

BUSINESS REVIEW

ISSN 0007-7011

Federal Reserve Bank of Philadelphia
SEPTEMBER • OCTOBER 1985

Reports on the Region

THE HEALTH OF BANKING IN THE THIRD DISTRICT

Thomas K. Desch & Richard W. Lang

THE
PHILADELPHIA
AREA ECONOMY:
Faster Growth in the 1980s?

John M. L. Gruenstein

Working Paper Summary: Tax Reform & Housing, Theodore Crone

BUSINESS REVIEW

Federal Reserve Bank of Philadelphia
Ten Independence Mall
Philadelphia, Pennsylvania 19106

REGIONAL REPORTS

As we move into the second half of the 1980s, the region's economy seems to be in much better shape than many people would have expected a few years ago. This is particularly good news considering both the serious employment declines the region experienced in the 1970s, and some alarming financial developments in the nation recently. This issue of the *Business Review* surveys the regional economic scene in this light. In the first article, Thomas K. Desch and Richard W. Lang briefly analyze some of the causes of the recent surge in the number of failed banks nationally, and assess the health of banks in the Third District. With only one bank failure in this District in the 1980s, and good scores for District banks on various measures of banks' health, the condition of the region's banks appears to be quite good. In the second article, John M. L. Gruenstein contrasts several measures of the region's performance relative to the nation in the 1970s with the 1980s. While the region's performance in the 1970s seemed to signal continuing decline, so far in the 1980s it has performed much closer to the national average. The analysis suggests both that the region now shares more fully in national expansions and contracts less in national recessions, and that regional growth is not limited to one sector, such as services, but is broad-based.

SEPTEMBER/OCTOBER 1985

THE HEALTH OF BANKING IN THE THIRD DISTRICT	3
<i>Thomas K. Desch and Richard W. Lang</i>	
WORKING PAPER SUMMARY: "The Effect of Recent Tax Reform Proposals on the Return to Owner-Occupied Housing"	12
<i>Theodore Crone</i>	
THE PHILADELPHIA AREA ECONOMY: Faster Growth in the 1980s?	13
<i>John M. L. Gruenstein</i>	

The BUSINESS REVIEW is published by the Department of Research every other month. It is edited by Judith Farnbach. Artwork is directed by Ronald B. Williams, with the assistance of Dianne Hallowell. The views expressed herein are not necessarily those of this Bank or of the Federal Reserve System. The Review is available without charge.

Please send subscription orders and changes of address to the Department of Research at the above address or telephone (215) 574-6428. Editorial communications also should be sent to the Department of Research or telephone (215) 574-3805. Requests for additional copies should be sent to the Department of Public Services.

The Federal Reserve Bank of Philadelphia is part of the Federal Reserve System—a System which includes

twelve regional banks located around the nation as well as the Board of Governors in Washington. The Federal Reserve System was established by Congress in 1913 primarily to manage the nation's monetary affairs. Supporting functions include clearing checks, providing coin and currency to the banking system, acting as banker for the Federal government, supervising commercial banks, and enforcing consumer credit protection laws. In keeping with the Federal Reserve Act, the System is an agency of the Congress, independent administratively of the Executive Branch, and insulated from partisan political pressures. The Federal Reserve is self-supporting and regularly makes payments to the United States Treasury from its operating surpluses.

The Health of Banking in the Third District

*Thomas K. Desch and Richard W. Lang**

INTRODUCTION

The rising number of bank failures since 1981 has fueled concern about the health of the banking industry. Between 1981 and 1984, more than 150 FDIC-insured banks failed. In 1984 alone, 79 banks failed—a level not approached since 1938 (Figure 1, p. 4).¹ News reports have been

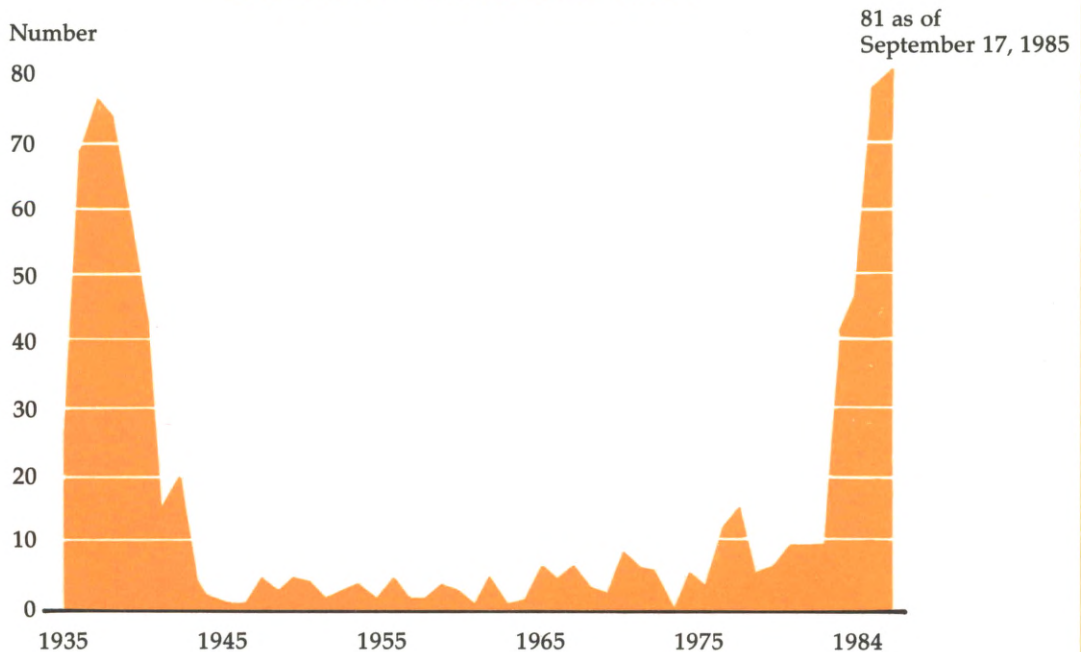
widespread that banks are troubled with loan losses and a general deterioration in their condition. One of the explanations for this state of affairs revolves around changes in the economic environment. Declining prices in the energy industry, problems in the agricultural sector, and poor economic performance by foreign

*Thomas K. Desch is the Senior Vice President of the Supervision and Regulation Department and Richard W. Lang is the Senior Vice President and Director of the Economic Research Department at the Federal Reserve Bank of Philadelphia. The authors wish to thank Mark Denesevich, Diane Mayer, and Eric Sonnheim for their able research assistance on this paper.

¹Bank failure data used in this article are failures of FDIC-insured banks, which include some savings banks as well as

commercial banks. These data include both payoffs and purchase and assumptions. The data do not include failures of savings and loans or credit unions. It should be noted that the high number of bank failures over the past few years cannot be attributed to the general economic and deregulatory environment alone. According to Attorney General Edwin Meese 3rd, bank fraud was a factor in more than half of the bank failures in recent years. See Leslie Maitland Werner, "U.S. Drive on Bank Fraud Set," *Wall Street Journal* (April 3, 1985), p. D-6.

FIGURE 1
INSURED BANK FAILURES



NOTE: Failures of FDIC-insured commercial banks and savings banks. These data do not include failures of savings and loans or credit unions.

SOURCE: Annual Report of the FDIC, 1984.

debtors have translated into substantial losses for banks on energy loans, agricultural loans, and international loans. Another prominent explanation in news reports involves the trend toward financial deregulation, which has exposed banks to stiffer competition for both depositors and loan customers.

Despite these widespread reports of problems in the banking industry, only one FDIC-insured bank failed in the Third Federal Reserve District during 1981-84 when bank failures were rising rapidly for the nation as a whole.² Indeed, a look

at several measures of bank soundness and performance reveals that the health of banks in the Third District has not deteriorated during the past few years and compares favorably with banks nationally. These measures help explain the success of Third District banks in adjusting to recent changes in the economic and regulatory environments.

BANKS' HEALTH IN A CHANGING ENVIRONMENT

The health of the banking system certainly depends in part on the health of the national economy, just as the health of individual banks is tied to the health of the region's economy in which the bank does most of its business. Banks'

²The Third Federal Reserve District includes the eastern two-thirds of Pennsylvania, the southern half of New Jersey, and the state of Delaware.

problems with deteriorating loan quality can be traced in part to the rising number of business bankruptcies resulting from the recessions of 1980 and 1982 (Figure 2). A rise in bankruptcies in the early stages of a recovery from a recession is typical in business cycles. As a result of this increase in bankruptcies, banks faced a rise in nonperforming loans—loans to businesses that are not being repaid on schedule—as well as outright losses on some business loans—called loan chargeoffs. Banks that have many of their loans turn sour find that their own health can deteriorate quite quickly.³

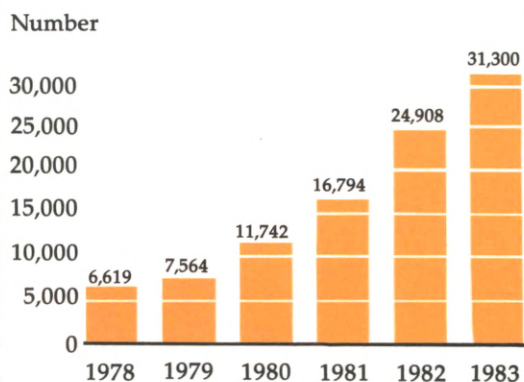
In the early 1980s, business bankruptcies increased even more sharply than usual in an economic recovery for several reasons. In addition to back-to-back recessions in 1980 and 1982—the latter of which was one of the most severe recessions in the post-World War II period—the economy in the 1980s has been experiencing a prolonged period of historically high real interest rates (that is, interest rates adjusted for expected inflation). Furthermore, some sectors of the economy suffered special problems and did not share equally in the economic recovery that began at the end of 1982. Energy conservation measures that reduced energy demand and declining energy prices resulted in cash-flow problems for businesses in the energy sector. Falling agricultural prices reduced farm income and land values. In many other industries, the rise in the value of the dollar on foreign exchange markets after 1980 increased foreign competition with U.S. producers and led to a rising trade deficit. Despite an increase in consumer and business spending between late 1982 and mid-1984 that was the strongest during the first 18 months of an economic recovery since 1949-50, foreign compe-

tion took away sales from U.S. manufacturers in domestic markets, reduced their exports, helped to hold down their prices, and thereby narrowed their profit margins. All of these factors help to explain why some sectors of the economy found it more difficult to recover from the recessions of the early 1980s, and why banks that lent to firms in these sectors found the quality of their loans deteriorating despite the economic recovery that began in late 1982.

Banks in 1982 also found that changing economic conditions in other countries affected the quality of their loan portfolios. The international debt problems of several Latin American, East European, and Southeast Asian nations came to a head in 1982 and 1983, contributing to the overall deterioration in the condition of some U.S. banks by increasing their nonperforming loans.

In addition to the problems tied to general economic conditions in the early 1980s, the banking industry also faced an increasingly competitive environment that was spurred by deregulation. Since 1980, deposit interest rates have

FIGURE 2
BUSINESS FAILURES
U. S. TOTAL



SOURCE: Dun and Bradstreet. (1984 data are not comparable to earlier data and are not available.)

³Gary Gorton has shown that, historically, business bankruptcies have been good indicators for predicting bank failures. See Gary Gorton, "Bank Suspension of Convertibility," *Journal of Monetary Economics* (March 1985), and "Banking Panics and Business Cycles," Federal Reserve Bank of Philadelphia Working Paper, forthcoming.

been progressively deregulated and barriers to competition among financial institutions for both assets and liabilities have been reduced.⁴ Banks and other depository financial institutions found in the late 1970s that money market mutual funds were competing vigorously for depositors' funds. This was primarily because banks faced regulated ceilings on the interest rates they could pay depositors, whereas the interest rates that could be paid on money market mutual funds were unregulated. To free banks and other depository institutions from this competitive disadvantage, Congress deregulated deposit interest rates in several steps, which resulted in the nationwide introduction of NOW accounts in 1980, and of MMDAs in late 1982 and Super-NOWs in early 1983. At the same time that Congress provided for the deregulation of deposit interest rates, it also permitted other depository institutions, such as savings and loan associations and credit unions, to offer transaction accounts in competition with banks and to make a wider range of consumer and commercial loans. Increased competition for both deposits and loans has meant that banks have had to run harder just to stay in place in terms of their market shares and profit margins. So although deregulation brought opportunities, it also made it

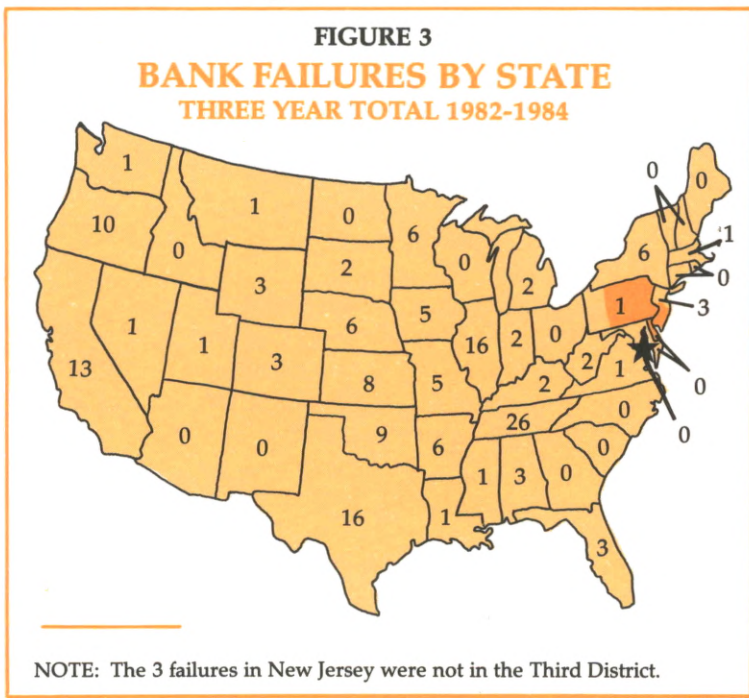
more difficult for weaker financial institutions to survive because of increased competition.

Despite the problems facing the banking industry during the past three years, not all parts of the U.S. suffered them to the same degree. Although the geographic distribution of bank failures is fairly widespread (Figure 3), there are some areas of the U.S. that have had fewer than their share of failures given the number of banks in those regions. This has been the case in the Third Federal Reserve District.

COMPARING HEALTH OF THIRD DISTRICT BANKS TO THE NATION

Banks in the Third District have not experienced the rising number of failures that banks have nationally. In fact, an examination of some of the measures used to profile banks' health shows that, on average, the condition of Third District banks in the early 1980s did not deteriorate significantly and that Third District banks generally were healthier than the national average. These measures include asset quality,

⁴For a discussion of interest rate deregulation, see Herb Taylor "The Return Banks Have Paid on NOW Accounts," this *Business Review* (July/August 1984). For a discussion of deregulation of barriers to competition for assets and liabilities, see Janice Moulton, "Delaware Moves Toward Interstate Banking: A Look at the FCDA," this *Business Review* (July/August 1983), Jan Loeys, "Deregulation: A New Future for Thrifts," this *Business Review* (January/February 1983), and Janice Moulton, "Antitrust Implications of Thrifts' Expanded Commercial Loan Powers," this *Business Review* (September/October 1984).



earnings, capital adequacy, and liquidity.⁵

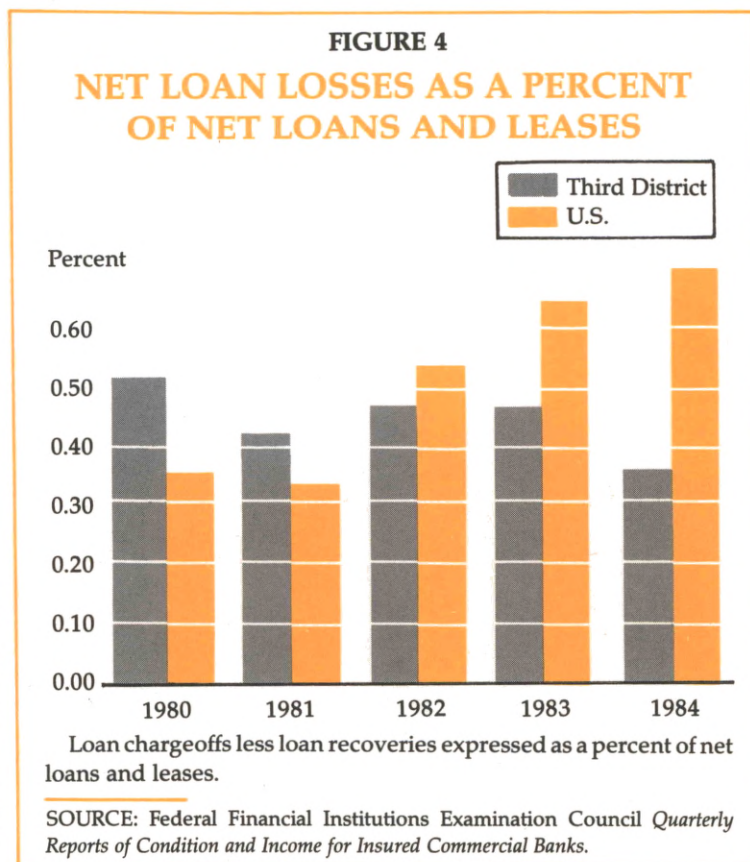
Asset Quality. Third District banks managed to avoid the severe deterioration in loan quality observed nationally. As a percent of total loans, net loan losses (chargeoffs less recoveries) for the nation roughly doubled between 1981 and 1984 (Figure 4). Although this loan-loss ratio for Third District banks began the decade at a level above the national average, the District banks' ratio has not been rising during the past few years. Consequently, this ratio has remained below the national average since 1982, and at the end of 1984 was only about half that of the national average.

A major reason for a better loan-loss experience in the Third District is that the region's economy has a diversified base of manufacturing, service, and agricultural firms. Consequently, banks in this region generally have been able to avoid concentrating their loan portfolios in one sector or industry. Diversification of banks' loan portfolios helps to cushion shocks coming from any one sector or industry, such as from energy loans, agricultural loans, or international loans.

Although Third District banks have avoided an increasing loan-loss ratio over the past several years, another aspect of banks' health to consider is whether they are in a position

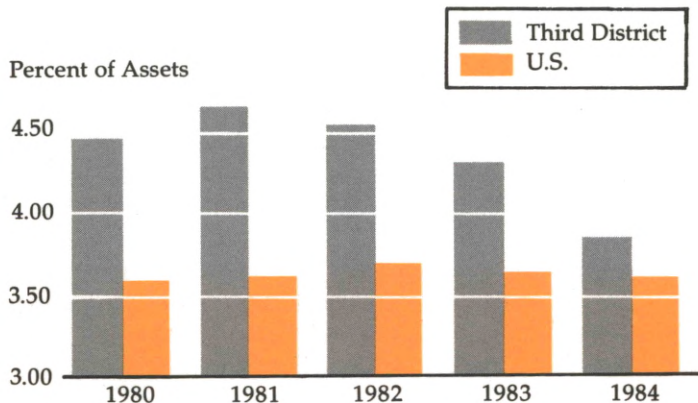
to absorb such loan losses when they *do* occur. The ability to absorb such losses depends both on banks' earnings performance—that is, whether current earnings can cover such losses—and on their capital position—that is, whether the bank has sufficient capital to cover such losses.

Earnings. Although the deregulation of deposit interest rates and heavier competition for loans and deposits in the early 1980s helped to increase banks' interest expense, banks' interest income was increasing at the same time. In fact, for the nation as a whole during this period, net interest margins (that is, net interest income as a percent of average assets) were quite stable (Figure 5, p. 8). But even though banks in the Third District have maintained higher net interest margins than the national average in the early 1980s, their margins have declined because in-



⁵Bank regulators construct a detailed profile of a bank's health based on what is called the CAMEL rating system. The CAMEL acronym stands for Capital adequacy, Asset quality, Management, Earnings, and Liquidity. For a discussion of the CAMEL rating system, see "Warning Lights for Bank Soundness: Special Issue on Commercial Bank Surveillance," Federal Reserve Bank of Atlanta *Economic Review* (November 1983).

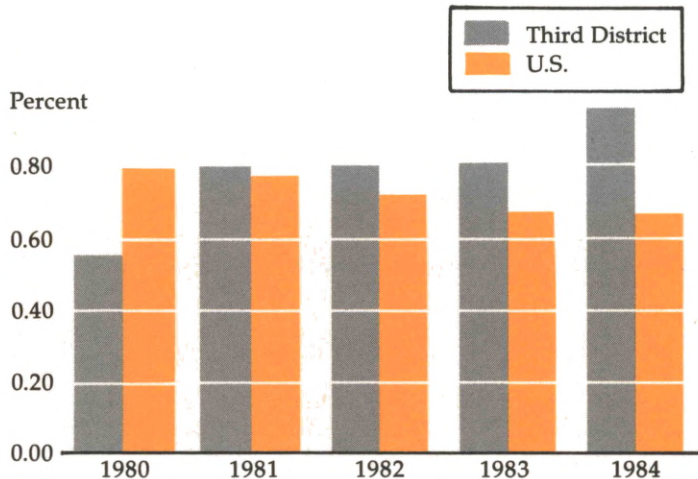
FIGURE 5
NET INTEREST MARGIN



NOTE: Net interest margin is calculated as the difference between interest income (adjusted for taxable equivalence on tax-exempt state and local securities) and interest expense, expressed as a percent of the beginning- and end-of-year assets.

SOURCE: See Figure 4.

FIGURE 6
RETURN ON ASSETS



NOTE: Return on Assets is calculated as net income as a percent of the average of the beginning- and end-of-year assets.

SOURCE: See Figure 4.

interest income in the Third District did not increase as much as interest expense. This narrowing of the net interest margin for Third District banks has been more than offset, however, by an improvement in the difference between noninterest income and expenses less taxes and extraordinary items. Consequently, earnings at Third District banks were somewhat stronger in the early 1980s than were banks' earnings in other parts of the nation. In fact, the return on average assets for Third District banks has been increasing since 1981, whereas it has been declining for banks nationally (Figure 6). The decline in return on average assets (ROA) in the national figures cannot be explained by the change in net interest margins. Instead, the decline in ROA nationally is primarily the result of mounting loan losses—both increased loan chargeoffs and additions to loan loss reserves in the expectation of future chargeoffs. Excluding such loan loss figures, banks' earnings nationally improved slightly between 1981 and 1984, although they improved even more in the Third District. So Third District banks have been better positioned to absorb additional loan losses than have banks in other parts of the nation.⁶

Capital Adequacy. Banks' pri-

⁶From these data, it appears that the claim that deregulation of deposit rates would result in a large drop in banks'

mary capital represents funds put up by stockholders of the bank (equity capital), as well as funds set aside in a reserve to cover loan losses (loan loss reserves).⁷ Because of poorer loan quality the past several years, banks nationally and in the Third District have increased their loan-loss reserves as a share of their total capital position in order to be in a better position to

earnings has not been supported by actual declines in net interest margins nationally. One explanation for this is that increased interest expenses stemming from deregulation were offset by the acquisition of higher yielding, riskier assets which later contributed to the rise in loan losses and the decline in profits. Net interest margins did decline in the Third District, however, and loan losses have not been rising in step with the national figures, suggesting that Third District banks followed a more conservative strategy in acquiring assets in response to rising interest expenses during the early 1980s.

For more discussion of the effects of deregulation on banks' profitability, see Michael C. Keeley and Gary C. Zimmerman, "Deregulation and Bank Profitability," Federal Reserve Bank of San Francisco *Weekly Letter*, July 13, 1984, and Mark J. Flannery, "Removing Deposit Rate Ceilings: How Will Bank Profits Fare?" this *Business Review* (March/April 1983), pp. 13-21.

⁷For regulatory purposes, primary capital also includes mandatory convertible debt outstanding and the bank's minority interests in consolidated subsidiaries.

absorb loan losses. As a percent of total assets, Third District banks' average loan-loss reserves increased from 0.62 percent in 1980 to 0.74 percent in 1984, while nationally this average rose from 0.54 percent to 0.74 percent (Table 1). In addition, banks nationally have been increasing their equity capital as a percent of total assets. Partly this has occurred in response to the urgings of the various bank regulators. In fact, all of the federal bank regulators have recently announced higher minimum standards for banks' capital-asset ratios.⁸

The ratios of primary capital to assets have been on an upward trend in the early 1980s for both the District and the nation, with the exception of one year, 1984, in which Third District banks' average capital-asset ratio declined (Table 1). This decline in 1984 was due largely to the early retirement of a special assistance package to one large bank, rather than to a general decline

⁸The new capital-asset ratio set by the Comptroller of the Currency and the FDIC is 6 percent, up from 5½ percent. The Federal Reserve has adopted similar guidelines, although the exact definition of what can be counted to meet the capital guidelines is somewhat different.

TABLE 1
PRIMARY CAPITAL RATIOS
(As Percent of Total Assets)

		1980	1981	1982	1983	1984
Loan-Loss Reserves	U.S.	0.54	0.56	0.60	0.66	0.74
	Third District	0.62	0.63	0.62	0.67	0.74
Equity Capital	U.S.	5.79	5.81	5.85	6.00	6.15
	Third District	6.37	6.65	6.72	6.91	6.72
Primary Capital	U.S.	6.33	6.37	6.46	6.65	6.89
	Third District	6.99	7.28	7.34	7.59	7.46

NOTE: The primary capital ratio is the sum of the loan-loss reserve ratio and the equity capital ratio.

SOURCE: See Figure 4.

in the capital-asset ratios at many of the region's banks. Despite this decline, Third District banks' capital-asset ratios have been higher than the national average throughout the 1980s. On the whole, then, Third District banks' capital has been in a good position, relative to the national average, to cover unexpected loan chargeoffs.

Liquidity. Another yardstick by which to assess a bank's ability to withstand a sudden deterioration in loan quality or a sudden loss of its depositors' confidence is generally referred to as a bank's liquidity—that is, its ability either to convert quickly some of its assets into cash or to maintain a stable source of funding its assets. Since a bank's loans are generally less easily converted into cash (that is, less liquid) than its securities holdings (particularly short-term securities), one measure of liquidity is the ratio of loans and leases to total assets. The higher this ratio, the less liquid the bank's assets.

Between 1980 and 1983, the loans-to-total-assets ratio decreased slightly for Third District banks while rising slightly for the nation (Figure 7a). Although the changes were not very large, this measure suggests that Third District banks' liquidity increased slightly over the 1980-83 period compared to the national average. The reversal of this situation in 1984 was primarily the result of the increasing numbers of new, rapidly growing banks in Delaware. These institutions are limited purpose banks that specialize in credit card or commercial lending, and consequently they maintain higher loans-to-assets ratios than full service banks.⁹ As these institutions expanded in 1984, they pulled up the overall loan-to-asset ratio for the District.

Another aspect of liquidity can be assessed by looking also at the banks' liability structure. Banks that have raised most of their funds from stable sources of deposits, such as savings and small time deposits, have a stronger base on which to

increase their assets than those banks whose major sources of funds are more volatile liabilities, such as short-term certificates of deposit sold overseas or overnight federal funds purchases. Such liabilities are called "volatile" because they tend to be sensitive to interest rate fluctuations and to swings in their holders' confidence about the bank since they are uninsured. Therefore, banks with a higher ratio of what are called core deposits to their total assets would be less subject to sudden shifts of depositors' confidence or to interest rates than banks with lower core-deposit-to-total-asset ratios.¹⁰

This core deposit ratio has been higher for Third District banks than the national average during the early 1980s (Figure 7b). In fact, the core deposit ratios for the nation and the District declined somewhat between 1979 and 1982 when market interest rates were substantially above the ceiling interest rates on core deposits. This decline was not reversed until money market deposit accounts were introduced at the end of 1982. The District's higher core-deposit ratio suggests that Third District banks had a more stable source of funding their asset growth, and in particular their loan growth, in the early 1980s than did banks in other parts of the nation.¹¹

This point is made clearer by examining the ratio of loans to banks' total sources of funds (Figure 7c) along with the first two ratios. Banks' total sources of funds is simply the sum of their core deposits and volatile liabilities. Although the mix of funding for banks nationally between

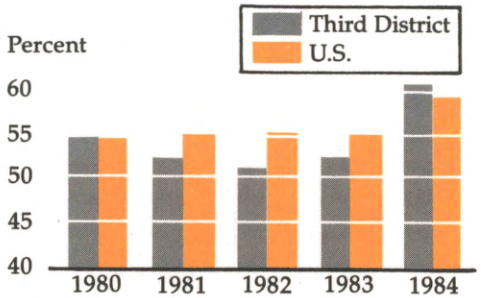
¹⁰Core deposits include all demand and savings deposits, money market deposit accounts, NOW and Super-NOW accounts, and time deposits in amounts less than \$100,000; volatile liabilities include all time deposits in amounts of \$100,000 or more, deposits of foreign offices, federal funds purchased, securities sold under agreements to repurchase, interest-bearing demand notes issued to the U.S. Treasury, and other liabilities for borrowed money.

¹¹The same conclusion emerges from comparing the ratios of volatile liabilities to total assets for the Third District and the nation. It should be noted that the increasing numbers of new, rapidly growing limited purpose banks in Delaware pulls down the core-deposit-to-assets ratio for the Third District banks in 1984.

⁹For more information about these limited purpose banks in Delaware, see Moulton, "Delaware Moves Toward Interstate Banking: A Look at the FCDA," this *Business Review* (July/August 1983).

FIGURE 7a

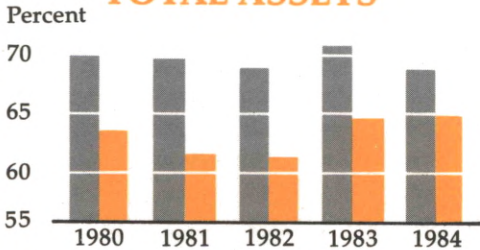
NET LOANS AND LEASES TO TOTAL ASSETS



Total loans and leases less reserves for loan losses expressed as a percent of total assets.

FIGURE 7b

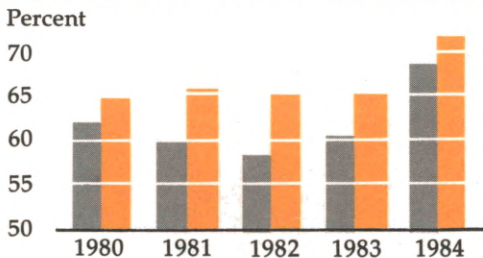
CORE DEPOSITS TO TOTAL ASSETS



Total domestic deposits less large CDs (over \$100,000) as a percent of total assets.

FIGURE 7c

LOANS AND LEASES TO TOTAL SOURCES OF FUNDS



Net loans and leases as a percent of the sum of: domestic and foreign deposits, federal funds purchased, securities sold under agreement to repurchase, U.S. notes and other borrowings, less cash items in the process of collection.

SOURCE: See Figure 4.

1980 and 1983 was shifting away from core deposits toward more volatile liabilities, their loans-to-total-sources-of-funds ratio changed little, while this ratio declined for Third District banks between 1980 and 1982. Combining this with the changes in the core deposit and loan-to-asset ratios shows that banks nationally were funding their less-liquid assets (loans) with more volatile sources of funds. Third District banks between 1980 and 1982 were decreasing the share of loans in their total asset structure, were decreasing loans relative to their total sources of funds, and were not increasing their funding of their loans through the use of more volatile sources of funds. In sum, Third District banks maintained a better liquidity position than the national average in the early 1980s.

SUMMARY

Despite widespread problems in the banking industry due to the changing economic and de-regulatory environments in the early 1980s, the condition of Third District banks did not deteriorate substantially over the past several years. Indeed, a comparison of measures used to profile banks' health reveals that Third District banks generally have been in good condition and compare favorably to banks nationally. This better health in the early 1980s was reflected in better loan quality, solid earnings performance, higher capital ratios, and a better overall liquidity position. As a result, Third District banks have been better able to adjust to recent changes in the economic and regulatory environments than have banks in other parts of the nation. This undoubtedly has helped banks in this region to avoid the financial difficulties that have plagued banks in other parts of the country during the past several years.

The Research Department of the Federal Reserve Bank of Philadelphia occasionally publishes working papers based on the current research of staff economists. These papers deal with virtually all areas within economics and finance. From time to time, the results of studies that are of general interest are summarized in the Business Review. The analyses and conclusions expressed are solely those of the authors and do not necessarily represent the views of the Federal Reserve Bank of Philadelphia or of the Federal Reserve System.

A list of all available papers may be ordered from WORKING PAPERS, Department of Research, Federal Reserve Bank of Philadelphia, 10 Independence Mall, Philadelphia, Pennsylvania, 19106. Single copies of papers may be ordered from the same address. For overseas airmail requests only, a \$2.00 per copy prepayment is required.

The Effect of Recent Tax Reform Proposals on the Return to Owner-Occupied Housing

Theodore Crone

Three major tax reform proposals have recently been presented to the Congress: Bradley-Gephardt (S.409); Kemp-Kasten (H.R.777); and an Administration proposal. This working paper examines the effect of these three proposals on the homeownership decision. By altering the tax advantages to homeownership, all three proposals would increase the user cost of owner-occupied housing. This has raised concerns that the reforms would also lower the homeownership rate in the U.S., that is, the proportion of households who own their principal place of residence rather than rent. In this paper, the homeownership decision is analyzed as an investment decision in which a household invests its accumulated wealth in that asset which promises the highest after-tax rate of return. This return will be dependent upon the tax advantages of homeowners as well as on the implicit rent they receive from their property.

A number of provisions in the three proposals would lower the value of the current tax advantages enjoyed by homeowners, thus raising the cost of owning a home. These include a reduction in marginal tax rates, an increase in the standard deduction, the elimination of some non-housing deductions, and, in the Administration proposal, the elimination of the deduction for state and local property taxes. The yearly economic cost of owning a home is the sum of mortgage payments, maintenance costs, property taxes, and forgone interest on equity minus capital gains. Let us consider a three-person household with one wage earner and an annual income of \$40,000 who buys an \$80,000 house with a 20 percent down payment. With the interest rates that prevailed in January 1985 and under the assumption of a 5 percent inflation rate, the after-tax economic cost of living in this home for the first year would be \$7,391 under the current tax law. This cost would rise by 23 percent under Bradley-Gephardt, by 8 percent under Kemp-Kasten, and by 20 percent under the Administration proposal.

These estimated increases presume no change in interest rates or rents as a result of changes in the tax law. However, both interest rates and rents can be expected to change if any of the tax reform proposals becomes law. A reduction in marginal tax rates is likely to reduce the equilibrium interest rate by the amount that would keep the after-tax rate for the marginal borrower unchanged. This would imply a 7 percent reduction in the rates which prevailed in January 1985.

There are also provisions in each of the tax reform proposals which would increase rents. These provisions include lower marginal tax rates for landlords, an increase in the capital gains tax rate, and, in the Administration proposal, a longer depreciation period. Others have estimated that rents would rise by 6 percent under Kemp-Kasten and by 10 percent under Bradley-Gephardt or the Administration proposal. While rent increases do not affect the cost of homeownership, they will influence the homeownership decision since the untaxed imputed rent which the homeowner enjoys represents a major portion of the return on his investment.

The homeownership decision in this study is viewed as a choice between alternative investments, in this case between owner-occupied housing and government securities. Based on a ten-year expected length of residence, the critical income level above which a three-person household would fare better by investing in an owner-occupied house under current law is \$30,000.

With no changes in interest rates or rents this critical income level would rise to \$68,000 under Kemp-Kasten or the Administration proposals. Under Bradley-Gephardt this household would fare better by investing in a home only if its expected length of stay were 17 years and its income \$71,000 or more. The longer length of stay required under Bradley-Gephardt is due to the fact that the major tax advantages come later in the period of residence because the repeal of indexation increases real marginal tax rates over time.

If we assume that market interest rates fall by 7 percent because of the adoption of any of the reform proposals and that rents rise by 6 percent under Kemp-Kasten and by 10 percent under the other two proposals, the critical income level for our hypothetical three-person household falls dramatically. For Kemp-Kasten it is \$24,000, for Bradley-Gephardt it is \$30,000, and for the Administration proposal it is \$33,000. Even though the after-tax cost of homeownership would rise under any of the proposed tax reforms, the results of this study suggest that because of offsetting effects from lower interest rates and higher rents the homeownership rate may actually increase under Kemp-Kasten or Bradley-Gephardt and decline only slightly under the Administration proposal.

The Philadelphia Area Economy: Faster Growth in the 1980s?

*John M. L. Gruenstein**

In the 1970s, economic growth in the Philadelphia area was slow, both absolutely and relative to the nation as a whole. Payroll employment growth, a commonly used measure of regional economic activity, lagged far behind the rest of the country. This, in turn, helped push the unemployment rate in the region significantly above the national average. By the end of the decade there were worries that the region was

locked into a downward spiral of self-reinforcing slow growth, destined to be outperformed by booming areas elsewhere, especially in the South and West.

So far in the 1980s, the region's economy has shown a fairly small increase in absolute growth rates, but a very large increase relative to the nation. The large gap between annual average employment growth in the nation and in the region that characterized the 1970s has been greatly reduced. The region's unemployment rate has dipped below the U.S. average, and income is growing faster regionally than nationally.

*John M. L. Gruenstein is a Vice President and Economist in the Research Department at the Federal Reserve Bank of Philadelphia.

Whether the upturn in absolute and relative growth rates of regional economic indicators will persist is of concern to a variety of groups with interests in the region. Local bankers, for instance, want to keep an eye on potential future growth in loans and deposits, and on how this market will compare to others around the country. Real estate investors want to judge the level of new office and industrial development that is sustainable here, again in both absolute terms and relative to the rest of the nation. Policymakers want to be able to plan for changes in services and in the tax base, and to assess the effect of local economic development initiatives on local employment growth and unemployment rates. Future rates of growth in bank loans, deposits, office and industrial space, taxes, and public services are all related to future rates of growth of general regional economic indicators, such as employment.

Different explanations about what underlies the upturn lead to different expectations about its continuation. One possible explanation for the upturn in relative performance is the region's reaction to the longer period of recessions in the 1980s than in the 1970s. A second explanation often mentioned is the shift of employment from the slow-growing manufacturing sector to the fast-growing service sector in the region and the nation. Trying to assess the relative importance of these two factors gives some insight into the likely persistence of the turnaround in the region's relative economic performance.

REGIONAL ECONOMIC PERFORMANCE: THE 1970s VERSUS THE 1980s

The most striking aspect of

the Philadelphia metropolitan area's economic performance in the 1980s is its sharp improvement relative to the nation since the 1970s. While the change in the absolute performance of the region between the two periods included some gains, a variety of commonly used economic indicators all showed much smaller gaps between the region and the nation in the 1980s.

Absolute Performance Mixed. Measures of both employment and income for the Philadelphia Primary Metropolitan Statistical Area (PMSA) indicate that there was faster growth in the 1980s than in the 1970s, although in some cases the change was not very large (Table 1).¹

¹The Philadelphia PMSA includes Philadelphia, Bucks, Chester, Delaware, and Montgomery counties in Pennsylvania and Burlington, Camden, and Gloucester counties in New Jersey.

TABLE 1
GROWTH IN THE PHILADELPHIA PMSA
THE 1970s VERSUS THE 1980s

	Percentage Growth (Average Annual Rate)		Difference
	1970s	1980s	
Payroll Employment	+0.7	+0.8	+0.1
Residential Employment	+0.9	+1.2	+0.3
Real Personal Income	+1.0	+2.0	+1.0
Real Income Per Capita	+1.2	+1.7	+0.5
Unemployment Rate (level)	6.8	8.6	+1.8
Population ^a	-0.2	+0.3	+0.5

NOTE: For employment and unemployment, the 1980s include Jan. 1980 to Feb. 1985. Data are seasonally adjusted. For income, income per capita, and population, data are annual averages, and the 1980s include 1980 to 1983. The deflator for both Philadelphia income and U.S. income is the U.S. Consumer Price Index for all urban workers, which is not available separately for Philadelphia for 1970.

^aPopulation is included in order to give information about the differences between income and income per capita, and employment and unemployment.

Two measures of regional employment flashed mildly positive signs in the first half of the 1980s: both payroll employment and residential employment recorded some acceleration in growth between the 1970s and the early 1980s. Employment is the summary indicator most commonly used by regional economists to measure the performance of metropolitan area economies. Employment is fairly well correlated with overall regional economic production (also termed Gross Regional Product, a statistic which is not consistently available for metropolitan areas), and employment is available on a much more timely basis than income.² The differences between the two employment measures stem

from a variety of factors; a good part of the faster growth in residential employment in recent years probably reflects larger percentage gains in the number of self-employed people compared to those on company payrolls. (See MEASURING EMPLOYMENT: A JOB IS A JOB IS A JOB?)

Data on income growth gave a more favorable reading. Between 1980 and 1983, the last year for which data are available, total real personal income grew at a 2.0 percent annual rate—double the 1.0 percent rate of the prior decade. Total real income grew faster than employment principally because of faster growth in non-labor income—dividends, interest, rent, and transfer payments—rather than growth in wages and salaries. Per capita income growth also accelerated, but at a slower rate than total income, because of a rise in population in the 1980s compared to a loss in the 1970s.

Unemployment was up, a negative signal. Despite the fact that employment growth exceeded population growth, the 1980s marked a

²Currently Gross Regional Product figures are not available for the Philadelphia PMSA. In the past they were estimated by Wharton Econometric Forecasting Associates (quarterly), and by the City Economist for the City of Philadelphia (annually). Both sets of estimates were based primarily on payroll employment data.

MEASURING EMPLOYMENT: A JOB IS A JOB IS A JOB?

There are two generally available monthly employment series for the Philadelphia PMSA, *payroll employment* and *residential employment*. While these two series give about the same picture for the region's performance relative to the nation, they have significant differences in definition and coverage.

The payroll employment series (also referred to as the establishment or nonagricultural series) is derived from a monthly survey of a sample of business establishments conducted in conjunction with the state unemployment compensation program. The residential employment series (also referred to as the household survey) is derived from the monthly Current Population Survey of households. There are a number of conceptual and practical differences between the two series. Payroll employment does not include the self-employed, unpaid family workers, domestic workers, and workers absent from their jobs without pay. All are included in the residential series. Payroll employment measures employment by place of work, whereas residential employment measures it by place of residence, so commuters into or out of the metropolitan area would cause a divergence between the two series. Multiple jobholders are counted more than once in the payroll series, but only once in the residential series. Only workers over 16 are included in the residential series, but workers of all ages are included in the payroll series. Finally, since each series is derived from a sample, each is subject to variations in the particular sample drawn, which may be different from the entire group of business establishments and households. Since the samples for the two surveys are totally different, this sampling variation would also be different for the two groups.

For more information about the difference between the two series, see John F. Stinson, Jr., "Comparison of Nonagricultural Employment Estimates from Two Surveys," *Employment and Earnings*, March, 1984 and Gloria P. Green, "Comparing Employment Estimates from Household and Payroll Surveys," *Monthly Labor Review*, December, 1969.

hefty increase in the local unemployment rate.³ The rise was caused by a larger percentage of the population entering the labor force in the 1980s.

Broad Relative Improvement. Judging the Philadelphia area's economy in isolation gives a somewhat misleading picture of the region's underlying economic performance, however. As with all regions, the Philadelphia area's economic fate is linked closely to that of the national economy. One linkage is through demand for locally produced products. According to estimates by Professor Anita Summers of the Wharton School of the University of Pennsylvania, almost 90 percent of this area's manufacturing output and 25 percent of its non-manufacturing output is sold outside the region, fairly typical figures for regions of this size.⁴ Because of this strong demand-side linkage, the region's economy is greatly affected by national business cycles. Other examples of linkages are through national demographic shifts and national government policies, both of which have had strong impacts on unemployment rates and the growth of different income components.⁵ Look-

ing at the Philadelphia area economy's performance relative to the national economy's helps separate out national from local economic factors and shows a very clear picture of improvement in the early 1980s.

A common way to compare the region's performance to the nation's over time is to look at the gap—that is, the difference—between the national rate of growth of some measure of economic activity, like employment or income, and the regional growth rate for the same indicator.⁶ Improvement in the region's economic performance relative to the nation can be defined as a reduction in the resulting gap, if it was negative to begin with, or a change from a negative to a positive gap. Using this definition, all of the commonly used broad economic indicators relay the same message: substantial relative improvement in the Philadelphia area's economy between the 1970s and the 1980s (Table 2).

The payroll employment growth gap between the Philadelphia metropolitan area and the nation has shrunk from 1.8 percentage points per year in the 1970s to only 0.5 percentage points per year during the last five years. Residential employment showed virtually the same improvement relative to the nation as payroll employment.

Income showed even larger gains relative to the nation than its absolute gains over the period. Total real income grew more slowly in the region than in the nation in the 1970s, but in the early 1980s the gap reversed, with the Philadelphia area outstripping the U.S. The change in relative terms was a gain of 1.7 percentage points, compared to an absolute improvement of 1.0. Per capita income also reversed a negative gap, to post a 1.1 percentage point per year improvement relative to the nation, about double its

³As with employment data, there is more than one source for unemployment data. The series presented in the text is an annual average of Current Population Survey data, which is the basis for the U.S. rate; this is generally regarded as the most accurate figure for unemployment on an annual basis. A second series, which is prepared monthly by the Pennsylvania State Office of Employment Security from a survey of firms, shows an even more dramatic regional turnaround, with the Philadelphia rate falling below the U.S. rate at the very beginning of the 1980s.

⁴See Anita A. Summers and Thomas F. Luce, *Economic Report on the Philadelphia Metropolitan Area, 1985* (Philadelphia: University of Pennsylvania Press, 1985).

⁵Thus, national comparisons can help adjust for changes over time in the way some regional economic indicators reflect actual underlying conditions. High unemployment rates in many regions of the U.S. over the last ten years, for example, probably reflect much more than specifically regional economic conditions; rather, high rates are related to a host of nationwide factors, including changes in the age structure of the population, increased participation of women in the labor force, changes in regulations regarding unemployment compensation and welfare, and cultural attitudes. For

further discussion, see Norman Barrens, "Have Employment Patterns in Recessions Changed?", *Monthly Labor Review*, February, 1981, pp. 15-28.

⁶Ratios of growth rates have been calculated for the variables examined in this study and the results show a picture similar to those for differences.

TABLE 2
PHILADELPHIA PMSA—U.S.
REGIONAL GAP

	Percentage Change (Average Annual Rate)		Difference
	1970s	1980s	
Payroll Employment	-1.8	-0.5	+1.3
Residential Employment	-1.4	-0.2	+1.2
Real Personal Income	-1.4	+0.3	+1.7
Real Income Per Capita	-0.1	+1.0	+1.1
Unemployment Rate (level)	+0.6	+0.3	-0.3
Population	-1.3	-0.7	+0.6

NOTE: See Table 1.

improvement in absolute terms.

Unemployment also showed a large relative improvement in the region, even though in an absolute sense it worsened. During the latter half of the 1970s, the region's unemployment rate remained suspended above the U.S. rate—by as much as 2 percentage points toward the end of the period. This positive gap persisted in 1980 and 1981, but in 1982 the situation turned around dramatically. Over the past three years, the Philadelphia region's unemployment rate has been lower than the nation's, with the difference reaching almost a full percentage point by 1984. Overall, the *average* gap between the Philadelphia area and U.S. unemployment rates shrank from 0.6 percentage points in the 1970s to half that size during the first five years of the current decade.

These figures suggest that Philadelphia's performance improved relative to the nation for all the commonly used broad indicators of economic performance in the first half of the 1980s. But is the improvement likely to persist? The answer to that question hinges on understanding the source of the improvement. Two of the most prominent explanations involve the region's reaction to the national business cycle and the

shift of employment from manufacturing to services. And each leads to different expectations about the future.

PHILADELPHIA'S REACTION TO BUSINESS CYCLES

Any region's economy is likely to fluctuate with the nation's—more specifically, the *absolute* rate of economic growth will rise and fall over the business cycle, almost invariably moving in the same direction as national growth. What is less obvious is that the pattern of *relative* performance—the difference between a region's rate of growth and the nation's—may also vary

systemically between expansions and contractions.

The pattern of the Philadelphia area's relative rate of growth over the national business cycle could account for the region's relative improvement in the early 1980s. Somewhat paradoxically, while the longer period of recessions in the 1980s than in the 1970s probably depressed the region's *absolute* performance, it could actually have contributed to the area's improved performance *relative to the nation*. This is because the Philadelphia area's economic structure is such that historically the gap between national and regional economic growth has been smaller during recessions than during expansions.

Smaller Gaps in Recessions. The best commonly available indicator for investigating the cyclical pattern of a metropolitan area's relative economic performance is payroll employment.⁷

⁷ Employment data are available monthly, allowing a more precise division of the period under study into business cycles than annual data such as income, and are also much more up-to-date than income data for metropolitan areas. Payroll employment data are also available as a consistent series for a much longer time period than residential employment and unemployment data.

In the Philadelphia metropolitan area this indicator has shown a very consistent pattern relative to the nation (Table 3). The gap between payroll employment growth in the region and the nation narrows and sometimes even reverses—that is, turns positive—during recessions or periods of slow national growth. During expansions, however, the gap widens.⁸ In fact between 1958 and 1985, the gap between employment growth in the Philadelphia region and the nation has been larger (more negative) during *any* expansion compared to *any* recession.

The region's pattern of relative performance over the business cycle—smaller gaps in recessions and larger gaps in expansions—probably stems from several factors. For one thing, Philadelphia's economy is very diversified, and therefore more resistant to swings in particular industries. In addition the Philadelphia area's economy is probably better at retaining jobs in existing firms than it is at generating jobs through expansions of area firms, openings of new branch plants, and start-ups of new firms.⁹ Since more job generation takes place nationally during expansions than recessions, this would tend to enlarge the employment growth gap during expansions and reduce it during recessions.¹⁰

⁸This is equivalent to saying that employment in the Philadelphia region is more stable over the business cycle than national employment.

⁹For a general discussion of this issue, see John M.L. Gruenstein, "Targeting High Tech in the Delaware Valley", this *Business Review*, May-June, 1984.

¹⁰See David Birch, *The Job Generation Process*, M.I.T. Program on Neighborhood and Regional Change, Final Report to Economic Development Administration, 1979. Birch finds

TABLE 3
PAYROLL EMPLOYMENT CHANGE
EXPANSIONS AND RECESSIONS,
1958-1984
(Average Annual Rate)

Recessions	Date	Philadelphia — U.S.
1960s	4/60 — 2/61	+0.8%
1970s	12/69 — 11/70 11/73 — 3/75	-0.9% -0.6%
1980s	1/80 — 7/80 7/81 — 11/82	+0.8% +0.9%
Expansions	Date	Philadelphia — U.S.
1960s	4/58 — 4/60 2/61 — 12/69	-1.8% -1.0%
1970s	11/70 — 11/73 3/75 — 1/80	-2.3% -1.9%
1980s	7/70 — 7/81 11/82 — 2/85	-0.9% -1.3%

Longer Recessions Key to Relative Improvement? Whatever the reason for the Philadelphia

that, in general, the difference between fast- and slow-growing areas is that the former have a greater rate of new job creation through expansions of existing firms and openings of new firms and branch plants. Birch has not looked explicitly at business cycle behavior of different places, but since more job generation takes place during expansions, his results would seem to imply that the employment growth gap between fast- and slow-growing places should be larger during expansions than during contractions. Empirical studies do not show this pattern to be a characteristic of slow-growing areas generally, however, even though it does clearly describe Philadelphia's reaction to business cycles. Two somewhat different sets of results are presented in Janet Rothenberg Pack, *Regional Growth: Historic Perspective* (Washington, D.C.: Advisory Council on Intergovernmental Relations, 1980) and Marie Howland, "The Business Cycle and Long-Run Regional Growth" in William C. Wheaton, ed., *Interregional Movements and Regional Growth* (Washington, D.C.: Urban Institute, 1979).

area's smaller employment growth gaps during recessions than during expansions, this clear-cut cyclical pattern may provide the key to the area's improved relative performance during the 1980s. About 36 percent of the time between January 1980 and February 1985 was spent in recession, when the gap usually narrows or reverses. Only 22 percent of the 1970s was spent in recession, however. So Philadelphia's relative improvement in the early 1980s could be due just to the unfortunate fact that substantially more time than in the 1970s was spent in recessions, periods when the region's relative economic performance generally improves.

To the extent that the relative improvement of the 1980s was a result of longer periods of national recession, Philadelphia's relative economic improvement cannot be interpreted as a change for the better in the underlying structure of the local economy. Rather it would represent an unchanged response to external forces. If the second half of the 1980s were to be marked by mostly expansionary periods, this would tend to weaken the area's relative performance once again. Further, this cause of relative improvement presents a kind of Catch-22—a better relative performance due solely to longer recessions would almost certainly imply a worse absolute performance.

If this explanation holds, then we should find that the employment growth gaps of the region *during* the expansions of the 1980s were about the same as during the expansions of the 1970s, and similarly for recessions. But, in fact, the gaps for the expansions of the 1980s were uniformly smaller. The largest gap during the two expansions of the 1980s, -1.3 percent, was smaller than the smallest gap during the 1970s, -1.9 percent. Comparing recessions from both periods shows an even more striking pattern. In both recessions of the 1970s the Philadelphia region lost jobs at a faster rate than the nation. In the 1980s the opposite occurred; the Philadelphia region outperformed the nation in the sense that it lost jobs more slowly during recessions.

To help settle the issue of how much the longer

period of recessions in the 1980s added to the Philadelphia area's relative improvement, we can ask a hypothetical question. What would the relative growth rate of employment have been in the early 1980s if the percentage of time spent in recession had been as low as that of the 1970s? The total employment growth gap for each period is the sum of the gaps during the expansions and recessions of that period, weighted according to their length. So the calculation is made by combining the growth gaps of the 1980s expansions and recessions with the weights of the 1970s. This calculation shows that most of the reduction in the employment growth gap between the two periods would have occurred even if the total time spent in recession in the 1980s had been the same as in the 1970s. The longer period of recessions in the 1980s accounts for less than 25 percent of the reduction in the gap.¹¹

Thus, most of the closure of the relative employment growth gap was due to better relative performance during both expansions and recessions in the early 1980s, rather than just the longer period of recessions characterizing that period. This indicates that the relative improvement is the result of fundamental changes in the struc-

¹¹To calculate how much the longer period of recessions of the 1980s contributed to the improved relative performance of the region, assume that the percentage of time spent in recessions in the early 1980s was 22 percent, as it was in the 1970s, rather than the actual figure of 36 percent. Apply this lower percentage to the average employment growth gap of the 1980s during recessions, which was +0.9 percent. Make a similar calculation for the expansions, using the higher percentage of time spent in the expansions of the 1970s, 78 percent, applied to the average employment growth gap during the expansions of the 1980s, -1.1 percent. Add the two results. The sum, -0.8 percent, is the employment growth gap for the 1980s that would have obtained if the percentage of time spent in recession in the early 1980s had been as low as it was in the 1970s. The actual employment growth gap for the early 1980s was -0.5, which is 0.3 percentage points smaller than the -0.8 calculated. Since the actual reduction in the gap from the 1970s to the 1980s was 1.3 percentage points, the longer period of recession in the 1980s accounted for 23 percent (0.3/1.3) of the reduction in the gap.

ture of the Philadelphia area's economy relative to the nation, which argues for a greater likelihood that the relative improvement will persist.

SHIFT TO SERVICES

One fundamental change that has often been advanced as an explanation for the region's relative improvement is the shift of employment from goods-producing industries to services-producing industries. This is a trend that has been occurring nationally and regionally, and the shift has been more marked in the Philadelphia area.

Changing Industrial Composition. Between 1970 and 1980 the national and regional shares of employment declined for goods-producing industries—generally defined to include construction, manufacturing, and transportation, communications, and public utilities—and rose for services-producing industries—generally defined to include wholesale and retail trade, finance, insurance, and real estate, general services, and government (Table 4). The sharpest

changes were the drop in the share of manufacturing employment and the increase in the share of employment in general services; the latter includes such industries as health, higher education, business services, legal services, personal services, repair services, and social services.

The changes in shares for the U.S. came about because of much faster growth in services than in manufacturing during the 1970s, whereas the change in shares in Philadelphia reflected a large absolute loss of manufacturing jobs combined with gains in the service sectors (Table 5). In the early 1980s, Philadelphia maintained a relatively unchanged growth pattern, in absolute terms, except for increases in the construction and trade sectors and a drop in the government sector. The U.S., however, changed from a gainer to a loser of jobs in all the goods-producing sectors, at the same time that employment in all the services-producing sectors slowed sharply.

The shift of employment shares out of manufacturing and into services in the 1970s, both

TABLE 4
SECTORAL COMPOSITION OF PHILADELPHIA AND
THE U.S. HAS SHIFTED TOWARD SERVICES

SECTOR	EMPLOYMENT SHARES					
	Philadelphia PMSA			U.S.		
	1970	1980	1985	1970	1980	1985
Construction	4.5	4.1	4.1	5.1	5.1	4.7
Manufacturing	31.7	23.3	19.9	28.4	23.3	20.4
Transportation, Communications, and Public Utilities	5.9	5.2	4.8	6.4	5.8	5.4
Trade	20.1	21.7	23.0	21.2	22.7	23.8
Finance, Insurance, and Real Estate	5.6	6.5	6.9	5.1	5.7	6.1
General Services	17.8	23.5	27.0	16.2	19.5	22.4
Government	14.5	15.7	14.4	17.5	17.9	17.3

NOTE: Data are seasonally adjusted for Jan. 1970, Jan. 1980, and Feb. 1985. Mining is excluded for the U.S. For the Philadelphia PMSA, the mining sector is small and is included in General Services.

nationally and regionally, by itself accounted for some of the narrowing of the total employment growth gap in the 1980s. The growth gap for the services sector was smaller than the manufacturing growth gap—indeed, services was the sector with the smallest gap. Because of this, the shift to services essentially increased the weight given to the smallest gap included in the total employment growth gap. The effect of this shift, then, was to narrow the total employment growth gap, and this would have been the case even if the difference between the sectoral growth rates—that is, the sectoral growth gaps—had remained unchanged.¹²

¹²The exact formula for the total employment gap can be expressed as the weighted (by the regional percentage of employment in each sector) sum of the differences between the regional sectoral growth rates and *weighted* national sectoral growth rates, where the weight on each national sectoral growth rate is the ratio of the national percentage of employment in that sector to the regional percentage of employment in that sector. The greater relative shift of employment from manufacturing to services in the region than

Most of Improvement Due to Smaller Sectoral Growth Gaps. Although the shift from manufacturing to services explains part of the relative improvement of the regional economy, most is explained by faster relative rates of growth of the individual sectors in the 1980s. The pattern of sectoral growth gaps (Table 6, p. 22) shows clearly the large impact of faster sectoral growth on the reduction in the total employment growth gap in the early 1980s. The growth rate gaps of all major sectors except government have declined by substantial amounts over the past five years. More than 80 percent of the overall reduction in the total employment growth gap in the

in the nation, therefore, would have caused a further reduction in the total employment growth gap, over and above that caused by the general shift to services in both the region and the nation. Because the percentage composition of employment in the region is close to the nation's, however, the simple difference between the regional and national growth rates provides a close approximation to the more precisely defined gap.

TABLE 5
GROWTH RATES OF EMPLOYMENT BY SECTOR
(Average Annual Rate)

Sector	Philadelphia PMSA		U.S.	
	1970s	1980s	1970s	1980s
Construction	-0.1	+0.5	+2.6	-0.2
Manufacturing	-2.3	-2.3	+0.4	-1.4
Transportation, Communications, and Public Utilities	-0.5	-0.7	+1.4	-0.1
Trade	+1.5	+1.9	+3.1	+2.2
Finance, Insurance, and Real Estate	+2.2	+2.0	+3.5	+2.6
General Services	+3.6	+3.5	+4.4	+3.9
Government	+1.5	-0.9	+2.7	+0.5

NOTE: Data are seasonally adjusted for Jan. 1970, Jan. 1980, and Feb. 1985.

TABLE 6
ALL PRIVATE SECTORS
SHOW SMALLER
EMPLOYMENT GROWTH GAPS
IN THE 1980s

Sector	Employment Growth Gap Philadelphia — U.S.		Difference
	1970s	1980s*	
Construction	-2.7	+0.7	+3.4
Manufacturing	-2.8	-0.9	+1.9
Transportation, Communications, and Public Utilities	-1.9	-0.6	+1.3
Trade	-1.6	-0.3	+1.3
Finance, Insurance, and Real Estate	-1.3	-0.6	+0.7
General Services	-0.8	-0.4	+0.4
Government	-1.2	-1.3	-0.1

*Jan. 80—Feb. 85.

1980s is accounted for by faster relative growth of individual sectors, and less than 20 percent is due simply to the shift from goods-producing to services-producing sectors of the 1970s.¹³

Given their relative contribution, how should

¹³This calculation is made by taking the weighted sum of the 1980 Philadelphia sectoral growth rates, using 1970 employment shares as weights, and subtracting from it a similar weighted sum calculated for the U.S. The reduction in the total employment growth gap calculated this way is what would have occurred if no shift of employment to services-producing sectors had taken place in either Philadelphia or the nation between 1970 and 1980. This hypothetical reduction is less than 20 percent of the actual reduction.

A further calculation has been done to assess the effect of simultaneously assigning the sectoral weights and the length of recessions their 1970 values. This shows that combining the two effects simultaneously is approximately the same as adding the two effects together.

the two components of the reduction in the total employment growth gap—the shift to sectors with smaller gaps, like the services, and the reduction in the sectoral growth gaps themselves—be viewed with regard to their impact on future relative performance of the region's economy?

The shift of employment towards services represents a fundamental change in the area's and the nation's economic structure that is unlikely to be greatly reversed. If it is not, and as long as the individual sectoral gaps remain about the same, this prior shift would continue to contribute to a permanent narrowing of the employment growth difference between the region and the nation, but the contribution would be limited.

The fact that most of the Philadelphia area economy's relative improvement in the early 1980s was due to smaller gaps for almost all sectors of the economy, rather than a shift from one sector to another, is a cause for greater optimism about the region's future relative performance. It implies that there is no necessary limit on how far the total gap could close, or even reverse. And the across-the-board nature of the sectoral improvement would appear to point to general factors at work rather than special factors that might be more easily reversed.

IN SUM

During the early 1980s, the absolute performance of the Philadelphia area economy strengthened somewhat (except for a rise in the unemployment rate), despite a substantial slowdown in the growth rates of employment and income at the national level. The result was a very significant improvement in the Philadelphia region's

economic performance relative to the nation. Although it is normal for the region's relative performance to improve during times of slow national economic growth, the extent of the improvement indicated that there were more fundamental forces at work than merely longer periods of recessions in the nation. Furthermore, even though the relative improvement was related to the shift of employment from goods-producing sectors to services-producing sectors, which entailed large absolute declines in manufacturing employment in the region during the 1970s, most of the relative improvement of the 1980s has been the result of smaller employment growth gaps for all private sectors of the local economy. The combined effects of the shift to services and longer recessions in the 1980s ac-

count for no more than 45 percent of the reduction in the employment growth gap between Philadelphia and the nation.

Thus, the trends of the past five years are a source of optimism that the economic performance of the region can continue to be close to that of the nation through the end of the decade. Ten years ago, Philadelphia would have been ranked in a low position relative to the rest of the nation in terms of economic growth. Based on experience so far in the 1980s, this would no longer appear to be the case. So businesses and investors scanning the country for relatively fast-growing markets should have more reason than before to conclude that, on the whole, they'd rather be in Philadelphia.



**Business Review
Federal Reserve Bank of Philadelphia
Ten Independence Mall
Philadelphia, PA 19106**

Address Correction Requested