. Those depositing larger sums were believed to be in a position to protect themselves and to be able to exert pressure on banks suspected of taking excessive risks. Protecting these small depositors is insufficient to protect the banking system from runs, however, because large banks often depend on deposits over $100,000 and these larger depositors also can participate. Thus in the case of several large bank failures, beginning with New York's Franklin National in 1974, the FDIC and the Federal Reserve, in effect, needed to extend the protection to deposits exceeding $100,000 at large problem banks.

The Federal Reserve protected depositors by lending troubled institutions money to provide time for the FDIC to develop a plan to deal with the crisis. This policy allowed risk-averse depositors to bail out of a failing large bank without having to take any chances on whatever plan the FDIC might implement. In most cases, large depositors need not have fled the bank, since the FDIC plan would have protected them. This protection typically has taken one of two forms: either the agency has arranged for a healthy bank to assume the deposit liabilities of a failed bank in a process called deposit assumption, or on rare occasions it has infused capital so the troubled bank could continue operating.[9] Only once has the FDIC liquidated a large bank—in the case of the Penn Square Bank in Oklahoma City.[10]

The actions of the Fed and FDIC have prevented widespread bank runs and the banking system has remained stable. Unfortunately, the responsibilities assumed by the bank supervisory agencies have not kept pace with the expanding risks. The agencies have been cautious in seeking to expand those responsibilities. We recognize that our actions can have a powerful effect on banks and their customers. Former Chairman Arthur Burns, in the Federal Reserve System's annual report for 1977, put it this way: "Nor do we as supervisors, despite our obligation to be watchful, seek to substitute our judgments for those of on-line bankers in deciding who should get credit. We have neither the capacity nor the desire to play such a role."

In 1984, the FDIC tried to stimulate greater private sector interest in bank safety through its modified payout plan. This resembles the deposit assumption plan often used to handle bank failures in that the FDIC arranges for a healthy bank to assume the liabilities of a failing institution. The difference is that the healthy bank assumes all of the failed bank's deposits under deposit assumption, but only part of the deposits under modified payout. All insured deposits—those up to $100,000 per depositor—would be transferred under modified payout, but only part of the uninsured deposits.[11] The FDIC would hold part of the uninsured deposits in reserve to cover uninsured depositors' share of the failed bank's losses.

An FDIC test of this plan was suspended shortly before the deposit run at Continental Illinois and the agency resumed its use of the deposit assumption approach. The modified payout plan, by placing large deposits at risk, contained a serious weakness because it gave some depositors cause to participate in bank runs. Continental's problems highlighted this flaw and demonstrated that the FDIC's and Federal Reserve's commitment to the banking system's stability necessarily was greater than their desire to place depositors at risk.[12]

Thus deregulation and disinflation created visible problems that have led to a reevaluation of who is responsible for bank safety. This reevaluation has uncovered a major conflict in the system: the government does not want to tell banks how to go about their business, but at the same time is at risk with respect to banking decisions. The conflict is especially significant at big institutions as illustrated by the protection regulators extended to all liabilities at Continental Illinois and the widespread belief that other large problem banks will receive similar protection in the future. Before we discuss proposed solutions to this problem, let's look at the basic question: What should our system of protecting bank safety accomplish?

Who Assumes Responsibility?

In our market economy, the government should intervene in the economy only when the market fails to account for externalities and then only to the extent necessary. The government does have a role in protecting the banking system to avoid widespread financial crises and monetary contractions. Banking-sector problems can trigger recessions or even depressions when they sharply reduce the public's monetary assets. Thus, while individual bank failures may not lead to a financial crisis, situations that cause many institutions to fail or the

public's confidence in the banking system to wane may. This economic phenomenon, called an "externality," suggests why the government has a vital stake in preserving the stability of the banking system.[13]

"There is a renewed recognition that federal protections have a price—that a government that visibly bears much of the ultimate risk will insist on its responsibilities to exercise strong supervision and regulation."

The most important criterion in weighing proposals for reforming the safety and soundness system is that any change must protect the stability of the money supply by preventing runs on one bank from growing into a general run on the banking system. Our experience prior to creation of the FDIC demonstrates that a banking system collapse and the accompanying drop in the money supply impose unacceptably high costs on the rest of the economy. A run on a single failing institution poses no serious problems to the financial system, but, as the Ohio and Maryland problems demonstrate, depositor confidence in solvent institutions must be maintained if the banking system is to continue.[14] Preventing runs on the system seems especially difficult to deal with when the problem institution is a giant bank. Large bank failures can affect directly other banks through its loans owed to smaller financial institutions.[15] Financial difficulties at large institutions receive wide publicity and can affect other banks by reducing depositors' confidence toward the entire banking system.

The second criterion for considering any proposal is that it must maintain the banking system's dominant position in providing transaction accounts. No proposal to protect banks from runs and excessive risk-taking can protect the money supply if it drives most transaction accounts out of the banking system. The danger is that the costs of regulation will become so

great that insured depositories will find themselves unable to compete effectively with unregulated competitors. We already have seen an example of this when restrictions on bank and thrift deposit rates prompted depositors to shift their funds to money market mutual funds to receive a market rate of return. This shifting of deposits weakened the government's ability to protect the money supply because money market mutual funds, which are not government insured, do not have direct access to the Fed's discount window. One way of looking at the problem is to view the protection of banks and thrifts as providing value for their franchise and to think of regulation as a tax on them. If federally insured depository institutions are to maintain their dominant position as providers of transactions deposits, the tax imposed by regulation cannot be significantly greater than the value of the subsidies banks receive.

A third criterion in judging proposals for change is that the government's responsibility must be commensurate to its risk liability. Any plan that does not meet this criterion permits banks to play a one-sided game. It allows banks to invest in high-risk, high-return investments, knowing they can keep the earnings if the investments succeed, while the government will bear much of the loss if the investments cause the banks to fail. As Federal Reserve Chairman Paul A. Volcker recently stated "there is a renewed recognition that federal protections have a price—that a government that visibly bears much of the ultimate risk will insist on its responsibilities to exercise strong supervision and regulation."

Although it seems a common-sense principle that regulators must have responsibility proportionate to risk, the concept has worrisome implications. Suppose a class of banks is too large to be allowed to fail and the government, to protect the financial system, must assume substantially all the risk ordinarily borne by creditors. If the government must assume primary responsibility for the safety of such a group of banks the regulators would have to play a larger role in determining acceptable risks. We would need to reverse some of former Chairman Burns' regulatory reluctance to interfere in bankers' judgments. Clearly, we in the regulatory agencies need to reconsider the implications of defining certain banks as too large to fail. Furthermore, those bankers hoping to grow too large to fail need to ask

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themselves if they are prepared to pay the price for such protection.

A fourth criterion is that the bank safety and soundness system should promote maximum efficiency in the financial system consistent with the first three criteria. The banking system's efficiency affects the rest of the economy significantly. Business expansion is influenced by the cost and availability of credit, which in turn depends on banks' operations, the spreads they charge, and the ease with which credit flows to the projects with the highest return. An efficient banking system can contribute importantly to improving our standard of living.

These four criteria form the basis on which reform proposals should be evaluated. Let's examine a final question: How should responsibility for bank safety be apportioned?

Private-Sector Constraints

In the near future, bank supervisory agencies will assume significantly more responsibility, which means stricter regulation. The agencies' renewed emphasis on safety already can be seen in the adoption of numerical capital guidelines, regulators' prompt and assertive action responding to problems at two major banks, and the recent rejection of some bank holding company applications.[16] Many people are speculating that the Reagan administration soon will propose a significant increase in capital adequacy standards calling for banks to maintain a 9 or 10 percent capital-to-assets ratio, with capital defined to include both equity capital and subordinated debt. The possibility also exists that the proposal for risk-related deposit insurance premiums will tier the rates themselves, rather than just the rebates as originally proposed by the FDIC.

Rather than examining the merits of these specific proposals, consider the potential candidates for assuming greater responsibility for bank riskiness. Government must play at least a minimal role in assuming risk and regulating banks because the free market does not price the impact of bank failure on the money supply. But let's focus our attention on candidates from the private sector. Everyone associated with banks has a moral obligation to discourage the institutions from taking excessive risks. However, as a practical matter, the only private individuals who can be counted upon to do
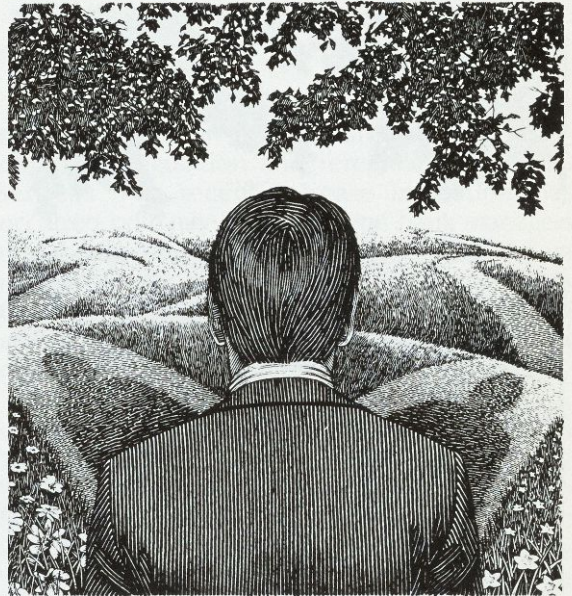
something about a bank's safety are those with an economic stake in its financial condition.

The first parties to assume responsibility for a bank's risk are its owners. Equity holders already stand to lose their entire investment should their bank fail, so the only way we can increase the risk they bear is to require banks to issue more equity. Bank owners cannot withdraw their capital when the bank has financial problems. Indeed, one advantage of bank equity is that losses can be written off against equity without forcing a bank to fail. There are three ways to force bank owners to assume more risk: increase equity capital adequacy standards, impose double liability on shareholders or force problem banks to close before they exhaust their economic net worth.

Unfortunately, requiring increased equity and imposing double liability have their disadvantages. First, the banks' ability to compete may be reduced by mandating increases in equity capital. If banks are required to hold more equity than unregulated competitors, and if equity is more expensive than debt, then capital requirements place banks at a competitive disadvantage with other financial firms. A
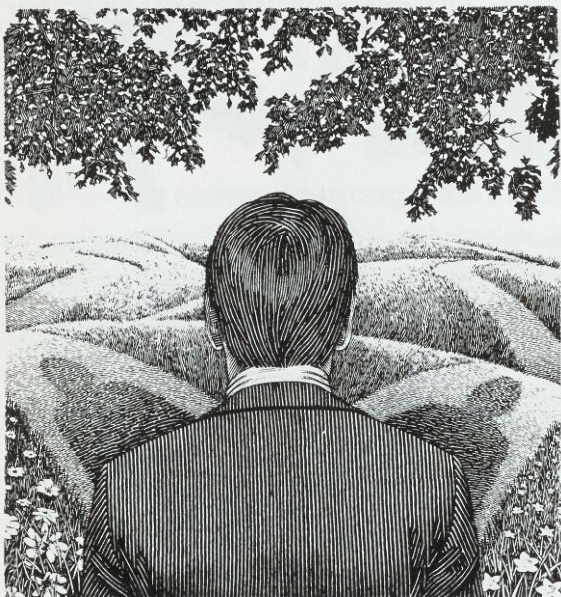
reduced ability to compete could weaken banks' money supply franchise.

A more serious problem with relying on owners is that they may respond by pressuring their banks to take more risks. Bank owners' investment falls to a zero but not negative value when an institution fails, while they also reap the rewards when it collects higher returns from taking more risks. Depending on their aversion to risk, the owners might respond to higher capital standards by directing their bank to take greater risks seeking to maintain its return on equity. This is especially tempting to owners if the guidelines imposed on individual banks are unrelated to their risk exposure, as is currently the case.[17] Thus more stringent bank capital adequacy guidelines may not reduce the government's exposure to bank failure, though it would provide the FDIC with more of a cushion. Imposing double liability would create an additional incentive for stockholders to monitor their bank, but it would make issuing new stock difficult.

Forcing banks to close before they exhaust their economic net worth would protect the government because all the losses would be absorbed by the bank's owners. Judging from the FSLIC's experience with the thrift industry, economic net worth should be used rather than accounting values.[18] Quite a few thrifts had negative net worth because many of their mortgages were yielding below-market interest rates, yet they showed a positive accounting value because no revaluation occurs in their accounting methodology. Unfortunately, economic net worth can be hard to measure, especially in evaluating certain credit risks and values of nonmarketable assets. In addition, day to day volatility in the market prices of a bank's assets' could make one-day measures of net worth misleading. Furthermore, political pressure could make it difficult for regulatory agencies to force banks to recognize losses on certain loans. Thus, while there is some merit in forcing banks to close before they exhaust their economic net worth, we cannot rely on such policies to solve the problem of bank risk-taking.

Other potential candidates for assuming responsibility for bank risk are its managers and directors. Both groups are already at risk. Should their bank fail, the FDIC routinely requests their resignations no matter how the agency handles the failure. Requiring a bank to hire different managers and directors may not necessarily make it safer, but imposing heavier penalties on those groups in the event of a failure, could have an effect. Certainly, any manager or director who violates existing laws should be prosecuted. The large pensions that some former officers of Continental Illinois obtained when they left the bank a few months prior to its demise are also troubling. There are limits, however, to how far we can go in punishing law-abiding managers and directors, who could feel pressured by the threat of excessive penalties to leave the banking system altogether.

Bank depositors, whose savings are now protected, are another group that potentially might impose discipline. We might reduce the protection if bank runs' threat to the money supply were eliminated. Theoretically, the danger to the money supply could be removed if the Federal Reserve provided liquidity to the banking system through the discount window or open-market operations during bank runs.[19] Indeed, the Federal Reserve System was created prior to the FDIC in part to prevent runs on one bank from causing the banking system to collapse. Although the possibility of greater reliance on depositors deserves additional study, banks,

thrifts, and their depositors have made many decisions based on a good faith reliance on deposit insurance. Some banks and thrifts now are experiencing serious financial problems because of disinflation. Pulling the supports abruptly from under these banks and thrifts would be unfair.

As an alternative to requiring depositors to bear the risk of bank failure, we could rely on private deposit insurance. However, the problems of the Ohio and Maryland private insurance funds demonstrate that confidence in private insurers can be as fragile as confidence in banks. These recent difficulties also demonstrate that even solid organizations can experience runs when the public loses confidence in insurance quality. Furthermore, private insurers lack the financial capacity to cover the banking system's potential risks. The FDIC estimates that domestic insurance could not insure more than $1 or $2 billion in deposits per bank.[20] Given this limited capacity, reliance on private deposit insurance seems impractical.

The last parties we could turn to are the bank's uninsured, nondeposit creditors, especially holders of its subordinated debt. Subordinated debtholders cannot withdraw from the bank at the first sign of trouble; the institution is not obligated to redeem their notes before maturity. Reliance on subordinated debt does not necessarily place banks at a disadvantage with their unregulated competitors. These competitors by definition cannot issue liabilities insured by the federal government. Subordinated debtholders have an incentive to analyze bank riskiness before they buy the debt, because they cannot share in the rewards from investment in high-risk, high-return assets. Thus subordinated debtholders appear to be the most likely private-sector candidate for assuming additional risk. Further reliance on subordinated debt is restricted primarily by a bank's ability to issue additional debt. The banking system may find only a limited number of investors interested in subordinated debt. Furthermore, smaller banks may encounter problems selling a significant amount of such debt. Their market is confined because they lack a national following and the fixed costs of issuing subordinated debt are too high. Perhaps this problem could be alleviated by investment bankers combining small banks' subordinated debt into pools as is currently done with home mortgages and automobile loans. Thus, while the holder of subordinated debt appears to be the best candidate for additional market discipline, the amount of such debt we can require banks to issue may be small.[21]

Conclusion

Evidence disputes the argument that the recent increase in bank failures justifies abandoning deregulation and reregulating financial services. The recent increase in failures has occurred primarily because some bank managers mistakenly bet that inflation rates would remain high. However, the current regulatory system is flawed because insufficient incentive exists to encourage private parties to discipline bank risk-taking.

Total reliance on private-sector discipline is unlikely given the importance of maintaining a stable banking system. The government is likely to continue bearing part of the risks of bank failure to prevent destabilizing runs on the system. Government risk-bearing necessarily will continue bringing with it government regulation to limit the risks borne. This regulation must not be so strict, however, that it prevents banks from competing successfully with nonbank financial firms. Furthermore, regulation beyond that necessary to protect the banking system and limit the risk borne by the government harms the entire economy by reducing the financial system's efficiency.

Several measures can be taken to induce greater private concern for bank safety. Closing banks before they exhaust their economic net worth is one of three possible ways to secure additional discipline. Increased penalties for the managers and directors of failed banks offer another potential source of discipline. And requiring banks to issue additional subordinated debt would be an excellent way of increasing private-sector discipline. However, these three steps are insufficient to ensure that the private sector assumes full responsibility for bank safety, at least not in the short run. Thus, we probably need to look to the regulatory agencies to assume greater responsibility.

This is a difficult issue with no easy answers. Something must be done to establish a better relationship between the risk various parties bear and the responsibility they assume for controlling risk. In the short run, we appear headed toward higher capital adequacy standards, increased supervision, and possibly risk-related premiums.

My message to those who object to the changes is simple: if you do not want the government to assume more responsibility for maintaining bank safety, then you must find someone in the private sector to step forward and assume it. The federal government no longer can afford to bear most of the risks unless it assumes more of the responsibility.

NOTES

[1] See Table 122 of the 1983 Annual Report of the Federal Deposit Insurance Corporation for a listing of the number of bank failures by year.

[2] The narrowing in small bank interest margins is noted by Larry D. Wall (1985).

[3] See Robert E. Lucas and Thomas J. Sargent (1979) for a discussion of the trade-off between inflation and unemployment in a rational expectations model. Even if we do not accept rational expectations in its purest form, we can no longer deny that individuals' expectations help determine the direction of the economy.

[4] See Jared Taylor (1984) for a discussion of the petroleum industry and bank loans to that industry.

[5] Keith Keplinger and colleagues (1985) examine the condition of farmers and agricultural banks with special emphasis on the Southeast.

[6] Henry S. Terrell (1984) examines bank loans to less developed countries.

[7] Andrew Alber and Richard Ringer (1984) discuss the assistance provided to Continental Illinois by the FDIC and Federal Reserve.

[8] The problems at Empire, discussed by David Stahl (1984), cost the FSLIC an estimated $295 million. National Thrift News (1985) reports on allegations that the officers of Association were "looting" the association. Some former officers are being sued by the FSLIC and by the association's shareholders. The thrift's estimated net worth at closure was -$125 million. The federal insurance agencies, recognizing the problems in deposit insurance, have made recommendations for change. Their reports to Congress are titled Federal Deposit Insurance Corporation (1983a), Federal Home Loan Bank Board (1983) and National Credit Union Association (1983).

[9] This policy did not begin with Continental Illinois. See Joseph F. Sinkey, Jr. (1979) for a discussion of the FDIC's handling of failed banks.

[10] Eugenie D. Short (1985) provides a recent review of the FDIC's handling of failed banks.

[11] An early application of this plan is discussed by Jay Rosenstein (1984).

[12] Stanley C. Silverberg (1985) discusses the issues considered by the FDIC in its handling of Continental Illinois.

[13] The effect of bank failures on the money supply from 1867-1960 is discussed by Milton Friedman and Anna J. Schwartz (1963). Arthur J. Rolnick and Warren E. Webber (1984) examine data from the period 1837-1863 and contend that the instability of laissez-faire banking has been overstated.

[14] See G. David Wallace and others (1985) and Blanca Riemer and others (1985) for a discussion of the runs in Ohio and Maryland and their aftershocks.

[15] Bevis Longstreth (1983) discusses the importance of preventing large bank failures from causing financial losses at other financial institutions.

[16] See Blanca Riemer (1984) for a discussion of the Comptroller's action. An example of a recent denial by the Board is Security Bank; the Board's opinion can be found in the April 1981 Federal Reserve Bulletin, pp. 246-7.

[17] See Michael Koehn and Anthony M. Santomero (1980) for an analytical discussion of the problem of requiring additional capital and Maggie McComas (1985) for a less technical discussion.

[18] The merits of market value accounting are discussed by Edward J. Kane (1985) and George G. Kaufman (1985).

[19] See Thomas M. Humphrey and Robert E. Keleher (1984) for a discussion of the role of a central bank as the lender of last resort.

[20] See Federal Deposit Insurance Corporation (1983a).

[21] Paul M. Horvitz (1984) and Larry D. Wall (1984) discuss the merits of requiring banks to issue additional subordinated debt.

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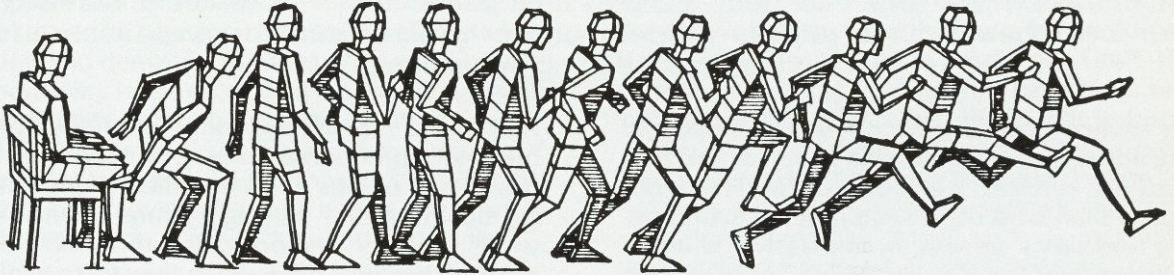
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Why Are Business and Profession

Bobbie H. McCrackin

Expansion of the business services industry has important implications for the Southeast. This Atlanta Fed study disputes an argument that the apparent increase in services jobs and output reflects no more than the transfer of certain occupations out of goods-producing industries.

For several decades, the number of firms and individual specialists offering business and professional services has been expanding more rapidly than most other sectors of the economy. The industry's growth is impressive whether measured by the increase in jobs or in output. From tax consultation to building maintenance, this sector has outdistanced not only the industries supplying consumer and public services but other sectors of the economy as well.

The growth of business and professional services has important implications for the Southeast, though only Florida and Louisiana claim an above-average share of what we call these "producer services." The impact on the region is suggested by the fact that every southeastern state except one is adding business and professional service jobs faster than the nation as a whole.

Recently the growth of the service sector has been interpreted as an indication of a structural

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The author is an economist on the Research Department's regional team.

shift in the nation's economy. Service employment and production have grown even as the proportion of jobs in such traditional industries as manufacturing and agriculture shrank. Yet, while statistics demonstrating this shift seem clear, researchers differ when they try to explain the reasons for it. In this article we evaluate the various explanations for the growth of producer service employment and suggest a possible explanation.

Some economists argue that the apparent growth of producer services reflects nothing more than a transfer of certain occupations, such as lawyers and accountants, out of the goods-producing sector into separate service businesses that cater to producers. Other analysts link the growth of producer services to demand stimuli such as rising national incomes and increasing government regulations, and to supply factors such as lagging productivity and a swelling labor supply as a larger number of women and the Baby Boom generation have been absorbed into the work force.

We analyze these explanations and offer an additional explanation borrowed from analysts

l Services Growing So Rapidly?

of the medical services industry. This explanation centers on the imbalance of information between suppliers and consumers in the producer services market and its impact on the relationship between supply and demand. Our research suggests lagging productivity in the sector and information-related peculiarities that inhibit productivity improvements better explain the rapid expansion of producer services jobs and the gap between the sector's employment growth and its increases in output than do other factors and hypotheses.

Why Are Business Services Important?

A structural shift in our economy is apparent from the fact that service-sector employment grew 46 percent from 1953 to 1982, while employment in the goods sector—manufacturing, agriculture, and mining—fell 8 percent. The difference between output of goods production and service production is narrowing more slowly, though. To understand better why the shift to services has been occurring—but at disparate rates for jobs and output—look at various components of the service sector individually. The service sector is a residual category that encompasses diverse activities not easily classified elsewhere but which often lack similarity among themselves. Thus growth in different services could be propelled by different dynamics. For example, the widespread availability of third-party payments, such as Medicare and employer-provided insurance plans, certainly has stimulated demand for health care and helped fuel the medical industry's growth to more than 10 percent of the gross national product or GNP. The growth of medical services may have been propelled by price effects peculiar to that industry, effects that muted consumers' sensitivity to the true price of products they were purchasing.[1] In contrast, travel services may be growing because of factors other than price, such as increasing personal income levels. So examining the growth in services on a disaggregated basis makes sense. For several reasons, we focus on what we term producer services.

Producer services are growing faster than personal or social services. From 1977 to 1982, receipts for business and professional services grew by more than 100 percent, while the overall services industry grew 89 percent and retail sales and manufactured shipments grew less than 50 percent. Other components of miscellaneous services, such as the health care, entertainment, hotel, and repair categories, grew more slowly than the service industry but still faster than manufacturing. Receipts of some entertainment and personal services declined or grew more slowly than manufacturing.[2]

Employment also has grown rapidly. Producer service jobs constituted 14 percent of all new jobs created nationally from 1972 to 1982, twice
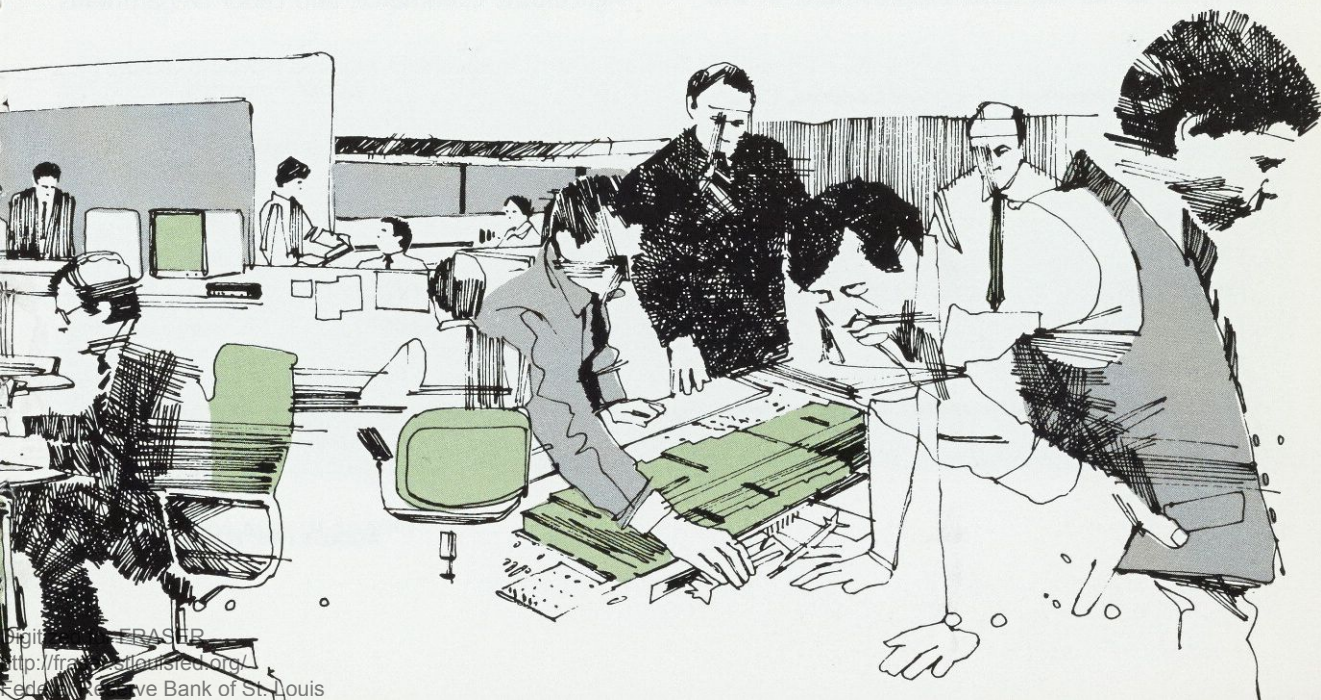
as large as the category's share of total employment in 1982. Of course, 1982 was a recession year, and manufacturing's share of employment was low as a result. Even during the subsequent three years of recovery and expansion, though, business services have created one in eight new jobs, according to the Bureau of Labor Statistics.[3] In view of producer services' outstanding growth record, this sector seems to be an interesting one on which to focus.

Knowing what propels the growth of producer services can help us understand how long these industries are likely to be a source of growth in the Southeast and what, if anything, can be done to promote their expansion, especially in regions needing new jobs.

What Are Producer Services?

We use the term producer services to cover business, legal, and other professional services. According to the classification system of the U.S. Department of Labor, business services include advertising, public relations, building maintenance, personnel services, computer and data processing, management consulting, protection, equipment leasing, and courier services. About 3.2 million people were employed by these industries nationally in 1982, 371,000 of them in the Southeast (Table 1). Professional services include architecture, engineering, accounting, and research; this is the second largest component, with a work force of 1.1 million nationally and 119,000 in the Southeast. Legal is the smallest component of producer services, with 581,000 employees nationally and 71,000 in the Southeast. Business, legal, and professional services constitute almost 7 percent of all nonfarm employment in the United States, a share as large or larger than those of financial services, construction, or transportation and communication.

Some economists include other intermediate or infrastructural services such as finance, trade, and transportation and communication in discussing producer services, but we excluded them in the final analysis because their growth patterns proved to be lower than that of business and professional services (Table 2). Rapid expansion of these intermediate services was more significant when the economy was changing from a primarily agrarian to an industrial basis, from household self-sufficiency and local markets to a national market economy in which producers and consumers were bifurcated so that establishing a distributive network became critical. Now the increasing complexity of organizations and markets seems to entail expansion of business and professional services such as marketing, accounting, planning, and administration more than the growth of other intermediate services. Therefore, we focus on the narrower categories of business, legal, and professional services and have adopted the term "producer services" to refer to these three.

However, even the narrow taxonomy in this article is less than perfect. Many so-called business services do not serve businesses exclusively. Over half of lawyers' receipts derive from consumers rather than businesses, according to estimates. On the other hand, hotels, usually considered personal services, increasingly depend on business travelers. Even much government activity represents a form of producer services, especially research conducted by the Agriculture, Commerce, and Labor Departments.

Table 1. Employment in Producer Services, 1982

| | United States | | Southeast | |
	thousands	percent*	thousands	percent*
Business	3,241	4.4	371	4.0
Legal	581	0.8	71	0.8
Professional	1,090	1.5	119	1.3
Total Producer	4,912	6.6	561	6.1

*Total Nonfarm Employment

Source: Computed by Federal Reserve Bank of Atlanta from data in U.S. Department of Commerce, *County Business Patterns*, 1982, Table 1B.

Which Services Are Growing Most Rapidly?

Nationally, as Table 2 shows, legal services grew the fastest between 1972 to 1982.[4] Employment in professional services grew the least rapidly of the three major producer services, although engineering and architectural firms expanded almost as rapidly as legal firms. Personnel services are the fastest growing component of business services. Besides engineering and architecture, other subsectors that outpaced the norm for producer services include testing labs and mailing and reproduction services.

Except for Mississippi, where legal services grew less rapidly than business services, the pattern in the Southeast is similar to that of the nation with respect to the three major areas (see Table 3). However, the subsectors that grew faster than the producer service average in the Southeast were temporary help, mailing and reproduction, protection, equipment leasing, and photo laboratories (figures not shown). Computer and data processing services probably grew rapidly as well, but comparable data for 1972 are unavailable because the category is new.

This pattern has changed over the postwar period (Table 2). Business services expanded the fastest in the 1960s, both nationally and regionally. In the 1950s professional services ranked first in growth. Despite internally shifting patterns, employment in business and professional services as a whole has outdistanced growth in other intermediate services and private employment generally. Producer services have grown about three times as fast as the private economy in the

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Table 2. Producer Services Employment Growth, 1953 to 1982
(percent increase)

	United States			Southeast		
	1953 to 62*	1962 to 72	1972 to 82	1953 to 62*	1962 to 72	1972 to 82
Total Producer Services	79	90	92	115	161	106
Business	65	103	94	116	188	102
Legal	42	70	115	73	98	142
Other Professions	155	69	76	148	132	99
Engineering & Architecture	34	53	113	36	129	96
Accounting	N/A	94	66	N/A	145	84
Other Intermediate Services						
Wholesale Trade	14	26	28	24	48	37
Trucking & Warehousing	21	29	12	40	52	28
Finance, Insurance & Real Estate	32	44	39	62	69	47
Total Private Employment	9	33	28	24	60	39

*1952 data not available
N/A — Data not available

Source: Computed by Federal Reserve Bank of Atlanta from data in U.S. Department of Commerce, *County Business Patterns*, 1953, Table 2 (U.S.) and Table 1 (various states); 1962, Table 1A (U.S.) and Table 1 (various states): 1972 and 1982, Table 1B (U.S. and various states).

Table 3. Producer Services Employment Growth by Sixth District State, 1972-1982
(percent change)

	Business	Legal	Other Professions	Producer Services	Total Private Employment
Alabama	96	121	77	94	25
Florida	105	156	114	113	58
Georgia	102	130	89	101	30
Louisiana	132	151	119	131	56
Mississippi	116	114	76	104	22
Tennessee	70	125	81	75	21
United States	94	115	76	92	28

Source: Computed by Federal Reserve Bank of Atlanta from data in U.S. Department of Commerce *County Business Patterns*, 1972 and 1982, Table 1B (U.S. and various states).

postwar period, almost doubling each decade nationally and more than doubling in the Southeast. In fact, during the 1950s, when the Southeast suffered slow growth or even declining employment and outmigration, business services grew five times as fast as employment overall.

Of course, making snapshot comparisons of two points in time and inferring trends from them is always risky. In the present case, measuring the growth of producer services from 1972 to 1982 may result in an upward bias relative to manufacturing because the period began in an expansion and ended in a deep recessionary trough, which would have had a greater negative impact on industrial jobs; in contrast, the growth of business and professional services probably is understated from 1962 to 1972 because the beginning point marked the early stages of a recovery and ended in an expansion. Little cyclical bias seems likely in the 1953 to 1962 period.

In absolute terms, business services created by far the most new jobs, followed by professional and legal services (Table 4). Nationally, business services added nearly 1.6 million new jobs, compared to 311,000 in legal services and 469,000 in engineering, architecture, accounting, and other professional services. This growth pattern holds over time, regionally as well as nationally. As mentioned earlier, producer services have created about one in eight new jobs in recent years, almost twice the category's share of total employment.

Producer services' share grew from less than 2 percent of total private employment in 1953 to almost 7 percent in 1982 (Table 5). In the Southeast the share expanded from a slightly lower level to over 6 percent. Just from 1972 to 1982, the share of producer services in both the Southeast and the nation rose about 2 percentage points. Florida and Louisiana enjoy larger shares of producer services than in the United States as a whole; other southeastern states, by contrast, have a lower than national average proportion (Chart 1).

Occupational data tell a similar story. In addition to counting employment in various industries, or Standard Industrial Classification (SIC) categories, the Department of Labor classifies employees by their occupation, according to a Standard Occupational Classification (SOC) system. This system groups several hundred occupations into broader categories: professional and technical, managerial, sales, administrative support (clerical), skilled and unskilled labor, service, and farming. As a whole, occupations associated with producer services have been growing more rapidly than overall employment (Table 6). Those with the fastest growth rates include lawyers and legal assistants, computer systems analysts and programmers, protective services, accountants, and advertising specialists. However, employment in some producer service occupations—engineers, architects, and engineering technicians—is growing more slowly than overall employment

Table 4. Absolute Increase in Producer Services Employment, 1972-1982 (in thousands)

	United States	Southeast
Business	1,570*	187
Building Maintenance	207	27
Personnel	364	53
Computer & Data Processing	354	38
Protection	163	25
Legal	311	42
Other Professions	469	60
Engineering & Architecture	303	30
Accounting	141	18
Total Producer Services	2,350	289
Total Private Employment	16,281	2,594

*Only components with largest increase are itemized; therefore, total of parts shown do not correspond to total of busiess service category.

Source: Computed by Federal Reserve Bank of Atlanta from data in U.S. Department of Commerce, *County Business Patterns*, 1972 and 1982, Table 1B (U.S. and various states).

Table 5. Relative Growth of Producer Services in the U.S. and Southeast, 1953-1982 (percent of total private employment)

	1953	1962	1972	1982
United States	1.9	3.1	4.4	6.6
Southeast	1.5	2.5	4.1	6.1
Alabama	1.1	1.8	3.0	4.6
Florida	1.8	3.7	5.4	7.3
Georgia	1.2	2.1	3.8	5.9
Louisiana	1.9	2.7	4.5	6.7
Mississippi	1.1	1.5	2.2	3.6
Tennessee	1.4	2.1	3.5	5.0

Source: Computed by the Federal Reserve Bank of Atlanta from in U.S. Department of Commerce data, *see Table 2 for complete listing.*

nationally.[5] The margin of difference between the growth of producer services and total employment, measured in terms of occupation, is much smaller than the gap between producer services' employment growth and total employment, measured in jobs in business and professional service establishments.

Chart 1. Producer Services Share of Private Nonfarm Employment, 1982

Percent

Source: Federal Reserve Bank of Atlanta.

Reasons for Growth

Transfer of Function. This disparity has caused some people to question whether the growth in producer services is real or if it simply represents the transfer of certain types of jobs out of goods-producing businesses into separate service businesses. They speculate that the apparent expansion of producer services is really a spurious change resulting from the transfer of certain occupational functions from manufacturing and other goods-producing companies into specialty firms classified as service industries. The Labor Department's SIC counts all employees working for a company whose primary product is, say, steel production, as manufacturing workers, even though some of them may be nurses, lawyers, accountants, engineers or janitors. These workers would be counted as service-sector employees if they worked for a company whose primary output was, respectively, health care, legal advice, accountancy, engineering or cleaning and maintenance.

The growth of producer services could represent a response to higher labor costs, a way of meeting increasing demand more efficiently or a necessary response to more complex and specialized markets. As wage and benefit costs rise, businesses may find contracting with specialized outside firms to increase flexibility and reduce
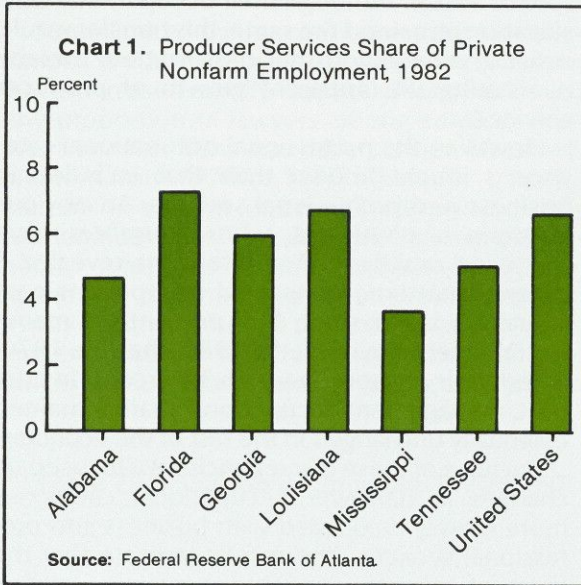
Table 6. Employment Increase in Producer Service Occupations, 1970-1980 (in thousands and percent increase)

	United States		Southeast	
	Actual	Percent	Actual	Percent
Accountants	356	56	55	97
Advertising	44	66	6	106
Building Maintenance	649	31	130	55
Computer Systems Analysts	95	89	8	112
Computer Programmers	153	95	13	120
Economists	31	50	3	66
Engineers and Architects	227	18	37	33
Engineering Technicians	181	25	36	53
Lawyers	226	83	28	114
Legal Assistants	59	339	6	367
Mail (non-public)	63	33	11	77
Protection	257	77	39	99
Public Relations	37	47	4	48
Total Producer Service Occupations	2,375	39	376	64
Total Employment	21,086	28	3,640	42

Source: Computed by Federal Reserve Bank of Atlanta from data in U.S. Department of Commerce, Bureau of the Census, *Detailed Population Characteristics, 1980 Census of Population,* Table 217 (various states) and Table 279 (U.S.).

labor costs in today's competitive markets more desirable. Instead of having one staff lawyer to handle most of a company's legal needs, contracting establishes a relationship with an independent law firm that might have specialists for international issues, environmental regulations, and taxes.[6]

To determine whether such a transfer of function underlies the growth of business services, we compared the occupational composition of major economic sectors in 1970 and 1980. Using data from the decennial census on the occupational composition of various industries and major economic sectors, we examined the main occupational categories previously mentioned and a number of narrower job categories closely associated with producer services. For example, we determined how many lawyers were employed in manufacturing in 1970 and 1980 and how many were employed in the rest of the economy. With this data we were able to compute the proportion of total employment that lawyers comprised in two major sectors of the economy and to examine differences in shares over time. By repeating this for all the major occupations associated with producer services, we were able to analyze whether the share of lawyers is falling in manufacturing and rising in the rest of the economy. If this had proved to be the case, it would have indicated that the growth of producer services partly reflects a transfer of functions outside the goods-producing sector into independent service establishments.

To make this calculation we first identified a number of occupations from the SOC closely associated with business and professional services. Next we adjusted the major occupational categories so those from the 1970 census matched the 1980 census. (Reclassification of a number of narrow occupations and of several major categories prevented outright comparison of data from the two years.) Then we determined the major occupational composition of major economic sectors by determining the percentage of managerial, professional, technical, sales, clerical, services, skilled and unskilled labor, and farm workers in 1970 and 1980. After making this calculation we compared changes over the last decade in the occupational composition of manufacturing—the core of the goods sector—with occupational changes in the composition of the rest of the economy, which, due to the small size of the goods categories included serves as a surrogate for the service sector.

The results show that professionals comprised a smaller share of manufacturing employment at the end of the decade, falling from 7.5 to 6.8 percent (Table 7). In contrast, the share of professionals in the rest of the economy rose slightly, from 13.3 to 13.9 percent.[7] This finding provides limited support for the transfer of function hypothesis. Professionals seem to be leaving the manufacturing sector and entering the larger service sector. Although their occupational classification remained the same, this transfer would result in a new industrial classification, thereby overstating the apparent growth of producer services.

However, the professional occupational category is much broader than that included in business and professional services. An obvious example is physicians, whose numbers have increased rapidly. Other categories revealed a different pattern. Managerial occupations constituted a larger share (8.6 percent) of manufacturing employment in 1980 than in 1970, when their proportion was 6.3 percent. In contrast, management occupations' share remained essentially unchanged in the rest of the economy.

Because of these discrepancies we focused on changes in narrower occupational categories more closely associated with business and professional services. The results indicate that the share of business service occupations, ranging from computer and public relations specialists to guards and cleaning personnel, increased in both the manufacturing sector and in the rest of the economy. For example, commercial cleaners expanded their share of manufacturing employment from 1.4 to 1.6 percent; their share in the rest of the economy rose from 2.8 to 3.0 percent. A similar pattern emerged for professional producer services: such occupations showed the same upward trend in both manufacturing and the economy as a whole. The only discrepancy occurred among engineers, whose share of manufacturing jobs remained constant but whose share of jobs in the rest of the economy fell slightly. Thus our research indicates little support for the argument that the growth of producer services is illusory, attributable to the transfer of certain occupational categories out of the goods sector.

However, the underlying factor cited for the transfer of function hypothesis—the search for economies of scale through larger and more specialized firms—still may propel the growth of producer services. Business and professional

service establishments might be expanding to take advantage of the greater specialization and economies of scale possible within an independent firm. If this is true, rising demand for business and professional services could be met by independent establishments with larger staffs of paraprofessionals and support workers who can, perhaps, offer the equivalent quality and higher volume of services at more competitive prices.

Some limited evidence supports this interpretation. We already have shown that paralegals have increased rapidly (Table 6). Not surprisingly, the proportion of lawyers among employees of legal service firms has fallen, from 51 to 49 percent from 1970 to 1980 (Table 8). A similar pattern is evident in other business and professional services. The share of engineers, architects, computer systems analysts, and programmers declined slightly in their respective types of firms. Although these occupational categories constitute less than two-thirds of all producer services occupations, making conclusions

somewhat tenuous, the results are strengthened by the similar pattern for producer services as a whole. Support occupations such as managers, technical personnel, sales, and service workers constitute a growing share of producer services employment. Managerial occupations' share of producer services, for example, rose from 17 to 19 percent. The share of professional occupations declined slightly.

What does this mean? While the evidence is limited, the growth of employment in producer services establishments seems to reflect more than the incorporation of functions and occupations formerly performed within goods-producing firms. Our analysis suggests instead that many producer services firms are developing a more complex occupational composition, relying more on various support functions. This means much of the job growth in business and professional services has occurred not in core occupations such as lawyers, architects, and computer specialists, but in sales, managerial, and service occupations. This analysis clarifies somewhat the

Table 7. Occupational Structure, 1970-1980*

	Manufacturing		Rest of Economy	
	1970	1980	1970	1980
Managerial	6.3	8.6	10.9	10.9
Professional	7.5	6.8	13.3	13.9
Technical	2.5	3.2	2.0	3.0
Sales	2.9	3.1	10.2	12.0
Administrative Support (clerical)	12.4	12.5	18.4	18.6
Service	2.3	2.3	16.0	16.0
Skilled Labor	19.7	18.8	11.0	11.2
Semi & Unskilled Labor	47.7	45.1	12.9	10.5
Farming	0.0	0.5	6.0	3.6
Business Services				
Computer	0.7	0.8	0.4	0.5
Public Relations	0.1	0.1	0.1	0.1
Protection	0.4	0.4	0.4	0.6
Commercial Cleaning	1.4	1.6	2.8	3.0
Professional Occupations				
Lawyers	0.0	0.1	0.4	0.6
Accountants	0.8	0.9	1.0	1.1
Engineers	3.3	3.3	1.0	0.9
Architects	0.0	0.0	0.1	0.1

*Figures indicate percent of total employment in sector comprised of various occupational categories.

Source: Computed by Federal Reserve Bank of Atlanta from data in U.S. Department of Commerce, Bureau of the Census, *Occupation by Industry, 1980 Census of Population* (Table 4) and *1970 Census of Population* (Table 8).

nature of producer services growth, but does little to help us understand what specific economic factors have propelled the growth of such services in the first place. So let us consider other explanations of this phenomenon.

Growth of Income. Another explanation offered for the sector's growth pertains to the income elasticity of demand for services.[8] According to this argument when the nation's real per capita income grows a larger portion of consumption goes to services, just as the composition of an individual household budget shifts toward nonessential items when family income increases. At any given price, the argument continues, the demand for producer services is likely to rise faster than the demand for goods in response to increases in real GNP.

Of course, this apparent relationship between GNP growth and service consumption could be related to other factors such as the increasing number of working women. As a greater share of women join the work force, aggregate and average household income tends to increase. Growth in service consumption, particularly of consumer

services, might reflect changes in the work and leisure preference of households. Particularly for families with working women, the costs of forgoing limited leisure to prepare meals and to perform other household duties seem greater than the costs of paying higher prices for services such as restaurants, laundries, and cleaning. Demand for day-care services also rises. One researcher has estimated that rising female labor force participation accounts for fully one-fourth of the growth in the service sector s share of gross domestic product since 1950.[9] This argument actually supports rather than contradicts the view that services grow in response to per capita income growth.

Others who have studied the growth of various services reject the hypothesis. One serious objection is methodological: most tests of the income elasticity hypothesis have been based on cross-sectional data, comparing the purchases of services in countries with different income and, presumably, different developmental levels at the same point in time. These comparisons, used to infer longitudinal trends in individual countries, ignore many potentially important variables that also change over time, such as family size, relative prices, and consumer preferences.[10] Services may comprise a smaller per capita share of aggregate expenditures in poor economies than in rich ones because the relative prices of services are lower in the former, and the price elasticity of services is greater than unity.[11] Service prices tend to rise relative to commodity prices as national income grows because the development process seems to increase productivity more in goods than in services, widening the difference between service and commodity prices.

Another fallacy of the income elasticity hypothesis is that the shift from goods to services parallels the well-established shift of household budgets from necessities to luxuries. However, luxuries can be satisfied by goods as well as by services. In 1975, musical expenditures on record players and radios were about six times as great as purchases of music through theater, opera, and other purely service vehicles.[12]

This explanation, known as the Clark-Fisher hypothesis, has not been widely applied to producer services since it is based on household income behavior and seems to apply more to consumer services. Several researchers who have applied this hypothesis to producer services (including finance, insurance, and real estate) in

Table 8. Core Occupations' Share of Producer Services, 1970 and 1980
(percent of total SIC employment by occupation)

	1970	1980
Advertising	17.8	18.4
Building Services	62.6	63.6
Computer Services	26.4	25.3
Protective Services	59.0	65.0
Legal Services	51.3	49.3
Engineering & Architecture	38.8	37.1
Accounting	52.8	54.2
Producer Services		
managerial	17.4	19.2
professional	22.5	22.0
technical	6.6	7.3
sales	3.5	4.0
administrative support		
clerical	31.5	28.5
service	8.7	11.4
skilled labor	3.7	3.0
semi & unskilled labor	6.1	4.6
farming	0.1	0.1

Source: Computed by Federal Reserve Bank of Atlanta from data in U.S. Department of Commerce, Bureau of the Census, *Occupation by Industry, 1980 Census of Population* and *1970 Census of Population.*

the Tennessee Valley found these services were underrepresented and declining relative to other sectors of the local economy even though the region's per capita personal income gap vis-a-vis the nation had narrowed substantially from 1959 to 1979.[13]

Regulation. Supposedly, another factor in the rapid growth of producer services is government regulation. Many people feel this exogenous factor shifts the demand curve for services of lawyers, economists, engineers, and other consultants to the right; that is, it increases the demand for services at any price, especially since the regulatory expansion of the 1970s was industry-wide, not specific as in the past. Older regulatory agencies such as the Food and Drug Administration affected particular types of businesses. In contrast, the Occupational Safety and Health Administration, the Consumer Products Safety Commission, the Equal Employment Opportunity Commission, and, to a lesser extent, the Environmental Protection Agency, increased the regulatory burden of a wide spectrum of businesses throughout the economy. Even the more recent trend toward deregulation of certain industries such as finance, transportation, and communication does not necessarily reverse this regulatory burden immediately because it has affected only certain industries. Even in these the services of lawyers, accountants, and others may be needed for several years to assist in the transition to a deregulated environment. Finally, demand induced by regulation tends to be price inelastic since tax and regulatory changes are compulsory and costs associated with compliance are tax-deductible.

Despite the intuitive appeal of the regulatory impact hypothesis, it contains theoretical, measurement, and empirical weaknesses. First, regulation's effect can be ambiguous; clarifying legislation could remove uncertainty concerning regulations, reducing the demand for lawyers and other consultants. Second, even if regulation helps increase demand for certain types of producer services, it does not explain logically why business services such as protection and cleaning also have been growing so rapidly. Third, testing the regulatory hypothesis poses severe measurement problems. How can researchers discern quantitative differences in the regulatory burden over time? Relying on measures such as federal case loads and the budgets of regulatory agencies, as some research has done, ignores the possibility that lawyers may be handling many regulatory disputes out of court or that agency budgets may reflect historical momentum and not the current burden on those regulated. Fourth, empirical support is lacking for this hypothesis. GNP growth, rather than regulation, was found to be the main factor swelling the number of lawyers during the 1960s to early 1970s and in an earlier era when this profession grew rapidly, the 1920s.[14]

Demographics—More Working Women. One explanation for the service sector's growth that might be applied to producer services is based on the increased proportion of women in the work force. As the nation's population surged after World War II, growth in female labor force participation increased the supply of workers at all levels, from professional to unskilled. The result was a shift of the labor supply curve to the right. To the extent that the economy is dual in nature, with legal or cultural barriers to entry into one sector, the other sector would stand to benefit disproportionately from an increased abundance of relatively cheap labor. A case can be made that until recently cultural barriers tended to exclude women from much of the goods sector, especially from industries perceived as dangerous and requiring superior physical strength, such as heavy manufacturing and mining.

Research by the Bureau of Labor Statistics confirms that much of the increase in female labor force participation was absorbed in services rather than the goods sector, although it does not address why this pattern occurred. New employees are much more likely to find jobs in services firms rather than in the goods sector. Seventy-eight percent of all new entrants to the labor force in 1978 entered service businesses; among women the proportion was even higher, 83 percent. Women constitute about three-fourths of new employees and since 1967 have accounted for about 60 percent of the total growth in the labor force. Thus, the implication is clear that workers are not migrating from the goods to the services sector; indeed, a 1977 versus 1978 matched sample of more than 35,000 individuals showed that the tendency was the reverse—those who switched sectors went instead from services to goods.[15]

Employment data for producer services suggest that the growth in the proportion of working women and its effect on the labor supply fail to explain adequately the growth of these industries. Table 9 shows that the percentage of women in producer services grew only slightly faster than the percentage of women in the work force as a

whole from 1970 to 1980 in both the Southeast and the nation. In several subcategories such as temporary personnel, computer and data processing services, and legal services, the share of women actually increased at a slower rate, in relative terms, than that of women in the work force as a whole.

Lagging Productivity. One currently popular explanation of service-sector growth pertains to shifts in the supply of services associated with various levels of technology. As technology advances, the supply curve for most goods shifts to the right, implying at any given price that more goods or higher value goods are available. However, some analysts contend that increasing the supply of services requires equivalent increases in inputs, which tend to be labor rather than capital or resources. For example, the only way a busy lawyer can serve additional clients is by stretching his or her already full schedule and sacrificing scarce leisure time. In contrast, a manufacturer probably can meet increasing demand by investing in modern equipment or more efficient procedures that allow the production of more units in the same number of man-hours. Since, according to this argument,

services generally are less amenable to productivity enhancements than goods production, the quantity of services supplied can be increased only through commensurate or larger increases in price. Because increases in remuneration per unit of work do not necessarily represent equivalent increases in output, this explanation implies that increased demand for producer services may prove inflationary in an economy in which various market restraints, such as minimum wage laws and collective bargaining agreements, prevent labor prices from adjusting to their true productivity level. Proponents of this view attribute services' alleged sluggishness in improving productivity to its labor-intensive nature and typically local markets, which shelter them from foreign competition to a greater extent than found in manufacturing, mining or agriculture.

This hypothesis is difficult to test because productivity measures for many services are lacking. The Bureau of Labor Statistics measures only 16 service industries' productivity, and these represent one-third of the relevant employment. This paucity of service productivity statistics reflects intrinsic measurement problems. For example, a lawyer's output in dollar value is

Table 9. Female Employment in Producer Services, 1970-1980*

| | Percent Female, U.S. | | Percent Female, S.E. | |
	1970	1980	1970	1980
Business Services	40	45	37	43
	(1.05)	(1.05)	(0.96)	(1.00)
Personnel	67	74	69	77
	(1.79)	(1.74)	(1.80)	(1.79)
Computer & Data Processing	36	40	38	39
	(0.95)	(0.93)	(0.99)	(0.91)
Professional Services	35	41	36	42
	(0.92)	(0.96)	(0.93)	(0.98)
Legal	47	51	49	53
	(1.23)	(1.20)	(1.27)	(1.23)
Total Producer Services	38	43	37	43
	(1.00)	(1.01)	(0.95)	(0.99)
Total Employment	38	43	39	43
	(1.00)	(1.00)	(1.00)	(1.00)

*Number in parentheses are index numbers representing ratio of percentage of women in particular industries to percentage of women in work force as a whole; only major components of business and professional services in which index declined are shown.

Source: Computed by Federal Reserve Bank of Atlanta from data in U.S. Department of Commerce, Bureau of Census, *Detailed Population Characteristics, 1980 Census of Population* (Table 226, various states and Tables 285, U.S.).

measured by billings, but billings are determined largely by the time he logs per client. Thus output and input are fundamentally interrelated and confound measurement of productivity gains. To address this question, therefore, many economists compare growth in the service sector's share of employment with its share of GNP in constant dollars. The fact that the latter has grown more slowly than the former is cited as evidence of the sector's lagging productivity. In addition, the fact that the sector's share of current dollar GNP has risen faster than the constant dollar share suggests that this structural shift may have inflationary consequences and may exert a widespread drag on productivity as services employment becomes even more prominent.[16]

More direct but more complex attempts to compare productivity differences found no significant variations between manufacturing and service productivity growth.[17] Some economists point out that productivity in the goods sector slipped in 1973 to 1979, whereas some service industries such as communication enjoyed high productivity growth; therefore, they maintain, the nation's recent productivity lag cannot be blamed primarily on growth of the service sector.[18]

Is producer services' growth record measured in terms of output, similar to that of other services? One way of answering this question is to compare the relative growth of business, legal, and professional service employment with growth in these producer services' share of constant dollar national income. To improve this analysis we chose a measure of producer service employment that adjusts employment rolls to a full-time equivalent basis (since many service industries hire a large share of part-time workers) that incorporates self-employed workers in similar businesses. As Charts 2a-d indicate, the employment share in producer services has been slightly higher than their output share. Professional services in particular seem to enjoy a high level of labor productivity—that is, their share of output is greater than their share of employment. Business services exhibit the opposite pattern, probably because of the large portion of labor-intensive, low-value-added activities such as building maintenance in the business services category.

The critical question is whether growth rates are similar for employment and output or whether jobs have been exceeding output growth. Each of the three major components of producer services shows a distinct pattern. The gap between employment and output has been widening for business services (figure a) since the early 1960s, with employment growth bypassing output growth. This pattern suggests that productivity has been a problem in this component of producer services. Legal services (figure b), in contrast, have maintained a much higher output level, apparently increasing relative to employment over the last two decades. In professional services (figure c), the gap has narrowed in recent years, but at no time has the share of jobs outstripped that of output. Because of the large size of business services, employment growth for the producer services category as a whole began to exceed ouput growth in the early 1970s (figure d).

Lagging productivity, then, seems to account for some of producer services' growth especially in business services. Expanding supply to meet demand has entailed employment increases that at times have outpaced the value of output added. The question remains: why are producer services slower to achieve productivity gains?

Informational Imbalances. A final explanation for the growth of producer services focuses on the interaction and elasticity of both supply and demand related to a unique characteristic of the market for many producer services—the suppliers' virtual monopoly on information. This "knowledge imbalance" is intrinsic to many producer services. As in the health care market, where patients go to doctors because they lack the knowledge to treat their ailments, many producer services' customers seek solutions to problems they cannot solve on their own.[19] These may be legal, engineering, marketing, accounting or other problems. Seeking this type of consultation service is distinct from buying a specified product. Customers are poorly qualified to evaluate what they are purchasing because essentially they are buying information.

In highly competitive markets exemplified today by many financial markets, information about prices and other relevant factors is readily available to all participants. However, in markets such as health care, information on prices, products or services is hardly available to all. Instead, it is concentrated in the hands and minds of suppliers. Customers seeking tax, legal, and other professional services do so because their knowledge of these specialized areas is inadequate. Many services offered by firms in this category have a strong informational content. We need

to think only of computer and data processing services, business consulting, public relations or advertising to see the basic similarity.

In markets where suppliers enjoy an imbalance of information certain distortions are likely from the usual patterns of supply and demand that mark more competitive markets. First, the imbalance in favor of suppliers arises from the former's specialized knowledge, usually acquired during a long training period. Subsequent certification is often necessary for such professionals as architects, lawyers, accountants, and increasingly for financial analysts. This training and licensing in effect erects entry barriers to such businesses, tending to make the supply curve inelastic—that is, unresponsive to changes in the price of the service when it is bid up by higher demand.

When demand increases as the result of exogenous forces such as regulation, the response likely will be felt more in terms of rising prices than of increasing quantity. The fact that most professional schools are nonprofit may mute their response to changing demand for various occupations. Professional codes of ethics such as the legal profession's recently repealed traditional

Chart 2a. Business Services As a Share of Total Employment and National Income
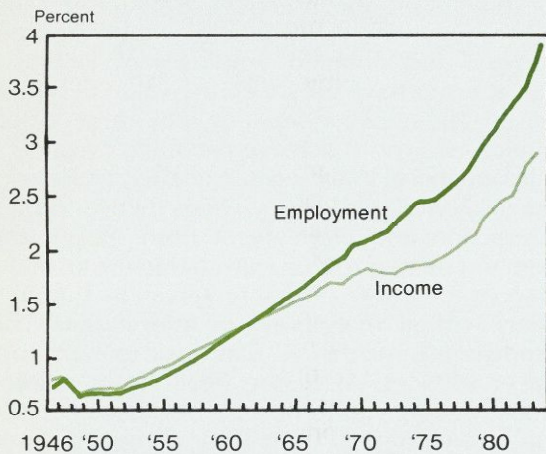
Percent

Employment

Income

1946 '50   '55   '60   '65   '70   '75   '80

b. Legal Services as a Share of Total Employment and National Income

Percent

Income

Employment

1946 '50   '55   '60   '65   '70   '75   '80

c. Professional Services as a Share of Total Employment and National Income

Percent

Income

Employment

1946 '50   '55   '60   '65   '70   '75   '80

d. Total Producer Services as a Share of Total Employment and National Income

Percent

Income

Employment

1946 '50   '55   '60   '65   '70   '75   '80
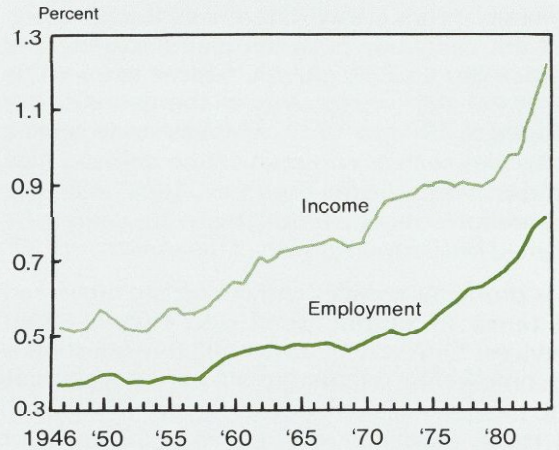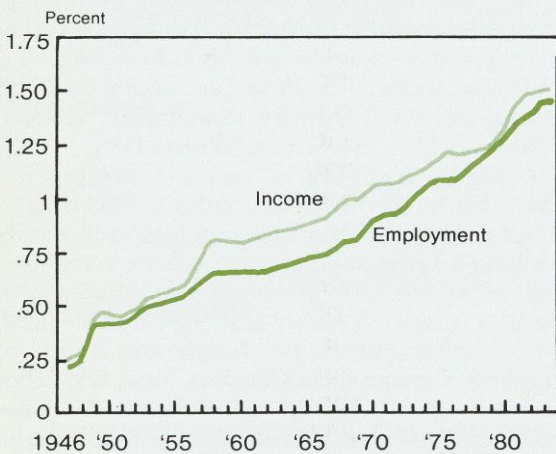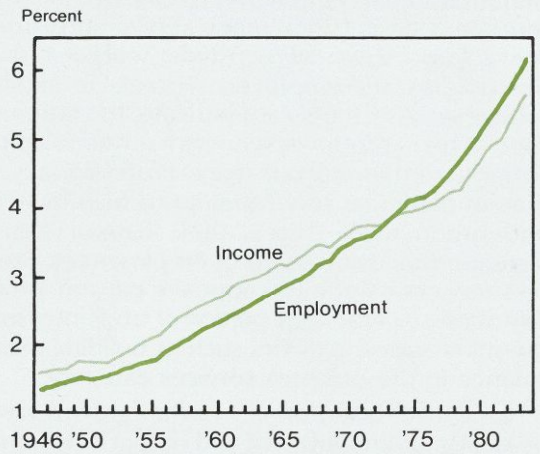
Source: Computed by the Federal Reserve Bank of Atlanta from data in *Supplement to Survey of Current Business*, Table 6.3B (September 1981) and Table 6.11B (July 1981, July 1982, July 1983.)

prohibition of advertising make obtaining price information more difficult. Finally, geographic constraints on markets dull competition further, exacerbating the effects of entry barriers. The existence of 50 state legal codes exemplifies the geographic restraints on many legal services. The human interaction required tends to shield services from foreign competition, while manufacturing and other goods production have proved vulnerable to the increased competitiveness of a global marketplace.

Of course, recently we have seen the proliferation of substitutes such as paralegals, franchised tax consulting services, and microcomputers and specialized software to compute payroll, inventory, and functions that might have been contracted to a data processing or accounting firm. Nonetheless, many of the services sought from independent professional and business service firms still can be obtained only from specialists within such firms or from staff members supervised by such professionals.

Thus, entry barriers arising from long training periods and special licensing restrict competition in such markets. In addition, customers' lack of knowledge regarding both prices and the products they need forces them to abdicate much of the purchase decision to suppliers. The time and money involved in seeking advice from several lawyers, public relations specialists, accountants or business consultants can be considerable although some preliminary comparison of firm reputation may be feasible. Thus the producer service customer often is as dependent on the recommendation of his or her financial analyst as the patient is on a physician; the former may be more vulnerable because suppliers of producer services generally are less constrained by ethical codes than are doctors.

This relationship between supplier and customer means the demand curve for producer services also is less sensitive to price changes than demand for other products because the conditions are set by suppliers, not consumers. In an imperfectly competitive market marked by entry barriers, suppliers can increase their incomes by increasing prices. The supply curve may be backward bending, since often a professional's income can be increased only by devoting more time to work, which can infringe unacceptably on leisure. The opportunity cost of leisure becomes higher because already high income levels afford many recreational alternatives, while the time available for such satisfaction is limited.

This informational imbalance explanation probably has little applicability to many business firms, such as those providing temporary personnel, protection, and building maintenance services. However, it does help to explain the disparate growth of employment and real output in other producer services, clarifying why they have not responded to lagging productivity. Price increases can be passed on to the purchaser because the supplier is making decisions on behalf of the consumer. Hence, according to this hypothesis, there is less incentive for suppliers of many producer services to improve productivity in their operations; they can respond to higher demand simply by adding personnel with less regard to concomitant productivity advances than manufacturers must pay. Economists' challenge at present is to devise ways to test this hypothesis, never subjected to extensive empirical scrutiny even in fields such as health care where it was applied many years ago.

Which of these factors—transfer of function, income growth, regulation, demographics, lagging productivity or imbalance of information—has the greatest validity? All are probably partially correct, with each accounting for some of the growth of producer services. The challenge is to determine the single most important explanation. There seems to be little evidence that the growth of producer services industries merely reflects a shift of such functions outside the goods sector into independent firms: core occupations involved in producer services show the same trend in manufacturing and the rest of the economy. Neither does overall growth in producer services seem to represent a response to an expanding supply of labor, particularly female workers available at lower wages or on a part-time basis. Income growth on its own has not clearly propelled the disproportionate expansion of producer services because empirical evidence is limited and the underlying theory may have serious problems.

Productivity differentials do seem to constitute a significant aspect of producer services' faster growth rate. As our study has suggested, the reason producer services have added less to output than to employment derives from peculiarities of the product being exchanged by many producer services—information. Because of consumers' comparative ignorance regarding

the purchase of many such services, certain distortions in supply and demand relationships make it easier for sellers in this market than in more competitive markets to pass along price increases to consumers and avoid investing in productivity enhancements.

Conclusion

In exploring the growth of the key business and professional components of the service sector, we found these producer services are growing rapidly. What's more, the number of business and professional service jobs in every southeastern state except Tennessee is growing more rapidly than in the nation. Although legal services have been growing at the fastest rate, business services are creating by far the largest number of new jobs. The growth of producer services employment seems to depend largely on the industry's relatively poor record of improving productivity. This lag may be due in turn to infor-

mational imbalances prevailing in this market and the effects these have on supply and demand relationships. Less evidence exists that the growth of business and professional services employment is tied to income growth or to the increasing number of women in the work force.

The implications of these findings for regional policymakers seeking to promote employment growth are discouraging. Rising per capita income in a state or locality is unlikely to stimulate a disproportionate expansion of the producer services sector, according to the preceding analysis, since income growth seems more likely to increase demand for consumer services. Beyond this, however, on the basis of the foregoing analysis suggesting policies for those seeking to promote job growth and regional economic development is difficult. To do so requires a more focused study of the geographic distribution of producer services.

Betty Bradfield, research assistant, provided valuable assistance on this project.

NOTES

[1] See Bobbie H. McCrackin, "Dynamics of Growth and Change in the Health-Care Industry," *Economic Review*, Federal Reserve Bank of Atlanta, vol. 69 (October 1984) pp. 4-17.

[2] Census of Service Industries, Preliminary Report Summary Series, May 1984, pp. 2-5; receipts are in current dollars.

[3] "Employment eased to 7.3 percent in February," *Wall Street Journal*, March 11, 1985.

[4] Employment data from *County Business Patterns* are used in the following analysis. This source provides highly articulated data for subsectors of various industries, including business and professional services, at the state and even county level on a regular (annual in recent years) basis.

[5] In the Southeast, the number of engineers grew at a faster rate than total employment.

[6] This hypothesis has not been tested empirically except on Italian data for 1965-1975 with inconclusive results; see F. Momigliano and D. Smiscalco, "The Growth of Service Employment: A Reappraisal," Banco Nazionale del Lavoro (September 1982), pp. 269-306.

[7] We have compared relative growth rather than growth trends because occupations could be increasing faster in one sector of the economy if that sector is growing faster; computing relative shares in the two time periods adjusts for this.

[8] This approach often is termed the Clark-Fisher hypothesis in recognition of two economists who in the 1930s applied the concept of income elasticity to macroeconomic shifts between major sectors of the economy. It originated with Christian Engel, a nineteenth century statistician who observed the patterns in income elasticity of food expenditures in household budgets.

[9] Victor R. Fuchs, "Economic Growth and the Rise of Service Employment," Working Paper No. 486, National Bureau of Economic Research, June 1980.

[10] George J. Stigler, "Employment in the Service Industries," NBER Working Paper No. 59, Princeton: Princeton University Press, 1956, p. 46.

[11] Irving B. Kravis, Alan W. Heston, and Robert Summers, "The Share of Services in Economic Growth," in *Global Econometrics* Cambridge, Mass.: MIT Press, 1983, pp. 192, 204.

[12] Kravis, pp. 196, 198.

[13] Donald J. Cocheba, Robert Gilmer, and Richard S. Mack, "Growth of the Service Sector in the Tennessee Valley," paper presented at the Southern Economic Association Annual Meeting, Atlanta, Georgia, November 1984.

[14] Peter Pashigian, "The Market for Lawyers: The Determinants of the Demand for the Supply of Lawyers," *Journal of Law and Economics* vol. 20 (April 1977) pp. 53-85.

[15] Michael Urquhart, "The Employment Shift to Services: Where Did it Come From?" *Monthly Labor Review*, vol. 107 (April 1984), pp. 20, 21.

[16] See, for example, U. K. Ranga Chand's, "Why the Dramatic Increase in Service Sector Employment?" *Canadian Business Review* vol. 10, (Autumn 1983), pp. 25-29, and "Growing Service Sector Threatens to Lower Overall Productivity Growth" *Canadian Business Review*, vol. 10 (Summer 1983) pp. 44-47.

[17] Phoebus J. Dhrymes, "A Comparison of Productivity Behavior in Manufacturing and Service Industries," *Review of Economics and Statistics*, vol. 45 (February 1963) pp. 64-69. He focused on the period from 1945-1958 due to its stability, full employment, and full utilizaion of capital stock.

[18] Herbert Runyon, "The Services Industries: Employment, Productivity, and Inflation," *Business Economics*, vol. 20 (January 1985), pp. 59-60.

[19] These concepts were first applied to the health care industry by Kenneth Arrow, "Uncertainty and the Welfare Economics of Medical Care," *American Economic Review*, vol. 53 (December 1963), pp. 941-73.

Farm Programs: How Important to the Southeast?

Gene Wilson, Gene Sullivan, and Charles Lokey, Jr.

Many farmers in the Southeast seem less vulnerable to potential congressional cutbacks in federal programs because benefits in the region total less than 8 percent of all farm income. But small groups of southeastern farmers could be seriously affected.

Federal farm programs have played an important role in the agriculture of the nation and Southeast in the past half century. Although the significance of programs has varied from crop to crop, government assistance in the aggregate has added millions of dollars to southeastern farm income. For example, in 1983 direct government payments to southeastern farmers approached $260 million. From

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1980 to 1983, net Commodity Credit Corporation (CCC) loans approximated $500 million.

Yet, because agriculture in this region is diverse, with many unsupported commodities, total direct and indirect benefits constitute less than 8 percent of total farm income. For certain crops, such as cotton in Mississippi, program benefits are important to producers' incomes. Growers of oranges, vegetables, and a variety of crop and livestock products, however, receive no benefits from the existence of farm programs.

There is widespread disagreement concerning the future of farm programs and which programs are needed, if any. The Reagan administration wants a more market-oriented farm policy with reduced government involvement.[1] Such pressures probably will encourage a shift toward greater reliance on the market to influence price levels and production decisions and less government participation. The shift probably will be gradual rather than a sudden restructuring of farm programs. In a recent budget compromise, for instance, Congress agreed to trim nearly $8 billion from the programs—yet recessed without acting on proposals to alter them substantially. Disagreement

still might block the passage of a farm bill this year. In the event of a legislative deadlock, in many cases agriculture would revert to expensive programs of bygone years.

Farm programs originated largely in the 1930s as the government's response to persistent and severe economic problems in the sector. These problems—low prices and incomes—essentially reflected an imbalance between supply and demand. Because of rising agricultural productivity and reduced effective demand during the Great Depression, supply far exceeded the quantity purchased, curtailing prices for farm commodities sharply in the early 1930s. Responding to the widespread distress in the farm sector, Congress enacted a variety of programs to redress the imbalance, primarily by reducing supply. Programs reflecting continued governmental attempts to improve the farmers' lot have remained with us for the past half century. Initial efforts to aid the sector brought farmers short-term relief through difficult years. However, as time passed and conditions changed, farm programs were modified to maintain goals, satisfy special interest groups or keep the programs in harmony with the realities of a modern economy. Today, the critics argue that the patchwork of farm programs created over the

History Of Commodity Programs

Cotton

The Agricultural Adjustment Act of 1933, which included cotton as one of the basic commodities, provided incentives to remove land from production in return for benefit payments. Since farmers were plagued by depressed cotton prices in 1932 and an abnormally high carryover from the previous year's crop, a cotton plow-up campaign in 1933 eliminated approximately 10 million acres, or one-fourth of the growing crop. Farmers participating in this program received cash payments. Cotton farmers, faced with deteriorating

financial conditions, also demanded and received price supports and a non-recourse loan of 10 cents a pound.

Acreage allotments were established in subsequent 1938 legislation but were used rarely between 1943 and 1949. Cotton price supports ranged up to 95 percent of parity and the Agricultural Adjustment Act of 1948 provided mandatory price supports at 90 percent of parity. Additional legislation extended this support through the 1954 crop season. Cotton remained under a marketing quota from 1954 to 1970.

As cotton surpluses continued to increase in the late 1950s and early 1960s, the Cotton-Wheat Act of 1964

was enacted in an attempt to alleviate the excess by increasing demand and encouraging farmers to reduce acreage voluntarily. The Secretary of Agriculture authorized payments to domestic handlers or textile mills, hoping to reduce the price of domestically used cotton to the export price. Also, he authorized a new cotton allotment that was smaller than the regular allotment; producers who participated received a higher support.

In 1965, the Cropland Adjustment Program was established, covering four years. This program supported the market price of cotton at 90 percent of the estimated world price

past half century may have become counterproductive to farmers' welfare while imposing a rising cost on the government.

Farm Programs: How They Work

Farm programs essentially are oriented toward supporting prices and incomes through production or acreage controls. Price and income objectives are pursued through price supports, non-recourse loans, target prices, and deficiency payments. Production and acreage controls are attempted by means of quotas, allotments, and land diversions.[2]

Agricultural price support programs seek to ensure participating farmers a minimum return per unit of production. Any farmer with a production history in a commodity covered by a program can enroll. That gives him the option of borrowing money from the Commodity Credit Corporation (CCC) at a predesignated loan rate (or support price) for the commodity after pledging his production as collateral for the loan. If market prices remain below the loan rate ($2.55 per bushel of corn, for example), the farmer legally can default on the loan by allowing the CCC to take ownership of the corn pledged as collateral. Such a default is treated as a full repayment of the loan. On the other hand, if market prices rise above the loan rate, the farmer may sell his commodity in the open market and repay the loan with interest. In effect, the price support forms a minimum market price, or at least influences it greatly.

Target prices play a different role. A projected target price set above the price support, is designed to provide the farmer with sufficient returns to cover per-unit costs for a specified commodity. When target prices were first implemented, they were derived from production cost estimates for each commodity; later they became a matter of political negotiation. The enrolled farmer receives a deficiency payment from the government reflecting the difference between the target price and the average market price of the particular commodity for the first five months of the marketing year. This program offers support for incomes without holding commodities off the market and thus avoids governmental expenses in storing and handling.

During past periods when price supports (and more recently target prices) exceeded the market clearing price for a given commodity, problems arose because the supports encouraged increasing production. That caused surplus reserves to accumulate. A variety of measures have been
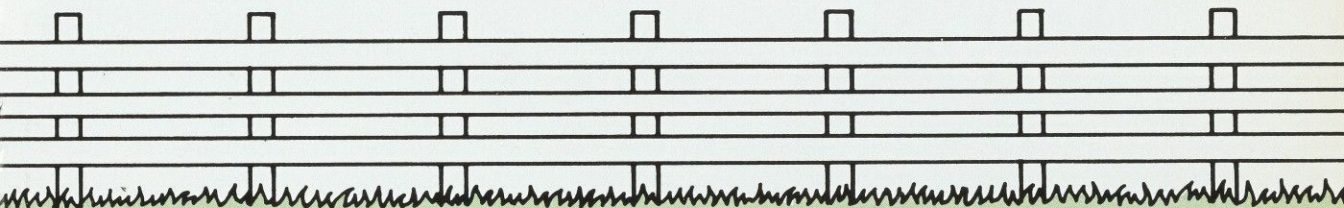
and farmers' incomes were maintained through payments based on participation in the Acreage Reduction Program. For the first time, legislation permitted the sale or lease of allotments within a state.

The Agricultural Act of 1970 established a voluntary program for cotton as marketing quotas were suspended for three years. A set-aside program to divert cropland to conserving uses was established. Payments were based on the difference between the higher of 65 percent of parity or 35 cents per pound and the average market price for the first five months of the marketing year.

The Food and Agriculture Act of 1977 allowed cotton production to shift to lower-cost western and
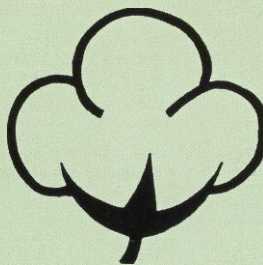
southwestern regions since plantings were based on current plantings rather than on an historically

based acreage allotment. This encouraged farmers to move their crops to more efficient production areas.

The 1981 Act allowed disaster payments to producers only under emergency conditions and then only if federal crop insurance were unavailable. The act also established 1982 through 1985 target prices at successively higher levels.

With increasing stocks, depressed commodity prices and lower farm income, the Payment-In-Kind (PIK) program was implemented along with existing acreage reduction and cash-paid land diversion programs for the 1983 cotton crop. To be eligible for

utilized to control the additional production that price and income support programs have stimulated. These controls have taken the form of marketing quotas, acreage allotments, paid land diversion programs, acreage reduction as a price for program participation, payments-in-kind, and various long and short-term diversions of land to conservation uses. These controls attempt to reduce the amount of commodity entering the market directly or else they do it indirectly by limiting the amount of resources, generally land, devoted to production of the commodity. The effectiveness of production controls has varied greatly, depending on the technique used and the circumstances at the time controls were attempted. The major weakness of most acreage controls has been farmers' tendency to idle less-productive, marginal land while increasing the quantity of other inputs (such as fertilizer) on land remaining in production. Because farmers behave in this economically rational manner, total production often does not decline in proportion to the amount of land idled.[3]

Benefits of Farm Programs

The benefits of farm programs are both direct and indirect. Direct benefits include those such as non-recourse loans, deficiency payments, and diversion payments. Indirect benefits include higher prices in the marketplace and greater price and income stability. Agricultural programs clearly have supported prices and improved farm incomes. However, the extent of direct and indirect benefits varies from year to year depending upon applicable programs and the level of farmer participation.

For some crops, total direct payments have represented a significant portion of the growers' income and net returns in recent years. Yet total direct government payments constitute only 6 percent of net farm income in the Sixth District and less than 2 percent of gross farm income. Fully 82 percent of all government payments in the Southeast were made to cotton and rice growers, largely concentrated in Louisiana and Mississippi. Farmers in those two states received 70 percent of the government payments made in the six-state District in 1983. In terms of total direct government payments, farmers in Louisiana and Mississippi clearly are the most vulnerable should payments be reduced or abolished.

Net CCC loans in Sixth District states (all or part of Alabama, Florida, Georgia, Louisiana, Mississippi and Tennessee) reveal a similar situation. Over a four year period, 1980-1983, these
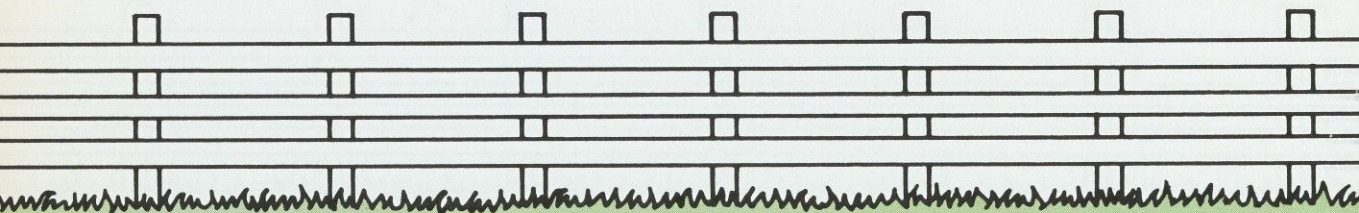
program benefits, growers were required to participate in the 20 percent acreage reduction program. The producer who idled an additional 5 percent of the base acreage could receive a diversion payment rate of 25 cents per pound of lint. The participant had an option to idle an additional 10 to 30 percent of his base acreage and receive "payment-in-kind" equal to 80 percent of the farm program yield. The 1983 loan rate for program participants was set at 55 cents a pound and the target price at 76 cents.

To be eligible for program benefits in 1984, producers had to limit upland cotton planted to no more than 75 percent of their cotton acreage base. Cropland acreage equal to at least one-third of the acreage planted in cotton had to be devoted to conservation uses. The target price was set at 81 cents a pound and the average loan rate was at 55 cents a pound, the legislated minimum.
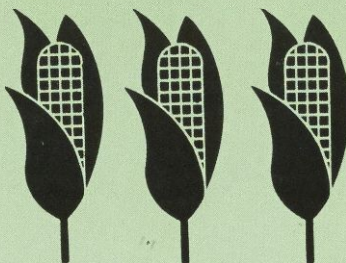
Corn

The Agricultural Adjustment Acts of 1933 and 1938 allowed farmers to obtain parity prices and non-recourse loans from the government when pledging their corn as collateral. Corn remained at 90 percent of parity under agricultural legislation of 1948 and 1949.

In 1950 and again in 1954 to 1958, allotments were utilized to control production. During the latter period allotments were voluntary, but only farmers who planted within their

loans totaled nearly $500 million, with almost 70 percent extended in Louisiana and Mississippi. Nevertheless, the primary benefits of non-recourse loans appear to emanate from their price supporting effects, especially since interest rates on CCC loans have moved closer to market rates recently.

Both participating and non-participating producers may benefit indirectly in the short run from higher prices that result from farm programs. A United States Department of Agriculture (USDA), study estimated that indirect benefits of the 1982 farm program were four times the direct benefits.[4] If we accept this as an arbitrary rule of thumb, then farmers gain $4 of indirect benefits for dollar each of direct benefits. For southeastern farmers, the gain from indirect benefits would exceed $1 billion or roughly 6 percent of District farm cash receipts. Based on estimates we made in our study, indirect benefits do approach that figure, with 1984 benefits reaching approximately $880 million.

Program benefits, particularly those associated with an acreage base or acreage allotment, usually are capitalized into the value of land. The original landowners who are allocated an acreage base or allotment generally benefit from an increase in both current income and wealth. However, even though renters or tenants

Table 1. Total Government Payments By State and Commodity, 1983

	Cash Receipts ($ millions)	Payments ($ millions)	Payments as A Percent of Cash Receipts
Alabama			
Wheat	53.6	2.5	4.6
Cotton	167.8	19.2	11.4
Feed Grains	26.4	2.7	10.1
Georgia			
Wheat	120.3	11.0	9.1
Cotton	77.1	7.4	9.6
Feed Grains	127.7	10.2	8.0
Louisiana			
Wheat	29.8	1.8	6.0
Cotton	341.4	35.5	10.4
Rice	136.3	45.5	33.4
Feed Grains	27.3	.3	1.1
Mississippi			
Wheat	76.9	5.2	6.8
Cotton	639.1	73.4	11.5
Rice	51.7	19.0	36.9
Feed Grains	22.5	.7	3.2
Tennessee			
Wheat	71.0	5.6	7.9
Cotton	132.3	14.5	11.0
Feed Grains	48.9	4.6	9.4

Source: *Economic Indicators of the Farm Sector, State Income, and Balance Sheet Statistics, 1983.* Tables 10 and 19.

allotments were eligible for the higher price support.

The introduction in 1956 of a soil conservation program through land diversion proved effective in reducing production, with the acreage of corn harvested for grain in 1957 10 percent below that of the early 1950s. Nevertheless, carryover stocks continued to increase because the least productive land was idled.

The Agricultural Act of 1961 established specific acreage diversion programs for corn. The program was voluntary but only participants could receive support. In 1968, a direct price support payment was introduced to supplement the diversion

payment. This program continued for 11 years. In the span from 1974 to 1977, corn prices remained at record levels. As a result, the loan rate or target price established in the Agriculture and Consumer Protection Act of 1973 had no real impact on market prices until mid-1977 and no deficiency payments were made to corn producers under this act.

In 1977, acreage allotments were replaced by another concept: deficiency payments based on production. In addition, Congress based target price adjustments on changes in per-bushel production costs.

The 1981 Act responded to problems that stemmed from the 1977 legislation, including inadequacy of the cost of production method to set and adjust target prices. Also the Acreage Reduction Program (ARP) was introduced. By the time the 1981 Act had been signed, the corn market had weakened and failed to rebound until the 1983 PIK program was announced. The PIK program, the ARP, and paid land diversion diverted nearly 32 million acres from corn production. Corn growers who participated in the 1984 corn program were protected against slumping prices by a $2.55 per bushel loan rate, down from $2.65 in 1983. Also,

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receive a share of the program-enhanced current income, they also face increased rents because of the higher land value.

Also, policy provisions for a specific crop may indirectly affect the production of other crops. Such effects have been particularly noticeable in areas where growers can shift acreage readily between crops of corn, soybeans, wheat, and grain sorghum. For instance, an increase in loan rates and target prices for one commodity may cause farmers to step up production of that crop and reduce plantings of a competing crop. As an indirect result, reduced production of the competing crop may increase its market price. Conversely, a program that decreases the acreage of one crop can increase production of other crops and reduce their market prices.

Another question involves distribution. Since program payments are based on an established payment rate per unit of a commodity, participants who produce more receive larger payments. Farms with higher yields per harvested acre or large farms are likely to receive the largest share of program benefits. Concerns over the large share of income support programs flowing to farmers already earning large incomes have prompted limitations on the payments that can be made to any one producer. Such

restrictions have encouraged growers to divide large holdings into smaller parcels that, for record-keeping purposes at least, are operated by separate family members.

Direct Benefits

Cotton. The cotton program has provided substantial short-run benefits to southeastern producers, who have accounted for 20 percent or more of total U.S. acres planted in recent years. The benefits have varied from year to year, depending upon program provisions and farmer participation. Direct program benefits have ranged lately from a low of $172 million in 1980 to a high of $1.2 billion in 1983, including payment-in-kind (PIK) entitlements.

Southeastern producers have become enthusiastic participants in the cotton program. Program participation in 1983 reduced the District's planted acreage by 31 percent from the previous year. As a result of curtailed planting and drought, production in the District decreased by almost 50 percent while total U.S. production decreased by only 35 percent.

In 1982 and 1983, District farmers received one-fourth of the total government cotton

growers became eligible for deficiency payments if the average farm price during the first five months of the 1984-85 season fell below the $3.03 per bushel target price.

Rice

Controlled production of rice, under the Agricultural Adjustment Act of 1933, was implemented with contracts between the government and rice millers.

Legislation that followed in 1938 included many provisions still found in the rice program, including nonrecourse loans, referendums for marketing quotas, acreage allotments

and, potentially, direct payments to bring producer prices up to parity.

Provisions of the 1949 Act had little effect on the rice market because average prices exceeded support levels in every year from 1941 to 1953, except for 1951. In the mid-1950s, production expanded greatly,
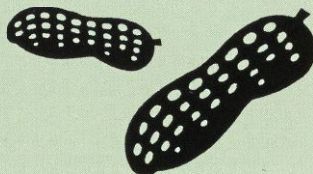
leading to excess supplies. Congress responded with flexible support prices, marketing quotas, and acreage allotments. The marketing quotas and acreage allotments remained in effect from 1955 to 1973.

As rice exports grew rapidly in the early 1970s, market prices climbed above support levels. In 1973, with the average farm price at $13.80 per hundredweight (cwt) and the support level at $6.07, marketing quotas were suspended for 1974 and 1975 crops.

The Rice Production Act of 1975 reflected further changes in the rice market. Rice programs shifted from quotas and allotments to a greater market orientation similar to that of

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Table 2. Total Government Payments in the Sixth District By Commodity, 1983

Commodity	Payments ($ millions)	Payments As A Percent of Total Gross Farm Income	Payments As A Percent of Total Net Farm Income
Wheat	26.4	0.1	0.6
Cotton	150.8	0.8	3.5
Rice	64.9	0.4	1.5
Feed Grains	20.5	0.1	0.5
Total	262.7	1.4	6.1

Source: *Economic Indicators of the Farm Sector, State Income, and Balance Sheet Statistics, 1983.* Tables 7, 10, and 19.

payments but they accounted for less than 2 percent of 1983's government payments under all programs. Even with wide participation by cotton growers in the Southeast, total payments received were relatively small compared with other U.S. regions. For example, cotton states in the Plains region (Texas and Oklahoma) received approximately 51 percent of the total cotton payments in 1983 and 4 percent of overall government payments. Of the Sixth District states, Mississippi and Louisiana accounted for 72 percent ($108 millon) of the total

cotton payments received by District states in 1983. In those two states, government payments comprise a substantial portion of cotton growers' farm income. In terms of cash receipts, government payments represented 10 percent of all receipts from cotton in Louisiana and 12 percent in Mississippi.

Rice. Since the inauguration of target prices, direct government payments have made up an increasing share of rice producers' income. Since 1980, producers have received over

other grain programs, with the establishment of a target price.

In 1981, Congress repealed the rice allotment and marketing quota system and based deficiency payments on normal production from current plantings. The acreage reduction program was introduced as a more specific control method. The large expansion of acreage in 1981, along with declining exports, increased carryover stocks sharply and resulted in a 15 percent ARP for 1982. In 1983, legislation specified a 15 percent ARP, a 5 percent paid land diversion, and an additional 10 to 30 percent PIK program. Program enrollment reached fully 98 percent

of the estimated 4.1 million acres devoted to rice production. In 1984 to 1985, a 25 percent ARP was announced, and, because farm prices declined below the target price during 1983 to 1984, enrollment in the program reached 87 percent.

Peanuts

The peanut program has retained continuity since its inception in the 1930s. Features such as marketing quotas, price supports, and acreage allotments have been maintained over the years.

In 1934, peanuts came under production control and diversion provisions of the Agricultural Adjustment

Act of 1933. Growers signed contracts obligating them to plant no more than 90 percent of the 1933 or 1934 acreage or the average acreage for those two years. Benefit payments were provided to farmers who diverted peanuts into crushing for oil and meal. The program succeeded in rerouting 154 million pounds of the 1934 crop into oil and meal, reducing the 1935 crop by 1 percent.

Amendments in 1941 authorized marketing quotas for peanuts and re-established peanuts as a basic crop. Price supports were made mandatory at 50 to 75 percent of parity.

After World War II, price support rates were scheduled to revert to

Chart 1. Total Government Payments for the District States, 1983 (Millions)

Mississippi 37% $230.1

Louisiana 26% $157.8

Florida 2% $13

Alabama 10% $64.3

Tennessee 11% $68.2

Georgia 13% $82.2
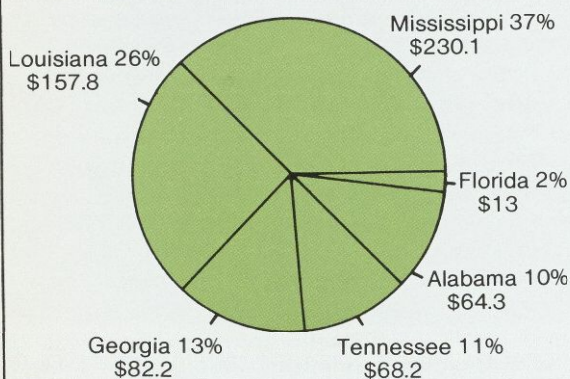
Source: *Economic Indicator of the Farm Sector, State Income, and Balance Sheet Statistics,* 1983.

$675 million in direct payments, including 1983 PIK entitlements.

Government payments comprised 18 percent of rice growers' gross income in 1982, but had grown to 42 percent by 1983. Comparing returns in 1982 and 1983, the benefits of participating in the rice program clearly are evident. Direct payments accounted for 76 percent of net returns in 1982 and 87 percent in 1983. Total direct payments in the U.S. that year came to $278 million.

In the Southeast, the rice program mainly involved Louisiana and Mississippi, the two major producers in the District. To participate and receive benefits from the payment program, farmers were required to reduce their planted acreage. The District's acreage was reduced 35 percent and production 39 percent for the 1983 crop year. Louisiana and Mississippi growers received $46 million and $19 million, respectively, accounting for 23 percent of the total rice payments in 1983. Payments contributed less than 2 percent to the combined total gross farm income of the two states, but made up one-third or more of the cash receipts of rice growers themselves.

Feed Grains. Participation in feed grain programs in the Southeast has been less active than in other parts of the United States because the grain sorghum and corn operations remain concentrated in the North Central and Plains regions. The Sixth District produced 7 percent of the nation's total sorghum crop while corn represented only 3 percent of all corn production in 1983. Alternatively, the North Central

pre-war parity levels upon expiration of wartime price supports. However, the Agricultural Act of 1949 set support levels at 90 percent of parity for 1950 and between 80 and 90 percent for 1951. From 1955 to 1977, the support price for peanuts varied between 75 and 86 percent of parity; the rate remained at the legal minimum of 75 percent from 1970 to 1977.

Marketing quotas and acreage allotments for peanuts have been effective since 1949, although acreage allotments were suspended in 1982. To protect the domestic peanut price support program, the U.S. government since 1953 has set an annual import quota of 1.7 million pounds, extremely small compared to the approximately 1.6 billion pounds used in domestic foods.

Because the peanut program was creating surpluses and forcing up costs to the government, the program became an issue in 1977 farm legislation. Escalating supplies generated concern over peanuts' competitive position in both domestic and foreign markets. While technological advances increased peanut production, domestic use rose more slowly, creating domestic surpluses. In response, the 1977 Act introduced two-tier price poundage quotas while retaining elements of the old program such as acreage allotments and price supports. The minimum national quota, set at 1.68 million tons, was decreased 5 percent annually through 1981. In addition to the acreage allotment, each allotment holder was assigned a poundage quota. Within their acreage allotment, growers could produce more than their quota—but the quantity for which they could receive the higher of the two price supports was limited to "quota" peanuts. Peanuts in excess of quota were referred to as "additionals". Quota peanuts are grown mainly for edible uses and seed for the following year's planting; additionals are ex-

and Plains regions accounted for 93 percent of the total national corn acreage base and 88 percent of all sorghum acreage.

Seventeen percent of the total corn acreage base in the District states was removed from production for the 1983 program, which, combined with drought, reduced production by 38 percent. Five percent of the total sorghum acreage was taken out of production, contributing to a 20 percent reduction. Feed grain program participants in the Southeast received only 1.5 percent of total feed grain payments made in 1983 and 2 percent of the payments in 1982. Feed grain payments constitute only 7 percent of total government payments to District farmers. Not surprisingly, feed grain programs contributed less than 1 percent to the District's total gross farm income in 1982 and 1983. In terms of cash receipts to corn growers, direct payments were equivalent to 7 percent for the District, although in Georgia and Alabama they were 8 and 10 percent, respectively.

Wheat. Overall, direct payments on wheat have varied widely in the U.S. over the past five years. From 1980 to 1983, payments accounted for 13 percent of the total farm value of production. Direct payments, representing over 35 percent of the total farm value of production, accounted for nearly 67 percent of the returns above cash expenses in 1983.

Regional participation is low for wheat, since nearly two-thirds of the wheat acreage base is located in the Great Plains and more than 70 percent of total payments goes to growers in that region. District states produced only 94.6 million bushels of wheat in 1983, less than 5 percent of total national production.

Government payments to national wheat growers, totaling $864 million, accounted for approximately 9 percent of total U.S. payments in 1983. Southeastern farmers received $26.4 million or just 3 percent of total government wheat payments even though they controlled 8 percent of the total wheat acreage. Wheat payments contributed less than 1 percent to total net farm income for the southeastern states, even though program payments in the District more than doubled from 1982 to 1983. For wheat farmers, payments made up only 7 percent of cash receipts from sales. In the aggregate, government payments for wheat played a small role in southeastern agriculture.

In 1982, approximately 15,000 of the District's wheat farmers, or nearly half, participated in the farm program. Since 86 percent of the wheat farmers tend less than 250 acres of land,

ported or directed into the crush market to extract the oil.

The 1981 Act further modified the peanut program, maintaining the two-tier price system while continuing to reduce the poundage quota. A major change was the suspension of acreage allotments, allowing anyone to produce peanuts; however, only quota holders were eligible to receive quota support prices.

Tobacco

Federal programs to support and stabilize tobacco prices have been in place since the Agricultural Adjustment Act of 1933 designated tobacco

as a "basic" commodity and authorized cash payments for growers who restricted production.
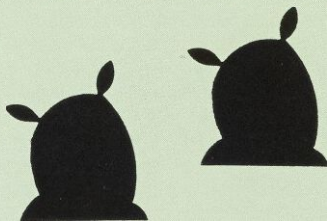
The current tobacco program is based on the Agricultural Adjustment Act of 1938, which authorized marketing quotas and established a

penalty for growers who exceeded their designated figures. Growers, a majority of whom favored marketing quotas, received price supports up to 75 percent of parity prices for their tobacco.

In addition to various parity changes in the 1940s and 1950s, other changes to the program followed during the next two decades. In 1962, lease and transfer of acreage allotments within counties was permitted and, three years later, poundage quotas were implemented on flue-cured tobacco. Poundage quotas, leasing, and transfers of allotments became effective for burley in 1971. Also, producers were allowed

more small and medium size farms are aided. Nevertheless, it is true that large farms receive the bulk of direct payments in every commodity class.

Indirect Benefits

Tobacco. The tobacco program is oriented primarily toward price stability while ensuring a steady supply of tobacco to processors. Therefore, the program offers greater indirect than direct benefits. Price supports ensure the farmer a minimum price for his commodity while marketing quotas restrict supply, indirectly supporting market prices.

Estimates vary on the impact of price supports, but one source suggests that tobacco prices are 30 to 50 cents per pound higher than they would be without supports.[5] If we accept this, then Sixth District tobacco growers received approximately $100 million more revenue in 1984 than a free market would have provided them. The majority of this ($59 million) would have profited Tennessee growers, while Georgia would have garnered most of the remainder ($33 million). These amounts would be offset somewhat, however, by the per pound assessments under the provisions of existing legislation,

which require that growers underwrite most costs of the program.

Because tobacco is grown mostly on small farms with average tobacco tracts of less than 20 acres, it represents a disproportionately important crop to smaller farms. In the Sixth District, more than 43,000 farms grow tobacco, with over 80 percent in Tennessee and 10 percent in Georgia. One important indirect benefit for growers is the capitalization of tobacco quotas into land values.

Peanuts. Georgia, Alabama, and Florida produce nearly 65 percent of the nation's peanuts, with the majority of farms harvesting less than 50 acres. Peanuts produced under quota are supported at approximately $550 a ton. Peanuts grown outside quotas, called "additionals", have a support price of $185 per ton, well below production costs. Peanut growers with quotas may earn as much as $100 a ton more than a free market price might provide them. In 1984, the existence of quotas provided additional income estimated at nearly $100 million for Georgia's growers, $12 million for Florida's, and $32 million for Alabama's, totaling about one-fourth of total cash receipts from peanuts in each case.
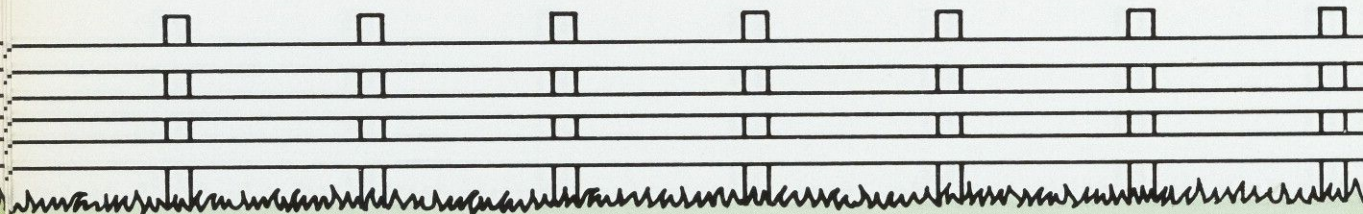
to sell up to 110 percent of their tobacco quota, with marketings the following year to be reduced by the amount of marketings above or below their quota.

Changes have been made as recently as 1982 in the tobacco price support and production control program. The 1981 Agriculture and Food Act required tobacco producers, to be eligible for price supports, to contribute to a fund to assure that the loan program operates at no net cost to the government except for administrative expenses.

Legislation signed in July 1983 froze that year's tobacco supports at their 1982 levels and included two

provisions that dealt specifically with burley. One provision allowed the reduction of burley quotas by as
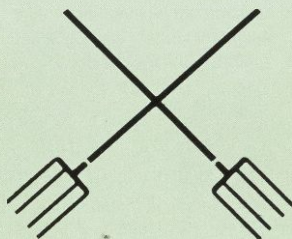
much as 10 percent in any one year. The second directed that, under specific conditions, the secretary of

agriculture must determine whether imports are interfering with the U.S. price support and production control program.

In November 1983, provisions were added freezing flue-cured price supports for 1984 at the 1982 level. The support price for burley and other types was set to avoid narrowing the normal price support differential between those types and flue-cured; leasing and transfer of flue-cured tobacco quota will be abolished beginning in 1987.

Sugar

The Sugar Act of 1934 required the secretary of agriculture to deter-

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Table 3. Estimated Indirect Benefits, 1984 ($ millions)

	Alabama	Florida	Georgia	Louisiana	Mississippi	Tennessee	District
Corn	6.9	3.6	22.1	2.2	1.7	17.1	53.8
Tobacco	*	7.2	33.0	*	*	59.0	99.2
Peanuts	32.0	12.0	100.0	*	*	*	144.0
Sugar	*	198.0	*	142.0	*	*	340.0
Cotton	6.1	.2	4.0	14.7	24.7	5.1	55.1
Wheat	1.2	*	3.0	1.2	2.4	1.9	10.0
Rice	*	*	*	51.9	19.6	*	71.6
Dairy	7.4	26.4	17.9	12.7	11.6	30.2	106.4
Total	53.8	247.5	180.1	224.9	60.2	113.5	880.3

Based on the following assumptions of indirect benefits:

28 cents per bushel of corn
40 cents per lb. of tobacco
5 cents per lb. of peanuts
15 dollars per bale of cotton (3 cents per lb.)
10 cents per bushel of wheat
2.4 cents per lb. of rice
1.4 cents per lb. of milk

*minimal or non-existent production
Source: Computed by author

As with tobacco, the value of quotas has been capitalized into the value of land, enhancing the assets of original allotment and quota owners. With the abolition of acreage allotments in 1981, the value of marketing quotas increased even further.

Dairy. The Sixth District hosts 7 percent (21,900) of the nation's dairy farms and produces

mine the nation's consumption requirements for sugar each year and divide these requirements among domestic areas and foreign countries by assigning each a quota. In addition to restricting acreage, the act also legislated benefit payments to growers, a processing tax on sugar, minimum wage rates for field workers, and child labor provisions.

In approving the Sugar Act of 1948, Congress retained the basic features of the 1934 and 1937 acts, but added more details. The 1948 Act was amended through the 1950s, 1960s, and early 1970s. New sugar legislation was introduced in 1974, but Congress failed to pass it because

of tight world sugar supplies and high world prices.

Sugar surpluses developed and prices fell during 1975 and 1976, but sugar crops were not covered by a support program, prompting Congress to include new sugar legislation in the Food and Agriculture Act of 1977. In the 1977 act, sugarcane and sugarbeets were supported through loans or purchased at between 52.5 and 65 percent of parity prices. The 1979 through 1981 crops were not designated in the 1977 act to receive price support; however, a sugar loan program was adopted for the 1979 crop but not the 1980 and 1981 crops. Market prices in 1980

and 1981 remained high enough to sustain the domestic industry.

A section of the 1949 legislation was amended by the Agriculture and Food Act of 1981, mandating a price support program for domestically grown sugarcane and sugarbeets. To minimize the Commodity Credit Corporation's (CCC) risk in acquiring sugar during periods of low prices under a support program, a market stabilization price was established for raw cane sugar above the purchase or loan rate. The stabilization price covered the cost of freight and related marketing expenses and the interest required to redeem a loan,

about 6 percent of its milk. Within the District, Tennessee is the leading dairy state, with nearly 40 percent of the farms and 30 percent of the cows.

In past years, dairy farmers benefited from the dairy program. In the 1982-83 marketing year, for example, the government spent an average of $13,000 per commercial dairy farmer. Recently, price supports generally have exceeded market clearing levels. The USDA has noted that, to balance production and consumption in 1983, that year's real milk prices needed to be 15 to 20 percent lower.

The extent to which dairy farmers have benefited from federal programs varies greatly. Smaller operations receive modest benefit while larger farms enjoy significant gains.[6] In the Southeast, although approximately 75 percent of all dairy farms have 20 or fewer cows, 70 percent of the region's milk cows are in herds of 100 or more. A 50 cent increase in the support price would provide less than $2,000 per year for small herds (fewer than 20 cows), while a farm with 500 cows would receive approximately $30,000 more a year.

In 1984, we estimate the southeastern dairy industry received approximately $106 million in indirect benefits from government programs.

The largest share, $30 million, went to Tennessee, while Florida ranked second with $26 million. Although these estimates are approximations, they are relatively conservative with a price effect of only 1.4 cents per pound of milk.

Producers also gain because program benefits are capitalized into the value of dairy cows and other assets associated with the industry. Obviously, the more assets owned, the greater the total benefit to an individual dairy farmer.

Sugar. Another commodity program that has bestowed considerable indirect benefits on growers is the sugar program. That program, which includes price supports, duties, and import quotas, benefits both sugarcane and sugarbeet producers. In the Sixth District, Louisiana and Florida are the major producers, accounting for 75 percent of total U.S. sugar farms (excluding Puerto Rico). In 1983, Florida numbered 127 sugarcane farms and Louisiana 925. The average farm size in Florida is 2,800 acres, while Louisiana's are much smaller at 265 acres.

Sugar farmers have profited significantly from existing programs, easily seen by observing the difference between U.S. and world prices. In recent months, the world sugar price has been in the 4 to 6 cents per pound range and the U.S.

and provided an incentive to encourage processors to sell sugar in the marketplace rather than to sell or forfeit it to the CCC.

Wheat

The 1933 farm legislation, which authorized the government to restrict supply in order to raise farm income, assigned wheat producers an allotment based on an average of past acreage planted. If growers agreed to reduce plantings voluntarily by a certain percentage of their allotment they also received a cash payment on their domestic allotment.

Next, the Agricultural Adjustment Act of 1938 responded to surpluses

and low prices by introducing features that have remained the basis of agricultural policy: non-recourse loans, storage payments, parity payments,
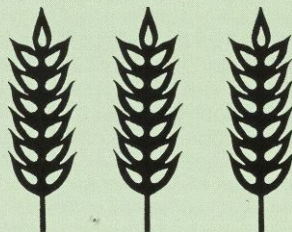
allotments, marketing quotas, export quotas, export subsidies, and conservation incentives. Initially, loan

rates were set between 52 and 75 percent of parity—the relationship of a commodity's purchasing power relative to the 1910 to 1914 period, the golden age of twentieth century farming. In order to receive payments, farmers were required to abide by acreage allotments.

Subsequent agricultural legislation in 1948 and 1949 revised the parity formula to account for productivity and other changes since the base period of 1910 to 1914. The 1949 legislation introduced flexibility, allowing a range of parity prices. Because of the Korean War, however, subsequent legislation retained parity at the 90 percent level.

price neared 21 cents a pound. The income effect has been estimated at an average $98,000 per sugarcane farm (including Puerto Rico). Based on average production in recent years, a rough estimate is that Florida and Louisiana growers receive $198 million and $142 million respectively in annual benefits. The USDA estimates that the total benefit to the U.S. sugarcane industry (including processors) was $1.5 billion in 1982.[7]

Corn. The precise impact of indirect benefits to corn producers varies from year to year and is difficult to estimate, yet high support prices and acreage diversion programs definitely have increased corn prices. By one estimate, U.S. corn prices rose by 6 percent in 1978 from acreage controls alone.[8] Obviously, the price support program provides an even greater effect in years when the market clearing price is below the support price. If we assume that corn prices averaged 10 percent above their free market level, the price effect yielded $54 million in additional revenue to District growers in 1984. The primary benefit would have gone to Georgia and Tennessee farmers, with $22 million and $17 million respectively.
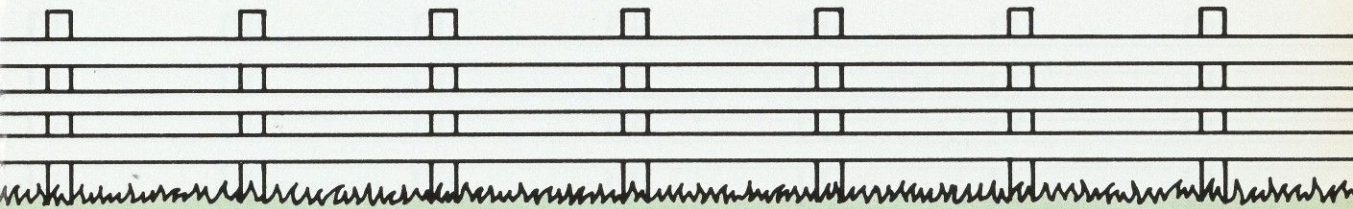
Soybean farmers also receive indirect benefits from the corn program since high loan rates and target prices for corn have caused some farmers to switch production from soybeans. In addition, higher corn prices may have expanded the demand for soymeal to be used in feed rations.

Rice. Approximately 3,200 rice farmers operate in Louisiana and Mississippi, with 80 percent in Louisiana. Mississippi rice farms tend to be about one-third larger than those in Louisiana. An estimate of 2.4 cents per pound of rice as the price effect translates to indirect monetary benefits of over $70 million to growers in the two states.[9] Because Louisiana produces more rice, farmers in that state receive the greater benefit.

Rising Costs

In recent years, farm programs have been accompanied by rising costs to government (and thus to taxpayers), high consumer prices, and an erosion of overseas markets as domestic prices exceeded world prices. New attempts at austerity in government, growing consumer awareness, and accumulating surpluses have combined to make the costs increasingly unacceptable.

In the 1960s, wheat surpluses increased immensely despite marketing quotas, so a voluntary paid diversion program was implemented in 1962 and 1963. An attempt to impose a mandatory acreage control program and marketing quotas for the 1964 crop were rejected by growers in a referendum. Because of the rejection, new legislation was enacted, changing the wheat program significantly by lowering minimum allotments, reducing the loan rate to the feed value of wheat, and making the program entirely voluntary. The legislation provided the first steps in separating income and price supports to keep U.S. wheat prices competitive while also supporting farmers' incomes.

The Agriculture and Consumer Protection Act of 1973 marked the beginning of a major revision in the income portion of farm programs. The target price concept, designed to support income without affecting the market, authorized deficiency payments to farmers when average prices fell below a designated level. The maximum payment is equal to the difference between the target price and the loan rate. The target price, set directly by legislation in 1974 and 1975, was adjusted thereafter by a formula based on the Index of Prices Paid by farmers and changes in yield. During the 1974 to 1977 period, wheat enjoyed strong exports and high prices that aided the move toward market-oriented farm programs.

The Food and Agricultural Act of 1977 improved the farm program significantly. Allotments were replaced and deficiency payments were based on normal production from current plantings. Target prices were adjusted on the basis of changes in production costs per bushel, which allowed fluctuating wheat yields to be taken into account in setting target prices.

Set-aside programs in 1978 and 1979 reduced wheat acreage and

How much do farm programs cost? In terms of government costs, program expenses escalated from $3 billion in 1979 to approximately $20 billion in 1983—nearly two-thirds of total net farm income in 1983. The net cumulative cost from 1979 to 1984 approached $50 billion, in effect, a transfer of income from taxpayers to the farm sector.

When the Agricultural Act of 1973 was implemented, farm prices were generally higher than loan and target prices, allowing relatively modest budgetary expenditures. However, this relationship began to change in the mid to late 1970s, forcing costs to rise. Production controls were used to a limited extent and markets usually cleared, which means that goods could all be sold in the marketplace with no significant surpluses. In 1982, under the Agricultural Act of 1981, farm prices generally paralleled the loan level.

The cost to consumers is more difficult to estimate and obviously varies greatly from year to year. Consumer costs seem to range from $2 to $4 billion annually, an estimate using the price effects listed in Table 3. Since lower income groups spend proportionately more on food than other income groups, higher food

Table 4. Variable Costs Per Unit of Production, 1983

	Southeast	United States
Corn	$1.96	$1.55
Wheat	2.23	1.63
Soybeans	3.57	2.22
Peanuts	.11	.12
Cotton	.48	.39
Rice	.05	.05

Source: *Economic Indicators of the Farm Sector—Costs of Production 1983.*

prices tend to weigh more heavily on the former.

The loss of markets to foreign producers has boosted the cost of farm programs. Up until the 1970s, U.S. exports remained relatively strong compared with other exporting countries. However, since then U.S. farm production has been declining in most crop markets while other countries, particularly Canada, Australia, Argentina, and the European Economic Community have expanded production. For instance, U.S. cotton production during 1928-1930 averaged 14 million bales and all other countries averaged 12 million bales. In the 1980s, however, annual

raised prices. Until 1982, strong exports eliminated the need for further acreage control programs. The Agriculture and Food Act of 1981 continued the wheat target price/deficiency payment program, farmer owned reserve program, set-aside program, and a crop-specific acreage reduction program (ARP). The government authorized a 15 percent ARP for wheat in 1982 and 1983, along with a 5 percent cash diversion and a 10 to 30 percent Payment-in-Kind program in 1983 that allowed participating growers to idle acreage for payment in commodities from government reserves.

For the 1984 crop year, a 30 percent acreage reduction requirement was implemented consisting of a combined 20 percent acreage reduction and a 10 percent cash diversion. Farmers who participated in the program could also participate in the PIK program that offered an optional 10 to 20 percent reduction from the acreage base for payment in kind.

Dairy

The U.S. dairy industry has been involved in considerable government regulation and participation in the marketplace. The price support program authorized by the Agricultural

Act of 1949 and the older Federal Milk Marketing Order Program authorized by the Agricultural Marketing Agreement Act of 1937 are the two principal domestic dairy programs.

The price support program supports the milk price received by farmers through purchases of butter, nonfat dry milk, and American cheese. Purchase prices were set at levels that enabled processors to pay farmers the announced support price for milk in surplus production periods.

In the 1949 Act and subsequent amendments, three major guidelines were specified for the price support program. First, they established minimum and maximum levels at which

U.S. cotton production averaged 15 million bales while foreign cotton production climbed to 50 million. In the period from 1979 to 1983, U.S production declined 46 percent while other countries' production rose nearly 20 percent.

Other crops experiencing similar reversals include peanuts, tobacco, and corn. Corn production declined nearly 48 percent while foreign countries expanded production nearly 10 percent in the five-year period. U.S. peanut and tobacco production decreased 13 percent and 8 percent, respectively, during this time, while foreign production has remained relatively constant or has increased.

Tobacco imports into the United States have increased 20 to 30 percent above the average of the late 1970s. Imports increased despite the fact that domestic stocks of burley and flue-cured tobacco under loan were, in the fall of 1984, at their highest levels in 13 years. The substantial increase in imports is attributable largely to the fact that U.S. tobacco prices have nearly doubled those of major competing countries. Largely as a result of this differential, the U.S. share of world tobacco exports has fallen from 30 to 18 percent during the past two decades.

The tobacco program has little impact on the general public. Under present law, tobacco growers underwrite the program through assessments on production. The taxpayer does pay to administer the program, which costs approximately $15 million a year. For consumers of tobacco products, the program may increase prices by only a small amount—2 percent or less. In the aggregate, consumers have been paying about $500,000 more annually because of the tobacco program.

What costs do the peanut program involve? For the government, and consequently the taxpayer, the cost has averaged $40 million each year since the early 1960s. From 1970 to 1982, the cost was approximately 50 cents for the average taxpayer.

Because peanut products are used more widely and in greater volume than tobacco goods, the cost to consumers has been much higher. During the early 1980s, one estimate indicated an annual cost to consumers of approximately $45 million.[11]

Part of the costs consumers have borne may well have been offset by the rapidly increasing yields per acre over the last quarter century. The peanut program has contributed to the

farm milk prices were to be supported. Second, they authorized the secretary of agriculture to determine the specific price within the minimum and maximum levels. Third, they specified that the price would be supported through purchases of milk and milk products.

The Agriculture and Food Act of 1981, passed at a time of large surpluses, established a set of triggers relating the minimum support level to the size of CCC purchases. This was a major departure from past policy under which price support changes were tied directly to parity.

As surpluses increased, 1982 legislation froze support prices for two

years and provided for deductions from milk producers' marketing receipts to offset partially the rising
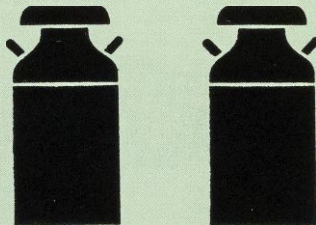
government costs. A year later, new legislation amended the 1949 act and provided for a milk diversion program.

From December 1983 to March 31, 1985, an assessment of 50 cents per cwt. was mandated on all milk marketed for commercial use by U.S. producers. Funds collected were used to offset the program's cost.

Another form of government involvement in the dairy industry was the Federal Milk Marketing Order program, which originated in the 1930s. The orders set prices that must be paid by processors to dairy farmers for grade A milk in geographic marketing areas under federal orders. The Federal Milk Marketing Orders classify pricing of milk according to use and provide for pooling or combining all revenue from the sale of

phenomenal growth in yields. Acreage allotments encouraged intensive farming, while price supports exceeded production costs. These two factors provided farmers with the incentive and means to adopt new technologies. We can't be sure whether such advances would have occurred equally fast in the absence of a government program, but certainly a free market does reward efficiencies in production.

The dairy program has proven to be one of the costliest in the government inventory. In the last decade, dairy price support activity has cost more than $10 billion.

Indirect benefits to feed grain farmers frequently represent indirect costs to the livestock sector and to consumers. Higher grain prices that boost feed costs may cause smaller inventories and the marketing of lighter stock. Consumers subsequently pay more for retail meats, eggs, and poultry. The USDA estimated in 1978 that adding 6 percent to the farm price translated to a 1 percent increase in retail price to consumers.[12]

The cost of the feed grain program in fiscal year 1983 in terms of net CCC expenditures was $814 million for sorghum and $5.7 billion for corn. The annual cost of the corn program averaged $2.3 billion during 1978-1982.

What's Ahead?

What will happen if Congress reduces the role of farm programs? That will depend directly upon the nature of the changes enacted. Let us assume that farm programs will be modified, with weaker price supports and target prices and fewer acreage controls. Given these assumptions, we anticipate a short-run reduction in income for crops with previously supported prices, greater price risk, and a weakening of farm asset values.

The USDA has projected that, if all price supports were removed, national net farm income would fall 42 percent. Consequently, a general range of lower price supports, reducing net farm income by an uncertain amount, would fall most heavily on producers of supported crops. A reduction in direct government payments certainly would curtail income. As indicated earlier, direct government payments of $200 to $250 million are at stake for southeastern farmers. If we assume a 20 percent reduction across the board in direct payments, farmers would lose $40 to $50 million. Of this, almost two-thirds would reflect a decline in payments to rice and cotton growers in Louisiana and Mississippi. Consequently, the aggre-

regulated milk to derive a single, uniform or blend price paid to producers.

Sorghum

Unlike a variety of other staples designated as "basic" commodities in the Agricultural Adjustment Act of 1933, sorghum was not included until the act was amended in 1934.

The Agricultural Act of 1938 included sorghum under commodities eligible for "permissive" support—that is, left to the discretion of the secretary of agriculture. Sorghum was not included among programs such as allotments, marketing quotas, and non-recourse loans but, instead, was listed as a non-basic commodity authorized to receive support at up
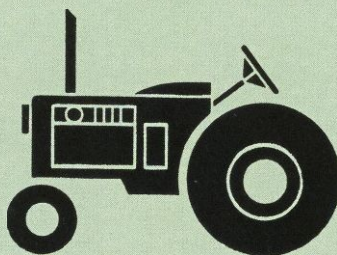
to 90 percent of parity depending on availability of funds.

The 1955 to 1960 period was significant for sorghum from a production and policy standpoint. Production tripled and government-owned sorghum stocks increased significantly. As a result, the government began providing aid to sorghum growers in 1961. The Feed Grain Act of March 1961 provided for voluntary acreage diversions, and a price support payment in addition to diversion payments was introduced two years later.

Sorghum diversion and payment programs in the late 1970s and early 1980s followed the same format of programs established for corn. The 1981 Agricultural Act mandated minimum loan rates and minimum target prices directly for corn and indirectly for sorghum.

gate effect in other states would be relatively insignificant. For individual commodity groups, the total monetary impact also would be small, but it could be much more severe for farmers for whom government payments provide badly needed income.

For farmers, the combination of reduced support prices in the face of surplus production portends lower market prices. Southeastern farmers, whose average unit costs are higher for most commodities than for U.S. farmers as a whole (see Table 4), would be among the first to feel the impact if prices fall as the USDA projects. If prices fall sufficiently, farmers whose costs exceed the price will either have to cease operation or switch to more profitable crops. Since two major crops in which southeastern farmers are cost competitive (rice and peanuts) also are rather specialized, the prospects for switching appear limited.

If we assume that price supports are modified to reduce indirect benefits 10 percent (and assuming 1984 was a typical year), then the loss of indirect benefits to southeastern farmers would approach $80 to $90 million in total revenue. The primary effects would be felt by sugar, tobacco, peanut, and dairy farmers. Sugar growers in Florida and Louisiana would suffer the greatest loss at $34 million. Peanut farmers, mostly in Georgia, could experience a reduction of nearly $14 million. The dairy industry would experience an $11 million decline in indirect benefits and the tobacco industry $10 million.

Nevertheless, indirect benefits lost would total less than 3 percent of District net farm income. The main effect would appear to fall on farmers who experience higher per-unit production costs. With lower prices, these farmers could find their financial positions deteriorating and themselves unable to remain in business—speeding up the exodus of farmers who are unable to compete effectively.

Like crop farmers, the southeastern dairy farmers generally experience higher per-unit production costs than in various other regions. As a result, a falling support price is likely to bear more heavily on this region's producers. Many small dairy operations, which already lack economies of scale, will have more difficulty remaining in business. Milk production declined in 1984 because of the attractiveness of the paid diversion program to high-cost southern producers. The absence of such a program and lower support prices may well force a shift out of milk production.

In addition to the impact on farm incomes, lower support prices would temporarily affect asset values—primarily land. Reduced support prices likely would prevent any strengthening in asset values, and could erode prices further. For farmers unencumbered by debt, reduced farmland prices would have a negligible effect. For indebted farmers, equity would decline even more, exacerbating already severe financial conditions.

Considerable uncertainty remains about the long-term impact on the Southeast of changes in the farm program, including the vagaries of weather and the extent of program change. However, the overall impact on the Southeast would be small. Slightly or moderately lower farm prices probably would produce few long-lasting effects on the southeastern economy. Even the overall impact on the agricultural sector would be diluted by gains in the animal product industries. But, the effects could be

more far-reaching on specific groups of farmers and in concentrated areas. Lower prices must mean that farmers with higher per-unit costs will either be unable to compete and leave farming or try to find other crops. Because so many farms in this region are small- or medium-sized, reduced government payments along with slumping prices could reduce farm income significantly for them. We can't be sure how important this would be to continuing operation, considering the sizable non-farm income these farmers earn.

The question of distributing benefits among small and large farms is of equal importance in estimating the impact of program reductions. While large farms clearly receive much more in absolute terms than do small operations, it is much less obvious whether the marginal value of each dollar received is greater for large farms. In other words, the net benefit derived by small- and medium-sized operations may be more vital to their continued operation than that derived by the large farms.

Considered solely in terms of numbers, agriculture in the Sixth District is made up predominantly of smaller farms. Eighty percent of the farms achieve less than $25,000 in gross sales. While non-farm income certainly is a factor for this size class, the decision to remain in farming also may be related to the generosity of support programs. If a primary goal of government policy is to maintain a "family farm" agriculture composed of many small- and medium-sized operations, then reductions in price and income support programs appear to be counterproductive to attaining that goal in southeastern agriculture. On the other hand, if maximum efficiency is a primary goal and hopes of competing in international markets rests heavily on efficient U.S. agricultural production, free market prices must be allowed.

Summary

The combined direct and indirect benefits from federal programs make up only a small percentage of the region's farm income. For specific groups of growers, however, reducing government assistance as the programs' critics have proposed could have a serious impact. The major effects would be felt in Louisiana and Mississippi, where benefits to rice and cotton growers constitute a significant percentage of cash receipts. The few counties in Florida and Louisiana that produce sugar also could suffer. For a few years, the southeastern economy might split, with urban areas growing normally and rural areas languishing as the farm sector struggles to make necessary adjustments.

Asset values, especially farmland, would remain weak and could decline even further if returns to crops fall severely. The most likely prospect is that farmland prices would remain near present levels, strengthening slightly as the farm sector recovers.

The prospect of lower feed cost promises to offset many of the benefits lost to the region's farmers if government programs are curtailed. This is possible because of the quantity of livestock and poultry raised in the Southeast. Lower feed costs should improve profitability, especially for poultry, and in states such as Georgia the loss in income to crop farmers might be offset by gains in the animal-product industries.

While federal programs have helped southeastern farmers in the past, existing programs are being challenged by changing economic conditions, including still-high interest rates, a dollar that remains strong compared to foreign currencies, and surging competition in trade. Prosperity in agriculture depends on foreign demand for agricultural commodities. Yet this demand is highly price-sensitive and can lead to greater price volatility. In addition, farmers have expanded their use of expensive inputs such as fertilizer and pesticides through increased borrowings, making interest expense a significant component of farm costs. Consequently, when interest rates or petroleum costs rise abruptly, farm profits can be cut because of factors largely beyond the farmers' control.

Due to changing macroeconomic conditions, current farm policy can achieve only limited success in accomplishing desired goals. However, for the southeastern farm, more market-oriented farm commodity programs could exacerbate existing problems in the short run. If price supports are reduced and farm prices move lower, as seems likely, more of this region's farms will stop producing. The question now facing policymakers and the public is how many farms might cease operation and how much federal expenditure will be needed to maintain these farms, if society desires to do so.

1929—Agricultural Marketing Act funded corporations to make loans to marketing cooperatives that would purchase surplus crops.

1933—Agricultural Adjustment Act of 1933 enacted. Instituted a wide variety of production controls for the first time.

1938—Agricultural Adjustment Act of 1938 featured: (1) non-recourse loans, (2) storage payments, (3) parity payments, (4) allotments, (5) marketing quotas, (6) export subsidies, and (7) conservation incentives.

1956—Soil Bank established. Comprehensive effort at soil conservation and production limitation.

1962—Voluntary paid diversion implemented.

1970—Agricultural Act of 1970 introduced direct payment programs and the set-aside concept.

1973—Agriculture and Consumer Protection Act introduced target price concept. A disaster program was introduced.

1977—The Food and Agricultural Act of 1977 replaced allotments with current planting concepts; deficiency payments now based on normal production from current plantings and set-aside acreage. Farmer-owned reserves (FOR) were created.

1981—Agriculture and Food Act of 1981 continued target price/deficiency payment programs, farmer-owned reserve programs and set-aside program authority. The acreage reduction program (ARP) was introduced.

1983—Owing to the large surplus of various commodities, the Payment-in-Kind Program was initiated.

1985—New farm legislation?

Agricultural Stabilization and Conservation Service - The section of USDA which has primary responsibility for implementing farm programs.

Acreage Reduction Program (ARP) - Requires participating farmers to limit a crop to a portion of their base acreage to qualify for other farm program benefits. The remainder of the base acreage must be diverted to some conserving use.

Acreage allotment - The individual farmer's share, based on previous production, of the national acreage needed to produce sufficient supplies of a particular crop.

Base acreage - The amount of a crop's acreage on a farm used to determine acreage reductions.

Carryover - The supply of a farm commodity not used at the end of a marketing year, carried over to the next year as surplus.

Commodity Credit Corporation - Created in 1933 to serve as a lender on farm commodities and consequently act as a major element of price support programs.

Conserving use or conservation use - An approved diversion of land into uses protecting it from weeds, wind, and water erosion, such as planting grasses, legumes, and small grain (if not allowed to mature).

Deficiency payment - Federal funds paid to farmers when the farm prices are below the target price. The rate of payment is determined by subtracting from the target price the higher of 1) the loan rate, or 2) the national average market price of a commodity during the first five months of the marketing year. The amount the government pays is determined by multiplying the difference (payment rate) by the farmer's program acreage of the particular crop by the farmer's program yield.

Disaster payment - Federal aid provided to farmers for certain crops (feed grains, wheat, rice, or cotton) either when planting is prevented or yields are abnormally low due to adverse weather and related conditions.

Export quota - Control applied to a countries' exports to limit the amount of goods leaving that country.

Export subsidy - A government grant, made to a private enterprise, to facilitate exports.

Farmers Home Administration - An agency of the Department of Agriculture whose responsibility involves lending to farmers who are unable to obtain credit from other sources.

Farmer-owned grain reserve - Program designed to provide protection against wheat and feed grain production shortfalls and buffer against sharp price movements. Farmers place their grain in storage and receive an extended non-recourse loan for three to five years. The loan's interest can be waived and farmers may receive annual storage payments from the government. Farmers are penalized for removing grain from storage unless the market price is at, or above, a specified "release price." Farmers may elect to remove their grain from storage if the release price is reached but are not required to do so. However, at that point, the storage and interest incentives may be reduced or eliminated.

Feed grains - Any of several grains commonly used for livestock or poultry feed, including oats, barley, corn, and grain sorghum.

Loan rate - The price per unit of a commodity at which the government will provide loans to farmers through the Commodity Credit Corporation.

Marketing orders and agreements - Regulatory structures which permit farmers to act collectively to improve orderly marketing of a crop or commodity through imposition of regulatory restrictions.

Marketing quota - Quantity of a crop that will provide normal and adequate market supplies of that crop. This is used to determine quotas for individual participants in terms of acreage of a farm's previous production of that commodity. If participating farmers produce more than their acreage allotment or farm marketing quota, they are subject to marketing penalties on the excess production, making them ineligible for government price support loans.

Non-recourse loans - Price support loans to farmers that enable them to hold their crops for later sale. Loans are non-recourse because the farmer has the option of turning over the mortgaged collateral (crops) to the government for the value of the loan.

Paid diversion program - A program that provides direct payment to farmers who divert a specific amount of acreage of certain crops into conservation uses.

Parity prices - Prices that restore the purchasing power of farm commodities to their 1910 to 1914 level. The price per unit that would be necessary to buy the same quantity of goods that an equivalent unit would have bought in the 1910 to 1914 period.

Payment-in-Kind - A 1983 program that provided compensation in the form of commodities for diverting a specific amount of acreage of certain crops into conserving uses. Participants, in turn, could resell the crop on the open market if they desired.

Production control programs - Any of the programs designed to control production, including acreage reduction programs, set-asides, paid diversions, acreage allotments, marketing quotas, and PIK. These programs are used for wheat, feed grains, cotton, and rice.

Set-aside - A program in which a wheat or feed grain farmer must divert a portion of his cropland to soil conserving uses to be eligible for program benefits such as deficiency payments, diversion payments, and loans.

Target prices - The price of wheat, feed grains, cotton, and rice, established by law, at which the government will support farmer's income by making payments to qualified farmers. Payments generally are made if the national average market prices fall below the target prices, thus assuring a certain minimum return.

NOTES

[1] For a summary of Administration proposals and a general overview of the farm economy, see "Agricultural Banks in the Southeast: How Are They Faring?," Keith Keplinger and others, *Economic Review*, Federal Reserve Bank of Atlanta (May 1985) pp. 4-18.

[2] A glossary of the more technical terms has been included at the end of this article for the reader's convenience.

[3] See Luther G. Tweeten's *Foundations of Farm Policy* for a more thorough view of farm policy.

[4] *The Distribution of Benefits from the 1982 Federal Crop Programs*, Committee on the Budget, U.S. Senate. Senate Print 98-238, November 1984, pp. 44.

[5] *Tobacco, Background for 1985 Farm Legislation*. Economic Research Service, USDA. Agriculture Information Bulletin No. 468, p. 27.

[6] *Dairy, Background for 1985 Farm Legislation*. Economic Research Service, USDA. Agriculture Information Bulletin No. 474, p. 20.

[7] *Sugar, Background for 1985 Farm Legislation*. Economic Research Service, USDA. Agriculture Information Bulletin No. 478, p. 37.

[8] *Corn, Background for 1985 Farm Legislation*. Economic Research Service, USDA. Agriculture Information Bulletin No. 471, p. 36.

[9] This estimate is based on the partial difference between world and domestic prices' of rice.

[10] Computed from data in Economic Indicators of the Farm Sector, Income and Balance Sheet Statistics, 1983. Economic Research Service, USDA, p. 54, 88.

[11] The authors' estimate is based partially on information in *Peanuts, Background for 1985 Farm Legislation*. Economic Research Service, USDA. Agriculture Information Bulletin No. 469, p. 16.

[12] *Corn, Background for 1985 Farm Legislation*. Economic Research Service, USDA. Agriculture Information Bulletin No. 471, p. 36.

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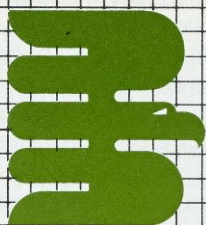
Economic Briefs

The Global Economy: A Closer Look

Christopher Paul Beshouri

Analysts often assert that we now live in a unified global market or, in the jargon of economists, an "integrated" world market. While such assertions are common—and consistent with the available data—the term remains ambiguous. What is economic integration? What are the implications of an open world economy for public policy, market structure, income and employment? How do we measure the degree of integration and how dependable are these measures?

Economic integration refers to the unification of geographically separate markets into a single, interconnected whole so that they effectively act as one market. To visualize this, recall that in an open economic system prices for goods and services are determined by the free interaction of buyers and sellers. However, high transportation or information costs or restrictions on market entry can prevent a seller in one geographical area from interacting with a buyer in another. Consequently, the interaction of buyers and sellers is restricted to the "home" market, which could be an area as small as Atlanta or as large as Georgia or the Southeast.

Prices indicate whether markets for tradable goods are segmented. That is, if producers or consumers lack access to geographical markets where higher or lower prices prevail, then prices for similar goods and services can differ between regions. When markets for comparable products become integrated by the elimination of barriers that separate markets, prices will equalize: geographically separate markets effectively will act as one market.

For example, for many years following the Civil War, credit and capital markets in the United States were segmented: regional credit markets predominated. Spreads between regional interest rates (long or short term) were often as high as 500 basis points.[1,2] Goods markets were similarly segregated so prices of comparable goods differed from region to region. Eventually, the development of railroads and the telegraph helped to integrate the various regional markets, so by the early 1900s prices on goods and services in the various regions were beginning to converge.

The global economy is developing in the same manner. Separate national economies become fused as the barriers that restrict the international interaction of buyers and sellers erode. Institutional and technological advances, in particular, have removed geographic barriers that once separated markets, making goods more mobile and permitting the instantaneous transmission of information around the globe. For example, technological innovations are fostering the integration of financial markets by instantaneously providing vital market information to traders in the United States who may be interested in, say, the Hong Kong stock exchange. More timely information reduces risk, promotes competition, and encourages international diversification of portfolios.

Where the international dynamic differs from the regional example is that over the last several decades markets have been separated more by artificial factors (quotas and tariffs, for instance) than geographic ones. The steady liberalization of payment restrictions by the International Monetary Fund and trade restrictions by the General Agreement on Tariffs and Trade (GATT) have helped break down these divisions over the past two decades. Consequently, the working definition must be modified to include politically as well as geographically separate markets.

Integration offers many benefits. Most important, scarce global resources are used more efficiently.

As mentioned above, price differences are attributable to the varying ability of regions to produce goods. When resources are distributed so a product is provided at the lowest relative cost, those resources are employed more efficiently and everyone benefits from lower costs. Lower costs mean higher real incomes by raising the level of purchasing power. The related effect is evident in the United States with the rapid influx of low-cost imports that have helped moderate this country's inflation rate in recent years.

In addition to higher real incomes, consumers in the integrated or integrating markets enjoy a more diversified choice of goods and services. This is true because, one, the resources used by inefficient producers prior to integration become available to produce items previously foregone, and, two, the effective market size grows larger and can support production of a greater diversity of goods.

Integration also affects a nation's market structure.[3] Before foreign automakers penetrated the U. S. auto market, for instance, many analysts argued that American auto firms possessed oligopolistic market power. That argument is more difficult to support now that Germany, Japan, Sweden, and others market their automobiles successfully to U.S. consumers. Generally, global integration introduces more competitors to an industry.

In addition, integration affects a nation's public policy decisionmaking process. Economic linkages between countries strengthen through the process of integration so jobs and incomes in one country become increasingly dependent upon economic growth in another. For example, the decline of U.S. export industries is a consequence of slow growth in Europe and Latin America as well as of the dollar's sharp appreciation since 1980. The greater the level of integration between countries, the faster a development in one nation will trigger adjustments elsewhere.

Because of the strengthening linkages between countries, policymakers increasingly are sensitive to the international ramifications of domestic policy choices. If U. S. economic growth appears excessively rapid, for instance, the Federal Reserve System might consider tightening monetary policy to guard against a resurgence of inflation. As a result, U.S. interest rates will rise and the nation's growth will slow. But less-developed countries' (LDCs) debt situation would worsen because their debt is linked to U.S. interest rates. Some U.S. banks could fail, also. Such ramifications require that policymakers take a global as well as domestic view.

To summarize, economic integration involves the dissolution of geographically distinct markets into a single interconnected whole. When economies are integrated, resources are used more efficiently so prices fall and real incomes rise. Market structure is affected and domestic policy increasingly becomes influenced by international developments.

For these reasons, the extent of market integration must be measured. Several methods are available. One is to measure the uniformity of prices among regions or countries. Since a market is defined as an area where equal prices prevail for identical goods and services, measuring price uniformity across countries will indicate the extent of integration The simplest test are based on the rule that, in the absence of restrictions, prices for the same commodity should not differ from one place to another by more than the transport cost between these places. Although examining price uniformity is the most comprehensive measuring of integration, it is also the most difficult because countries record price data differently, limiting comparable information.

An alternative is to calculate the percentage of a country s products that are tradable and thus subject to competition from abroad. The more goods and services facing international price pressure, the greater the extent of integration between markets. One such calculation estimates that in 1980 fully 70 percent of all manufactured goods produced in the United States were subject to foreign competition.[4] One problem with this approach is the number of non-tradable

products, such as real estate and many services. Therefore, the level of tradable goods constituting perfect integration is unclear, unlike an examination of price differences where complete integration is consistent with perfect price uniformity (excluding transportation or information costs).

A third approach is to calculate the ratio of a country's exports or imports to gross domestic product (GDP).[5] These trade ratios indicate the growth over time of trade between countries or regions. An increase in trade relative to GDP suggests greater integration. This approach also has its problems. First, in a country as large as the United States, the ratios may come out low even though the absolute levels of imports, exports, and GDP are quite high. For instance, in 1982 France's trade ratios were higher than those of the United States, but in the same year the combined value of U. S. imports and exports was more than $1 billion larger than France's total GDP.

There is also the previously mentioned problem of knowing what ratio indicates high integration levels: does a trade ratio of 100 percent, 50 percent, or 10 percent constitute complete integration? More importantly, trade ratios often do not capture the full price effects of international competition.

Nonetheless, trade ratios provide useful information about the integration of markets. Unlike the other measures that involve extensive data gathering and considerable statistical problems, trade ratios are simple to construct and use because the statistics are readily available and relatively uniform from country to country. For these reasons, we will use ratios of merchandise imports and exports to GDP to quantify the development of the "global economy."[6]

Table 1 lists the export- and import-to-GDP ratios for the world and three major country categories for the years 1962, 1972, and 1982.[7] For the world as a whole, both ratios moved upward during the period, indicating an increasing flow of goods between countries. The most pronounced changes occurred between 1972 and 1982, when the value of exports grew

Table 1. Ratios of Merchandise Exports and Imports to Gross Domestic Product*

Exports as a Percentage of GDP

	1962	1972	1982
World	9.34	11.36	16.77
Industrial	8.71	10.98	15.49
Oil Developing	24.18	30.25	33.07
Non-Oil Developing	10.39	10.14	15.58

Imports as a Percentage of GDP**

	1962	1972	1982
World	9.91	11.73	17.62
Industrial	9.07	11.28	16.35
Oil Developing	15.28	16.73	25.67
Non-Oil Developing	12.86	12.93	19.23

*All figures are value-based in local currency
**Imports are c.i.f. basis—includes cost, insurance, and freight (excluding duties) to first port of entry.

Source: International Monetary Fund, various publications.

at an average annual rate of 16 percent. But this may have been largely a consequence of the oil price shocks of the 1970s. In fact, the annual expansion of export volume actually slowed to an average 4 percent between 1972 and 1982, compared with 7.5 percent per year between 1962 and 1972.

Each of the major country groups experienced steady growth over the period. Industrial countries post the lowest levels of integration, although their share of world trade is the largest. Oil-exporting countries consistently experience the highest integration levels, even though on average their ratios grew less overall than the industrial countries and, in the case of exports, less than the non-oil developing countries.

Ratios for the non-oil exporting developing countries indicate a degree of integration in 1972 little changed from 1962; imports, exports, and GDP all grew near an annual rate of 8.5 percent. In contrast, between 1972 and 1982

Table 2. Country Specific Ratios*

Exports to GDP

Year	U.S.	France	United Kingdom	Japan	Germany	Egypt	India	Brazil	Mexico	Korea
1952	4.40	9.73	17.13	7.37	12.39	17.28	6.06	N.A.	9.70	N.A.
1962	3.87	10.13	14.10	8.33	14.68	10.46	3.91	4.29	6.47	2.04
1972	4.24	13.60	14.99	9.54	18.09	9.79	3.88	6.84	3.76	15.30
1982	7.03	17.74	20.06	13.01	26.73	10.76	5.41	6.83	13.08	30.21

Imports to GDP *

Year	U.S.	France	United Kingdom	Japan	Germany	Egypt	India	Brazil	Mexico	Korea
1952	3.39	10.93	20.99	11.74	11.87	26.20	7.94	N.A.	11.80	N.A.
1962	3.18	10.09	16.06	9.55	13.72	19.89	6.58	7.14	7.79	15.58
1972	5.05	13.88	17.29	7.83	15.63	10.67	3.52	8.14	6.02	23.77
1982	8.44	21.25	20.57	12.34	23.53	31.32	8.54	7.14	8.23	33.53

*Import and export figures are value-based.
**Imports are c.i.f. basis—includes cost, insurance, and freight (excluding duties) to first port of entry.
Source: International Monetary Fund, various publications.

this group's exports and imports grew sharply relative to GDP. Exports received a boost from the rise in world commodity prices in the early 1970s; rising export incomes permitted many of these developing countries to expand their demand for imports. The non-oil exporting developing countries' increasing dependence on imports coincided with the petroleum price shocks of the 1970s.

Table 2 lists export- and import-to-GDP ratios for the so-called Group of Five (G5) largest industrial countries and for selected LDC countries for 1952, 1962, 1972, and 1982.[8] The largest industrial countries posted a higher degree of integration in 1982 than in 1952, even though the United States and United Kingdom, in particular, and all industrial countries, in general, accounted for a smaller share of total world trade

in 1982. Increased production from plants and equipment installed after World War II spurred trade among the more advanced manufacturing countries, particularly between the countries of the European Economic Community, and diminished the United States' dominant position in the world economy. The adaptation to standardized high-volume production by many Third World countries and the consequent rise in incomes and development of markets helps explain the expansion of trade in this group. However, the trade ratios suggest that not all of the LDCs became more integrated over time.

For the world as a whole, these ratios clearly indicate a greater level of economic integration in 1982 than in 1962. But they also reveal that not all countries have participated evenly in the internationalization of markets. India, for example,

only recently re-achieved 1950s integration levels, after declining steadily from 1952 to 1972. Similar trends occurred in Mexico, Egypt, Japan, and the United Kingdom.

The U.S. trade ratios make our nation appear less dependent on trade than many other countries. Indeed, the size of the U.S. economy and the vast resources in this country allow for a greater degree of self-sufficency than is possible elsewhere. Nonetheless, the actual dollar value of U.S. trade is tremendous, making this nation one of the dominant forces in international trade.

Judging from these figures, the world clearly is becoming more integrated, even though some countries are not participating in the development of the global economy and participation is uneven for those that are. The trend toward integration could be challenged by calls for protectionist legislation in the United States and several other countries to protect industries hard-hit by imports. Nonetheless, barring the erection of additional trade and payment barriers and given continued technological advancements and the steady erosion of trade and payment barriers, the process of integration seems destined to continue. That should assure more efficient use of the world's scarce resources and raise most nation's standard of living.

The author is research assistant and foreign exchange markets analyst on the Research Department's macropolicy team.

NOTES

[1] See Robert E. Keleher, *Regional Credit Market Integration: A Survey and Empirical Examination*, Federal Reserve Bank of Atlanta: Working Papers Series, February 1979.

[2] A basis point is one one-hundredth of a percentage point.

[3] Market structure refers to the economically significant features of a market that affect the behavior of firms in the industry supplying that market.

[4] Robert B. Reich, *The Next American Frontier*, New York: Times Books, 1983, p. 121. The estimate of U.S. manufactured goods exposed to international competition was calculated by adding up total production of U.S. goods in Standard Industrial Classification six-digit categories in which imports equal more than 10 percent of production.

[5] Gross domestic product is GNP—gross national product—less net factor income from abroad.

[6] Ratios could be constructed using exports and imports of goods and services relative to GDP. Since this study aggregates ratios of major groups of countries, it uses goods data only.

[7] The figures for world imports and world exports differ because the UN requires the value of exports to be reported on a "free on board" basis (f.o.b.) and imports on a "cost including freight and insurance" (c.i.f.) basis. In 1981, the value of freight and insurance equaled $127 billion. Statistical discrepancies also cause the numbers to differ.

[8] Note that the figures in Table 1 represent trade between an individual geographical region and all other countries, in addition to intra-regional trade. The import and export ratios in Table 2 represent external activity only.

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	JUL 1985	JUN 1985	JUL 1984	ANN. % CHG.		JUL 1985	JUN 1985	JUL 1984	ANN. % CHG.
UNITED STATES									
Commercial Bank Deposits	1,517,482	1,506,892	1,380,284	+10	Savings & Loans**				
Demand	331,856	326,818	314,187	+ 6	Total Deposits	735,387	731,769	674,306	+ 9
NOW	103,183	102,500	88,711	+16	NOW	24,233	24,283	19,742	+23
Savings	419,644	412,659	358,996	+17	Savings	172,105	170,623	170,782	+ 1
Time	707,172	709,551	659,078	+ 7	Time	541,414	539,876	485,834	+11
Credit Union Deposits	64,267	63,305	52,997	+21		JUN	MAY	JUN	
Share Drafts	7,272	7,246	5,526	+32	Mortgages Outstanding	623,275	617,574	563,375	+11
Savings & Time	56,985	56,358	47,264	+21	Mortgage Commitments	39,956	40,705	47,754	-16
SOUTHEAST									
Commercial Bank Deposits	150,017	149,617	157,580	- 5	Savings & Loans				
Demand	52,432	52,561	36,336	+44	Total Deposits	95,136	95,230	N.A.	
NOW	18,868	18,778	11,402	+65	NOW	3,673	4,564	N.A.	
Savings	53,353	51,361	40,807	+31	Savings	21,143	21,030	N.A.	
Time	71,691	71,565	73,111	- 2	Time	72,600	70,986	N.A.	
Credit Union Deposits	5,926	5,833	6,209	- 5		JUN	MAY	JUN	
Share Drafts	674	670	504	+34	Mortgages Outstanding	79,181	78,571	70,986	+12
Savings & Time	6,475	6,394	5,498	+18	Mortgage Commitments	4,872	4,791	5,424	-11
ALABAMA									
Commercial Bank Deposits	18,336	18,237	16,455	+11	Savings & Loans**				
Demand	3,878	4,007	3,712	+ 4	Total Deposits	5,784	6,335	5,436	+ 6
NOW	1,312	1,296	1,021	+29	NOW	219	216	158	+39
Savings	3,685	3,640	3,322	+11	Savings	1,062	1,043	877	+22
Time	9,942	9,839	8,851	+12	Time	5,132	5,116	4,441	+16
Credit Union Deposits	1,124	1,097	974	+15		JUN	MAY	JUN	
Share Drafts	121	120	97	+25	Mortgages Outstanding	4,484	4,411	4,165	+ 8
Savings & Time	937	930	843	+11	Mortgage Commitments	333	349	222	+ 5
FLORIDA									
Commercial Bank Deposits	63,287	63,023	55,623	+14	Savings & Loans**				
Demand	13,618	13,827	12,792	+ 6	Total Deposits	61,062	60,891	57,273	+ 7
NOW	5,642	5,658	4,717	+20	NOW	2,460	3,365	2,155	+14
Savings	21,678	21,543	19,201	+13	Savings	14,318	14,281	14,687	- 3
Time	23,999	23,832	20,161	+19	Time	44,285	44,156	40,425	+10
Credit Union Deposits	3,302	3,247	2,728	+21		JUN	MAY	JUN	
Share Drafts	341	339	272	+25	Mortgages Outstanding	47,453	46,959	41,759	+14
Savings & Time	2,822	2,780	2,300	+23	Mortgage Commitments	3,276	3,206	3,386	- 3
GEORGIA									
Commercial Bank Deposits	27,743	27,426	24,109	+15	Savings & Loans				
Demand	7,895	7,878	7,363	+ 7	Total Deposits	8,387	8,282	8,020	+ 5
NOW	1,792	1,770	1,506	+19	NOW	384	375	266	+44
Savings	7,223	7,110	5,498	+31	Savings	1,874	1,853	1,787	+ 5
Time	12,399	12,315	10,993	+13	Time	6,272	6,225	6,075	+ 3
Credit Union Deposits	1,504	1,477	1,303	+15		JUN	MAY	JUN	
Share Drafts	109	110	82	+33	Mortgages Outstanding	9,419	9,426	8,798	+ 7
Savings & Time	1,405	1,383	1,213	+16	Mortgage Commitments	416	410	489	-15
LOUISIANA									
Commercial Bank Deposits	28,179	28,231	25,881	+ 9	Savings & Loans**				
Demand	5,520	5,582	5,689	- 3	Total Deposits	10,966	10,832	9,540	+15
NOW	1,682	1,687	1,502	+12	NOW	313	313	236	+33
Savings	7,884	6,240	5,533	+42	Savings	2,306	2,286	2,275	+ 1
Time	15,132	15,248	13,688	+11	Time	8,499	8,376	7,150	+19
Credit Union Deposits	189	188	211	-10		JUN	MAY	JUN	
Share Drafts	17	17	23	-27	Mortgages Outstanding	9,457	9,368	8,766	+ 8
Savings & Time	184	182	207	-12	Mortgage Commitments	354	337	724	-51
MISSISSIPPI									
Commercial Bank Deposits	13,063	13,062	12,147	+ 8	Savings & Loans				
Demand	2,469	2,491	2,352	+ 5	Total Deposits	1,906	1,879	N.A.	
NOW	914	919	829	+10	NOW	56	55	N.A.	
Savings	2,531	2,503	2,402	+ 5	Savings	310	307	N.A.	
Time	7,457	7,472	6,880	+ 8	Time	1,595	1,569	N.A.	
Credit Union Deposits	N.A.	N.A.	N.A.			JUN	MAY	JUN	
Share Drafts	N.A.	N.A.	N.A.		Mortgages Outstanding	2,156	2,149	2,059	+ 7
Savings & Time	N.A.	N.A.	N.A.		Mortgage Commitments	285	263	223	+28
TENNESSEE									
Commercial Bank Deposits	25,360	25,294	23,365	+ 9	Savings & Loans**				
Demand	4,594	4,546	4,428	+ 4	Total Deposits	7,031	7,011	6,938	+ 1
NOW	2,095	2,108	1,827	+15	NOW	241	240	191	+26
Savings	5,176	5,120	4,851	+ 7	Savings	1,273	1,260	1,293	- 2
Time	13,657	13,697	12,538	+ 9	Time	6,817	5,544	5,495	+24
Credit Union Deposits	1,202	1,191	993	+21		JUN	MAY	JUN	
Share Drafts	86	84	67	+28	Mortgages Outstanding	6,212	6,258	5,439	+14
Savings & Time	1,127	1,119	935	+21	Mortgage Commitments	208	226	380	-46

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 Monday of the month. This data, reported by institutions with over $15 million in deposits and $2.2 million of reserve requirements as of June 1984, 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. The major differences between this report and the "call report" are size, the treatment of interbank deposits, and the treatment of float. The data generated from the Report of Transaction Accounts is for banks over $15 million in deposits as of December 31, 1979. The total deposit data generated from the Report of Transaction Accounts eliminates interbank deposits by reporting the net of deposits "due to" and "due from" other depository institutions. The Report of Transaction Accounts subtracts cash in process of collection from demand deposits, while the call report does not. 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.
* = fewer than four institutions reporting.
** = Year-ago S&L deposits subject to revisions due to reporting changes and are therefore not completely comparable with current data.
N.A. = not available at this time.

CONSTRUCTION

	JUN 1985	MAY 1985	JUN 1984	ANN. % CHG.		JUN 1985	MAY 1985	JUN 1984	ANN. % CHG.
UNITED STATES									
Nonresidential Building Permits - $ Mil.					Residential Building Permits				
Total Nonresidential	64,639	64,751	57,260	+ 13	Value - $ Mil.	75,280	75,155	74,849	+ 1
Industrial Bldgs.	8,566	8,635	7,468	+ 15	Residential Permits - Thous.				
Offices	16,485	16,307	13,777	+ 20	Single-family units	897.0	899.6	942.2	- 5
Stores	10,027	10,128	8,536	+ 17	Multifamily units	727.7	739.6	772.3	- 6
Hospitals	2,025	1,994	1,874	+ 8	Total Building Permits				
Schools	1,127	1,191	829	+ 36	Value - $ Mil.	139,919	139,906	132,109	+ 6
SOUTHEAST									
Nonresidential Building Permits - $ Mil.					Residential Building Permits				
Total Nonresidential	10,065	9,991	8,899	+ 13	Value - $ Mil.	13,635	13,600	14,159	- 4
Industrial Bldgs.	1,040	1,010	887	+ 17	Residential Permits - Thous.				
Offices	2,438	2,372	2,040	+ 20	Single-family units	187.3	186.2	193.6	- 3
Stores	2,018	2,040	1,662	+ 21	Multifamily units	159.1	164.5	184.6	- 14
Hospitals	372	357	479	- 22	Total Building Permits				
Schools	115	111	117	- 2	Value - $ Mil.	23,700	23,590	23,057	+ 3
ALABAMA									
Nonresidential Building Permits - $ Mil.					Residential Building Permits				
Total Nonresidential	646	664	725	- 11	Value - $ Mil.	477	476	479	- 0
Industrial Bldgs.	68	90	180	- 63	Residential Permits - Thous.				
Offices	122	121	81	+ 51	Single-family units	9.1	9.0	8.3	+ 10
Stores	139	135	110	+ 26	Multifamily units	6.4	6.8	9.1	- 30
Hospitals	51	51	13	+292	Total Building Permits				
Schools	9	9	8	+ 13	Value - $ Mil.	1,123	1,140	1,203	- 7
FLORIDA									
Nonresidential Building Permits - $ Mil.					Residential Building Permits				
Total Nonresidential	5,111	5,021	4,290	+ 19	Value - $ Mil.	7,746	7,741	8,230	- 6
Industrial Bldgs.	559	542	413	+ 35	Residential Permits - Thous.				
Offices	1,102	1,066	907	+ 21	Single-family units	99.9	99.0	105.8	- 6
Stores	1,156	1,154	957	+ 21	Multifamily units	96.2	98.5	101.0	- 5
Hospitals	183	163	223	- 18	Total Building Permits				
Schools	40	42	43	- 7	Value - $ Mil.	12,857	12,762	12,520	+ 3
GEORGIA									
Nonresidential Building Permits - $ Mil.					Residential Building Permits				
Total Nonresidential	1,821	1,845	1,632	+ 12	Value - $ Mil.	2,843	2,861	2,732	+ 4
Industrial Bldgs.	272	241	176	+ 55	Residential Permits - Thous.				
Offices	493	521	554	- 11	Single-family units	44.3	44.1	43.5	+ 2
Stores	290	310	221	+ 31	Multifamily units	23.1	24.2	27.6	- 16
Hospitals	29	32	61	- 52	Total Building Permits				
Schools	16	15	17	- 6	Value - $ Mil.	4,664	4,705	4,364	+ 7
LOUISIANA									
Nonresidential Building Permits - $ Mil.					Residential Building Permits				
Total Nonresidential	1,310	1,278	1,165	+ 12	Value - $ Mil.	848	879	1,177	- 28
Industrial Bldgs.390	46	46	30	+ 53	Residential Permits - Thous.				
Offices	390	342	329	+ 19	Single-family units	12.4	12.7	16.5	- 25
Stores	239	245	175	+ 37	Multifamily units	8.9	9.6	17.7	- 50
Hospitals	64	69	149	- 57	Total Building Permits				
Schools	37	35	41	- 10	Value - $ Mil.	2,158	2,157	2,342	- 8
MISSISSIPPI									
Nonresidential Building Permits - $ Mil.					Residential Building Permits				
Total Nonresidential	242	250	243	- 0	Value - $ Mil.	352	368	373	- 6
Industrial Bldgs.	14	13	14	- 0	Residential Permits - Thous.				
Offices	45	42	27	+ 67	Single-family units	6.2	6.4	5.6	+ 11
Stores	48	47	53	- 9	Multifamily units	3.5	3.7	6.0	- 42
Hospitals	6	8	14	- 57	Total Building Permits				
Schools	5	5	1	+400	Value - $ Mil.	594	618	617	- 4
TENNESSEE									
Nonresidential Building Permits - $ Mil.					Residential Building Permits				
Total Nonresidential	936	933	844	+ 11	Value - $ Mil.	1,369	1,275	1,168	+ 17
Industrial Bldgs.	81	78	74	+ 9	Residential Permits - Thous.				
Offices	286	280	142	+101	Single-family units	15.4	15.0	13.9	+ 11
Stores	146	149	146	0	Multifamily units	21.0	21.7	23.2	- 9
Hospitals	39	34	19	+105	Total Building Permits				
Schools	8	5	7	+ 14	Value - $ Mil.	2,304	2,208	2,011	+ 15

NOTES: Data supplied by the U. S. Bureau of the Census, Housing Units Authorized By Building Permits and Public Contracts, C-40. Nonresidential data excludes the cost of construction for publicly owned buildings. 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. Publication of F. W. Dodge construction contracts has been discontinued.

GENERAL

	LATEST DATA	CURR. PERIOD	PREV. PERIOD	YEAR AGO	ANN. % CHG.		JUL 1985	JUN 1985	JUL 1984	ANN. % CHG.

UNITED STATES

	LATEST DATA	CURR. PERIOD	PREV. PERIOD	YEAR AGO	ANN. % CHG.
Personal Income					
($bil. - SAAR)	1Q	3,129.1	3,082.9	2,906.5	+ 8
Taxable Sales - $bil.		N.A.	N.A.	N.A.	
Plane Pass. Arr. (000's)					
Petroleum Prod. (thous.)	JUN	8,975.1	9,031.8	8,688.6	+ 3
Consumer Price Index					
1967=100	JUL	322.8	322.3	311.7	+ 4
Kilowatt Hours - mils.	MAY	177.6	177.3	175.6	+ 1

		JUL 1985	JUN 1985	JUL 1984	ANN. % CHG.
Agriculture					
Prices Rec'd by Farmers					
Index (1977=100)		127	128	145	-12
Broiler Placements (thous.)		86,858	90,145	83,960	+ 3
Calf Prices ($ per cwt.)		60.70	62.60	58.50	+ 4
Broiler Prices (¢ per lb.)		30.60	31.10	35.50	-14
Soybean Prices ($ per bu.)		5.52	5.62	6.95	-21
Broiler Feed Cost ($ per ton)		196	198	233	-16

SOUTHEAST

	LATEST DATA	CURR. PERIOD	PREV. PERIOD	YEAR AGO	ANN. % CHG.
Personal Income					
($bil. - SAAR)	1Q	381.7	375.9	351.5	+ 9
Taxable Sales - $bil.		N.A.	N.A.	N.A.	
Plane Pass. Arr. (000's)	MAY	5,037.1	5,248.3	4,455.9	+13
Petroleum Prod. (thous.)	JUN	1,509.0	1,517.0	1,482.0	+ 2
Consumer Price Index					
1967=100		N.A.	N.A.	N.A.	
Kilowatt Hours - mils.	MAY	28.5	27.0	28.2	+ 1

		JUL 1985	JUN 1985	JUL 1984	ANN. % CHG.
Agriculture					
Prices Rec'd by Farmers					
Index (1977=100)		121	123	139	-13
Broiler Placements (thous.)		33,358	35,026	31,861	+ 5
Calf Prices ($ per cwt.)		58.94	58.53	54.78	+ 8
Broiler Prices (¢ per lb.)		29.89	30.02	34.32	-13
Soybean Prices ($ per bu.)		5.67	5.72	6.77	-16
Broiler Feed Cost ($ per ton)		190	192	237	-20

ALABAMA

	LATEST DATA	CURR. PERIOD	PREV. PERIOD	YEAR AGO	ANN. % CHG.
Personal Income					
($bil. - SAAR)	1Q	41.1	40.7	38.6	+ 6
Taxable Sales - $bil.		N.A.	N.A.	N.A.	
Plane Pass. Arr. (000's)	MAY	147.8	124.9	120.3	+23
Petroleum Prod. (thous.)	JUN	57.0	58.0	51.0	+12
Consumer Price Index					
1967=100		N.A.	N.A.	N.A.	
Kilowatt Hours - mils.	MAY	3.7	3.6	3.7	0

		JUL 1985	JUN 1985	JUL 1984	ANN. % CHG.
Agriculture					
Farm Cash Receipts - $ mil.					
(Dates: JUL, JUL)		N.A.	-	1,066	
Broiler Placements (thous.)		11,244	11,883	10,723	+ 5
Calf Prices ($ per cwt.)		58.20	56.80	53.40	+ 9
Broiler Prices (¢ per lb.)		29.00	29.50	32.50	-11
Soybean Prices ($ per bu.)		5.63	5.73	6.60	-15
Broiler Feed Cost ($ per ton)		191	192	240	-20

FLORIDA

	LATEST DATA	CURR. PERIOD	PREV. PERIOD	YEAR AGO	ANN. % CHG.
Personal Income					
($bil. - SAAR)	1Q	145.4	142.9	131.7	+ 6
Taxable Sales - $bil.	JUN	88.4	87.6	79.1	+12
Plane Pass. Arr. (000's)	MAY	2,258.7	2,598.2	2,296.5	- 2
Petroleum Prod. (thous.)	JUN	35.0	36.0	42.0	-17
Consumer Price Index	JUL	MAY	JUL		
1967=100 Miami	171.4	171.0	167.0	+ 3	
Kilowatt Hours - mils.	MAY	8.1	7.6	8.0	+ 1

		JUL 1985	JUN 1985	JUL 1984	ANN. % CHG.
Agriculture					
Farm Cash Receipts - $ mil.					
(Dates: JUL, JUL)		N.A.	-	3,104	
Broiler Placements (thous.)		2,065	2,159	1,918	+ 8
Calf Prices ($ per cwt.)		64.50	63.00	59.30	+ 9
Broiler Prices (¢ per lb.)		30.00	30.00	34.00	-12
Soybean Prices ($ per bu.)		5.63	5.73	6.60	-15
Broiler Feed Cost ($ per ton)		230	235	255	-10

GEORGIA

	LATEST DATA	CURR. PERIOD	PREV. PERIOD	YEAR AGO	ANN. % CHG.
Personal Income					
($bil. - SAAR)	1Q	70.6	69.4	64.2	+10
Taxable Sales - $bil.		N.A.	N.A.	N.A.	
Plane Pass. Arr. (000's)	MAY	2,104.8	2,019.1	1,801.0	+17
Petroleum Prod. (thous.)		N.A.	N.A.	N.A.	
Consumer Price Index	JUN	APR	JUN		
1967=100 Atlanta	328.0	324.6	314.0	+ 4	
Kilowatt Hours - mils.	MAY	4.8	4.3	4.5	+ 7

		JUL 1985	JUN 1985	JUL 1984	ANN. % CHG.
Agriculture					
Farm Cash Receipts - $ mil.					
(Dates: JUL, JUL)		N.A.	-	1,595	
Broiler Placements (thous.)		13,634	14,341	12,860	+ 6
Calf Prices ($ per cwt.)		55.10	56.80	52.00	+ 6
Broiler Prices (¢ per lb.)		29.50	29.50	34.60	-15
Soybean Prices ($ per bu.)		5.70	5.78	6.86	-17
Broiler Feed Cost ($ per ton)		195	200	255	-24

LOUISIANA

	LATEST DATA	CURR. PERIOD	PREV. PERIOD	YEAR AGO	ANN. % CHG.
Personal Income					
($bil. - SAAR)	1Q	49.6	49.1	46.9	+ 6
Taxable Sales - $bil.		N.A.	N.A.	N.A.	
Plane Pass. Arr. (000's)	MAY	290.7	293.4	330.0	-12
Petroleum Prod. (thous.)	JUN	1,331.0	1,335.0	1,299.0	+ 2
Consumer Price Index					
1967=100		N.A.	N.A.	N.A.	
Kilowatt Hours - mils.	MAY	4.7	4.3	4.7	0

		JUL 1985	JUN 1985	JUL 1984	ANN. % CHG.
Agriculture					
Farm Cash Receipts - $ mil.					
(Dates: JUL, JUL)		N.A.	-	566	
Broiler Placements (thous.)		N.A.	N.A.	N.A.	
Calf Prices ($ per cwt.)		61.00	62.40	56.50	+ 8
Broiler Prices (¢ per lb.)		31.0	30.5	35.5	-13
Soybean Prices ($ per bu.)		5.63	5.42	6.90	-18
Broiler Feed Cost ($ per ton)		250	245	270	- 7

MISSISSIPPI

	LATEST DATA	CURR. PERIOD	PREV. PERIOD	YEAR AGO	ANN. % CHG.
Personal Income					
($bil. - SAAR)	1Q	23.9	23.4	22.6	+ 6
Taxable Sales - $bil.		N.A.	N.A.	N.A.	
Plane Pass. Arr. (000's)	MAY	38.5	34.9	35.2	+ 9
Petroleum Prod. (thous.)	JUN	86.0	88.0	90.0	- 4
Consumer Price Index					
1967=100		N.A.	N.A.	N.A.	
Kilowatt Hours - mils.	MAY	2.0	1.8	1.9	+ 5

		JUL 1985	JUN 1985	JUL 1984	ANN. % CHG.
Agriculture					
Farm Cash Receipts - $ mil.					
(Dates: JUL, JUL)		N.A.	-	872	
Broiler Placements (thous.)		6,414	6,643	6,376	+ 1
Calf Prices ($ per cwt.)		61.00	58.50	54.70	+12
Broiler Prices (¢ per lb.)		32.00	32.00	36.50	-12
Soybean Prices ($ per bu.)		5.70	5.85	6.73	-15
Broiler Feed Cost ($ per ton)		154	154	188	-18

TENNESSEE

	LATEST DATA	CURR. PERIOD	PREV. PERIOD	YEAR AGO	ANN. % CHG.
Personal Income					
($bil. - SAAR)	1Q	51.1	50.4	47.4	+ 8
Taxable Sales - $bil.		N.A.	N.A.	N.A.	
Plane Pass. Arr. (000's)	MAY	196.6	177.8	169.9	+16
Petroleum Prod. (thous.)					
Consumer Price Index		N.A.	N.A.	N.A.	
1967=100					
Kilowatt Hours - mils.	MAY	5.2	5.4	5.4	- 4

		JUL 1985	JUN 1985	JUL 1984	ANN. % CHG.
Agriculture					
Farm Cash Receipts - $ mil.					
(Dates: JUL, JUL)		N.A.	-	873	
Broiler Placements (thous.)		N.A.	N.A.	N.A.	
Calf Prices ($ per cwt.)		53.90	56.70	52.70	+ 2
Broiler Prices (¢ per lb.)		28.50	28.50	34.50	-17
Soybean Prices ($ per bu.)		5.68	5.85	6.79	-16
Broiler Feed Cost ($ per ton)		173	173	205	-16

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. R = revised.

EMPLOYMENT

	JUN 1985	MAY 1985	JUN 1984	ANN. % CHG.		JUN 1985	MAY 1985	JUN 1984	ANN. % CHG.
UNITED STATES									
Civilian Labor Force - thous.	116,572	114,890	115,393	+ 1	Nonfarm Employment - thous.	98,376	97,752	95,182	+ 3
Total Employed - thous	107,819	106,880	106,812	+ 1	Manufacturing	19,524	19,409	19,585	- 0
Total Uemployed - thous.	8,753	8,011	8,582	+ 2	Construction	4,849	4,674	4,526	+ 7
Unemployment Rate - % SA	7.3	7.3	7.2		Trade	23,355	23,095	22,207	+ 5
Insured Unemployment - thous.	N.A.	N.A.	N.A.		Government	16,258	16,510	16,048	+ 1
Insured Unempl. Rate - %	N.A.	N.A.	N.A.		Services	22,066	21,895	20,881	+ 6
Mfg. Avg. Wkly. Hours	40.6	40.3	40.8	- 0	Fin., Ins. & Real. Est.	5,971	5,886	5,738	+ 4
Mfg. Avg. Wkly. Earn. - $	386	382	373	+ 3	Trans. Com. & Pub. Util.	5,366	5,307	5,209	+ 3
SOUTHEAST									
Civilian Labor Force - thous.	15,274	15,166	14,999	+ 2	Nonfarm Employment - thous.	12,721	12,710	12,322	+ 3
Total Employed - thous.	14,023	14,098	13,776	+ 2	Manufacturing	2,304	2,299	2,328	- 1
Total Uemployed - thous.	1,251	1,087	1,219	+ 3	Construction	782	769	767	+ 2
Unemployment Rate - % SA	8.1	7.4	8.0		Trade	3,144	3,131	2,976	+ 6
Insured Unemployment - thous.	N.A.	N.A.	N.A.		Government	2,227	2,265	2,176	+ 2
Insured Unempl. Rate - %	N.A.	N.A.	N.A.		Services	2,673	2,664	2,526	+ 6
Mfg. Avg. Wkly. Hours	41.1	40.7	41.1	0	Fin., Ins. & Real. Est.	727	721	697	+ 4
Mfg. Avg. Wkly. Earn. - $	348	343	326	+ 7	Trans. Com. & Pub. Util.	734	732	720	+ 2
ALABAMA									
Civilian Labor Force - thous.	1,798	1,802	1,822	- 1	Nonfarm Employment - thous.	1,397	1,401	1,403	- 0
Total Employed - thous.	1,633	1,665	1,621	+ 1	Manufacturing	354	352	367	- 4
Total Uemployed - thous.	165	157	201	-18	Construction	67	66	67	0
Unemployment Rate - % SA	9.4	9.1	11.2		Trade	295	294	291	+ 1
Insured Unemployment - thous.	N.A.	N.A.	N.A.		Government	294	303	297	- 1
Insured Unempl. Rate - %	N.A.	N.A.	N.A.		Services	232	233	230	+ 1
Mfg. Avg. Wkly. Hours	41.1	40.8	41.3	- 0	Fin., Ins. & Real. Est.	66	65	63	+ 5
Mfg. Avg. Wkly. Earn. - $	341	339	330	+ 3	Trans. Com. & Pub. Util.	75	73	73	+ 1
FLORIDA									
Civilian Labor Force - thous.	5,239	5,219	5,085	+ 3	Nonfarm Employment - thous.	4,417	4,428	4,201	+ 5
Total Employed - thous.	4,877	4,963	4,748	+ 3	Manufacturing	515	518	503	+ 2
Total Uemployed - thous.	362	256	337	+ 7	Construction	331	329	321	+ 3
Unemployment Rate - % SA	6.9	5.2	6.6		Trade	1,165	1,167	1,107	+ 5
Insured Unemployment - thous.	N.A.	N.A.	N.A.		Government	685	695	648	+ 6
Insured Unempl. Rate - %	N.A.	N.A.	N.A.		Services	1,145	1,145	1,068	+ 7
Mfg. Avg. Wkly. Hours	41.1	40.9	41.5	- 1	Fin., Ins. & Real. Est.	315	313	300	+ 5
Mfg. Avg. Wkly. Earn. - $	322	318	315	+ 2	Trans. Com. & Pub. Util.	251	250	244	+ 3
GEORGIA									
Civilian Labor Force - thous.	2,880	2,851	2,771	+ 4	Nonfarm Employment - thous.	2,608	2,590	2,461	+ 6
Total Employed - thous	2,677	2,677	2,599	+ 3	Manufacturing	544	543	550	- 1
Total Uemployed - thous.	202	183	172	+17	Construction	151	146	133	+14
Unemployment Rate - % SA	7.0	6.6	6.1		Trade	671	665	600	+12
Insured Unemployment - thous.	N.A.	N.A.	N.A.		Government	449	452	444	+ 1
Insured Unempl. Rate - %	N.A.	N.A.	N.A.	0	Services	487	480	441	+10
Mfg. Avg. Wkly. Hours	41.2	40.4	41.2	0	Fin., Ins. & Real. Est.	136	134	129	+ 5
Mfg. Avg. Wkly. Earn. - $	322	318	3125	+ 2	Trans. Com. & Pub. Util.	162	162	155	+ 5
LOUISIANA									
Civilian Labor Force - thous.	1,981	1,948	1,978	+ 0	Nonfarm Employment - thous.	1,597	1,591	1,611	+ 2
Total Employed - thous	1,754	1,729	1,779	- 1	Manufacturing	180	180	184	- 2
Total Uemployed - thous.	227	219	198	+15	Construction	113	111	124	- 9
Unemployment Rate - % SA	11.0	11.3	9.5		Trade	381	379	386	- 1
Insured Unemployment - thous.	N.A.	N.A.	N.A.		Government	325	328	318	+ 2
Insured Unempl. Rate - %	N.A.	N.A.	N.A.		Services	318	314	315	+ 1
Mfg. Avg. Wkly. Hours	41.6	41.2	41.7	- 0	Fin., Ins. & Real. Est.	84	84	84	0
Mfg. Avg. Wkly. Earn. - $	427	435	416	+ 3	Trans. Com. & Pub. Util.	116	116	120	- 3
MISSISSIPPI									
Civilian Labor Force - thous.	1,114	1,103	1,087	+ 2	Nonfarm Employment - thous.	841	845	822	+ 2
Total Employed - thous	1,001	1,000	964	+ 4	Manufacturing	221	219	220	+ 0
Total Uemployed - thous.	114	103	123	- 7	Construction	41	40	40	+ 3
Unemployment Rate - % SA	9.5	9.4	10.6		Trade	186	184	176	+ 6
Insured Unemployment - thous.	N.A.	N.A.	N.A.		Government	182	189	179	+ 2
Insured Unempl. Rate - %	N.A.	N.A.	N.A.		Services	127	129	124	+ 2
Mfg. Avg. Wkly. Hours	40.5	40.4	40.8	- 1	Fin., Ins. & Real. Est.	35	35	34	+ 3
Mfg. Avg. Wkly. Earn. - $	291	291	283	+ 3	Trans. Com. & Pub. Util.	40	40	39	+ 3
TENNESSEE									
Civilian Labor Force - thous.	2,262	2,243	2,253	+ 0	Nonfarm Employment - thous.	1,861	1,855	1,824	+ 2
Total Employed - thous	2,081	2,074	2,065	+ 1	Manufacturing	490	487	504	- 3
Total Uemployed - thous.	181	169	188	- 4	Construction	79	77	82	- 4
Unemployment Rate - % SA	7.9	7.7	8.0		Trade	446	442	416	- 7
Insured Unemployment - thous.	N.A.	N.A.	N.A.		Government	292	298	290	+ 1
Insured Unempl. Rate - %	N.A.	N.A.	N.A.		Services	364	363	348	+ 5
Mfg. Avg. Wkly. Hours	41.3	41.1	41.7	- 1	Fin., Ins. & Real. Est.	91	90	87	+ 5
Mfg. Avg. Wkly. Earn. - $	338	333	330	+ 2	Trans. Com. & Pub. Util.	91	91	89	+ 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.