THE REGIONAL ECONOMY

OF UPSTATE NEW YORK

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Small Business Survey

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Regional Business Cycles in New York State

Economists commonly refer to the pattern of expansion and recession in the U.S. economy as the business cycle. A recession is a significant decline in activity that affects all sectors of the economy and that lasts more than a few months; it begins just after the economy reaches a peak of activity and ends as the economy reaches a trough. As business activity contracts during a recession, output and employment decline, and earnings and spending also come under downward pressure. Between trough and peak, the economy is in an expansion—its normal condition in the United States. The U.S. economy has contracted only 15 percent of the time since 1950, and most recessions have been fairly brief.

National business cycles are closely monitored, and a shift from one phase to the other receives considerable press attention. By contrast, much less attention has been paid to state and local business cycles. Yet evidence suggests that regional business cycles do not always move in tandem with national cycles. The composition of a local economy may cause a recession or expansion to begin earlier or later than the nation's, and to have a shorter or longer duration. Understanding these differences is essential to any effort to gauge regional economic activity.

In this issue of the *Regional Economy*, we track the business cycles for New York State and for major upstate metropolitan areas over the last quarter century and compare them with the national cycles. To date the regional cycles, we use a new methodology that combines several data series into a single composite measure—or index—of economic activity.

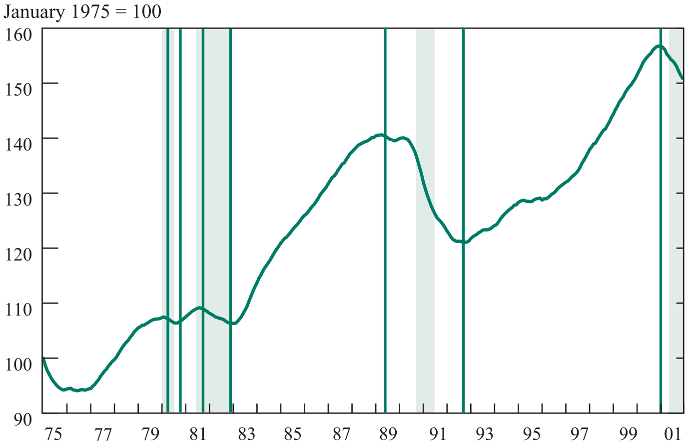
Our findings show that business cycles in New York State and its metro areas do in fact differ considerably from national business cycles. New York State's recessions tend to last longer than the nation's; the state's 1989-92 downturn in particular proved much more enduring than the corresponding 1990-91 national recession. And although upstate New York is often considered a single economy, the region's metropolitan areas have very different industrial compositions and thus different business cycles as well. Upstate metro areas also tend to experience longer recessions than the nation, and recessions occur more frequently in some areas than others. Our indexes show that Albany's economy has grown the most—and Buffalo's the least—during the period examined, while Binghamton's economy has been in recession considerably longer than others.

Constructing Economic Indexes

The lack of timely data on total state and local production complicates the task of dating regional business cycles. Measures of gross state product are available only with a delay of two or more years, and similar measures for metropolitan areas simply do not exist. In the absence of such measures, we combine readily available data into economic activity indexes that can be used as a guide to state and local business cycles. These indexes – often referred to as coincident indexes of economic activity – are based on a formal statistical model developed by Stock and Watson.[1] The model estimates an underlying trend in economic activity on the basis of several data series.[2] The resulting trend is translated into an index that is a weighted average of current and past changes in the component series.

We use four data series to construct the indexes: nonfarm payroll employment, wages and salaries (adjusted for inflation), the unemployment rate, and average weekly hours worked in the manufacturing sector.[3] These series were chosen because they are available on a timely basis and are expected to have a strong relationship to the current state of the economy. The weights attached to each of the components are determined by the statistical model and are different for each metropolitan area.

Chart 1
New York State Coincident Economic Index



Note: The shaded areas indicate national recessions; the bands mark state downturns.

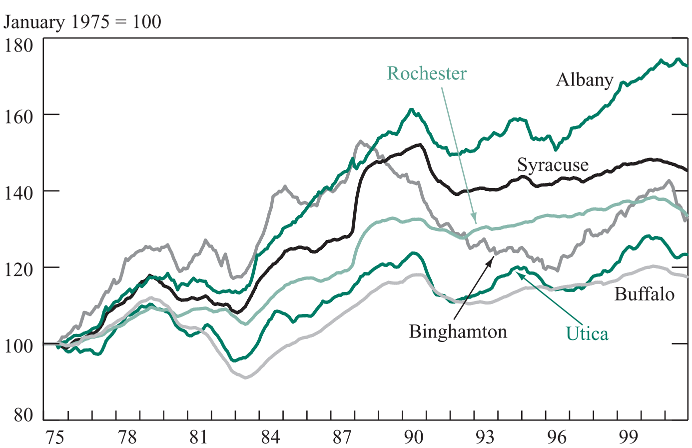
Sources: New York State Department of Labor; authors' calculations.

The resulting indexes yield monthly values, which can be used to plot the peaks and troughs in economic activity.[4] A decline in the index for a minimum of six months following a peak indicates that the economy has entered a recession.

What the Index Reveals about New York State

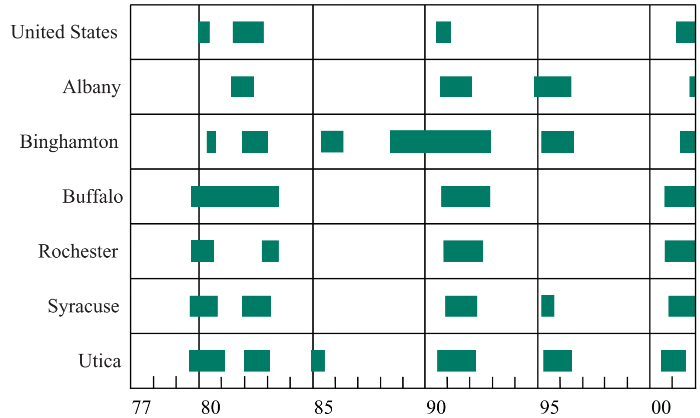
The index for New York State shows that state business cycles do in fact differ from national cycles (Chart 1). While New York's economic downturns in the 1980s were similar to the nation's, New York experienced longer recessions in the 1970s and 1990s. The recessions of 1980 and 1981-82 roughly coincided for New York and the United States. The national recession of 1990, however, proved much less prolonged than its New York counterpart. New York entered a three year recession in 1989, more than a year before the United States, and did not begin to recover until late in 1992. Finally, the index indicates that New York State entered the latest recession at about the same time as the U.S.

Chart 2
Coincident Indexes for Upstate New York



Sources: New York State Department of Labor; authors' calculations.

Chart 3
Periods of Recession in Upstate New York



Sources: New York State Department of Labor; authors' calculations.

What the Indexes Reveal about Upstate New York

Movements in the indexes for the six major upstate metropolitan areas during the 1975-2001 period are shown in Chart 2.[5] Albany's economy has grown the most since 1975, Buffalo's and Utica's the least. The economic performance of Syracuse, Rochester, and Binghamton falls somewhere in between. Fairly steady growth was evident in all upstate metro areas throughout the 1980s, followed by much flatter growth in the 1990s. Using the indexes, we identify peak-to-trough periods as recessions and compare them with recessions at the national level (Chart 3). Recessions in upstate New York have clearly differed significantly from national ones in both timing and duration.

Albany

Albany's economy has grown more than any other upstate region's since 1975. Steady growth in the 1980s was followed by a combination of recession and sluggish growth in the early 1990s. Since 1996, however, the region's economy has been on a steady upward trend. Albany's single recession in the 1980s roughly coincided with the 1981-82 national recession; the region experienced no local downturn corresponding to the 1980 national recession. Albany entered the 1990-91 recession at the same time as the nation, but it remained in recession a full year longer. In addition, beginning in 1994, the area experienced another recessionary episode that lasted over a year—an episode due in part to a sharp cutback in state government employment that resulted in the loss of roughly 6,000 jobs. Albany's latest peak was in October 2001, but since its economy has not yet declined for six months, it is not clear if it has entered a recession.

Binghamton

Binghamton is at the other end of the spectrum from Albany: it has been in recession more than any other upstate metro area examined. The area experienced three distinct recessions in the 1980s linked to volatility in its computer-related electronic components industry. Decline in this dominant industry led to a one year recession in 1985, followed by a very long recession beginning in 1988—a full two years before the rest of the country entered the 1990-91 recession. That recession lasted over four years, ending in 1992, and was followed by another episode lasting over a year, ending in 1996. Over this prolonged recessionary period, employment in electronic components and accessories dropped by about one-half, and manufacturing jobs declined by more than one-third. Overall, the Binghamton economy spent more time contracting in the 1990s than expanding, and was on a downward trend roughly from 1988 to 1996. Its latest recession began in May 2001.

Buffalo

Buffalo—with Utica, the slowest growing of the metro area economies—experienced three recessions over the 1975-2001 period. The first spanned both national recessions of the 1980s, beginning prior to the 1980 recession and ending several months after the 1981-82 recession had ended for the nation. The Buffalo area economy declined significantly over this period, losing almost 30 percent of its manufacturing employment through severe cutbacks in the steel and auto industries. During the remainder of the 1980s, Buffalo's growth kept pace with the nation's. The area entered the 1990-91 national recession a few months after the United States but did not recover until the end of 1992. Since then, its economy has grown very slowly. It entered the latest recession about six months earlier than the nation as a whole.

Rochester

Rochester's recessions in the 1980s diverged in timing from those of the nation, largely in response to the changing fortunes of the region's photographic equipment industry. Rochester began a downturn in 1979, months before the nation entered its 1980 recession, and the area remained in recession until late 1980. However, accelerated job growth at the region's largest employer, Eastman Kodak, between 1981 and 1982 kept Rochester's economy from re-entering a downturn until the nation's 1981-82 recession was nearly over, and the region's downturn proved short, lasting less than one year. Rochester's economy, like Buffalo's, grew from the mid-1980s through 1990 at a faster pace than it did throughout the 1990s. The region entered the 1990-91 recession a few months after the United States and stayed in recession until nearly the end of 1992. It began the latest recession about six months before the nation.

Syracuse

Syracuse's recessions have been similar to those of Rochester. The area entered a recession in 1979, ahead of the 1980 national recession, and recovered a few months after the United States began its recovery. Syracuse entered the 1981-82 recession at the end of 1981, but did not come out until 1983. Overall, the growth of Syracuse's economy in the late 1980s outpaced that of other upstate metro economies, in part because its manufacturing sector did not decline as severely. Growth was more sluggish, however, in the 1990s. Syracuse's economy turned down late in 1990, well after the 1990-91 national recession began, and the region's recession lasted a full year longer. It experienced an additional short lived recession in 1995.

Utica

Utica, like Binghamton, experienced more frequent and longer lasting recessions than the nation. The region overall is among the slowest growing economies upstate. From the late 1970s through the early 1980s, the decline of Utica's defense-related electrical equipment industry contributed to a significant downward trend. During this period, the area saw three distinct recessions lasting a total of nearly four years. The economy expanded steadily in the second half of the 1980s, but it entered a recession in 1990—about the same time that the 1990-91 national recession began—and did not recover until 1992. The closing of Griffith Air Force Base contributed to another recession, beginning early in 1995 and ending in 1996. Like Buffalo and Rochester, Utica entered the latest recession several months before the nation, but its economy reached a trough that at least temporarily may signal the downturn's conclusion.

Conclusion

Identifying regional business cycles is an important step in understanding the performance of local economies. Because timely measures of local production are unavailable, these cycles are often obscured. We use a new methodology to construct indexes of economic activity and employ them to identify local business cycles. Our findings show that New York State and its metropolitan areas often diverge from the nation—and from one another—in the timing and duration of recessions.

In general, upstate metropolitan areas have tended to experience longer recessions than the country as a whole. Binghamton and Utica, the smallest metropolitan areas examined, have seen especially frequent recessions and volatile growth. Although New York State is often considered a single economy, each of its metro areas has a distinct industrial composition and therefore experiences business cycles differently.

For up-to-date information on coincident indexes for New York and New Jersey, visit:
http://www.newyorkfed.org/rmaghome/regional/

Notes:

[1] See James H. Stock and Mark W. Watson, "New Indexes of Coincident and Leading Economic Indicators," in *NBER Macroeconomics Annual* (Cambridge, Mass.: MIT Press, 1989).

[2] For a more detailed explanation of the methodology and issues related to the construction of the indexes, see James Orr, Robert Rich, and Rae Rosen, "Two New Indexes Offer a Broad View of Economic Activity in the New York-New Jersey Region," Federal Reserve Bank of New York *Current Issues in Economics and Finance* 5, no. 14 (October 1999).

[3] All data are monthly from January 1975 through December 2001 except for wages. Real wages were available quarterly through the first quarter of 2001. In addition, data on average weekly manufacturing hours for Buffalo do not begin until 1984. For statistical estimation of the index, we rely on remaining data if any of the series have missing observations.

[4] To make comparisons possible between metropolitan areas, we benchmark the indexes to the long-term trend growth rate in wages and salaries. Two of the series, the unemployment rate and average weekly hours in the manufacturing sector, show no significant upward or downward trend over time. The more weight these variables receive in the coincident index (which is determined strictly by the underlying statistical estimation), the less the long-run growth of the index. This makes it difficult to compare indexes between states and regions. Retrending based on the long-term growth of wages and salaries creates consistently comparable indexes.

[5] We use the Bureau of the Census definitions of metropolitan areas (typically multi-county regions).

Richard Deitz and Ramon Garcia

New Data on the New York Economy

The results of a new monthly statewide survey of manufacturing activity conducted by the Federal Reserve Bank of New York, the *Empire State Manufacturing Survey*, will be available on our web site beginning April 16, 2002. www.newyorkfed.org/rmaghome/regional

Tours of the Buffalo Fed now available

The Buffalo Branch recently opened its new Interpretive Center, which showcases the Federal Reserve System from its inception to the present day. It also includes exhibits featuring counterfeit detection, a history of money, and an interactive monetary policy display. For information on tours, please contact Connie Poniatowski at (716) 849-5023.

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Tools for Building Sustainable Rural Communities

A conference sponsored by the Federal Reserve Banks of Cleveland, New York and Philadelphia. For more information, visit www.clev.frb.org/CommAffairs/index.htm

June 6, 2002
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Manufacturing Matters

This conference will focus on the manufacturing sector of western New York and its future. Please contact Connie Poniatowski at (716) 849-5023 for details.