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# Economic Currents: The State of the State Economy

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*The economy is slowing, as it continues to be constrained by labor shortages. Inflationary pressures are present in labor and housing markets, and consumer spending is strong. Fed policy may keep inflation from getting out of hand in the short run. In the long run, however, Massachusetts needs to speed up the growth of its skilled labor force. Minorities and low-skilled workers, who until recently had been largely unaffected by the expansion, are now benefiting from tight labor markets.*



ILLUSTRATION: NAOMI SHEA

# Economic Currents

ALAN CLAYTON-MATTHEWS

**W**e are past the peak growth rate in the Commonwealth's long expansion. The economy is slowing, primarily due to the shortage of available skilled labor. This shortage, in turn, is a result of many years of strong regional and national consumer and investment demand.

Years of robust growth have led to low unemployment, rising wages, and a long bull stock market. These have reinforced demand. Until recently, the process has been characterized as a "virtuous cycle," in which high productivity growth and the confluence of good fortune have kept inflation and interest rates low. Now, however, some classic characteristics of the late stages in the business cycle's expansion phase are beginning to emerge. Inflationary pressures are evident in the state's labor and housing markets, and interest rates are rising. Furthermore, stock market indices—including the Bloomberg Stock Index for Massachusetts—are reacting wildly to each piece of economic news, and consumer confidence is reacting to stock markets.

The Fed is attempting a soft landing, which could allow the expansion to continue for several more years. Stepping on the monetary brakes too hard could cause a recession; not applying the brakes hard enough would necessitate slamming them on sometime in the future. If the current effort is not successful, a recession is possible in the next year or two.

The Fed's job is made difficult by conflicting information on the economy's growth and inflationary pressures. Some data support the view that the economy is growing too quickly, with "irrational exuberance" driving financial markets and inflation looming just around the corner. Other data show no signs of inflation and indicate that the Fed's rate hikes may be having the desired calming effects on demand. A third interpretation of the data is that the seemingly unsustainable growth rates of the economy and its bubble financial markets are actually supported by a "new economy" that is riding on a faster productivity/growth track.

# The Current and Leading Economic Indices for Massachusetts

**T**he Current Economic Index is calibrated to grow at the same rate as real gross state product, so the Leading Economic Index is a forecast of the growth of real GSP over the coming six months, expressed at an annual rate. The current index is composed of four statewide indicators: nonagricultural employment, withholding taxes, sales taxes, and the unemployment rate. Each of these indicators is a broad-based measure of the state's economic activity. The cyclical patterns of these monthly indicators agree well with one another, so together they form a good measure of the current state of the Massachusetts economy.

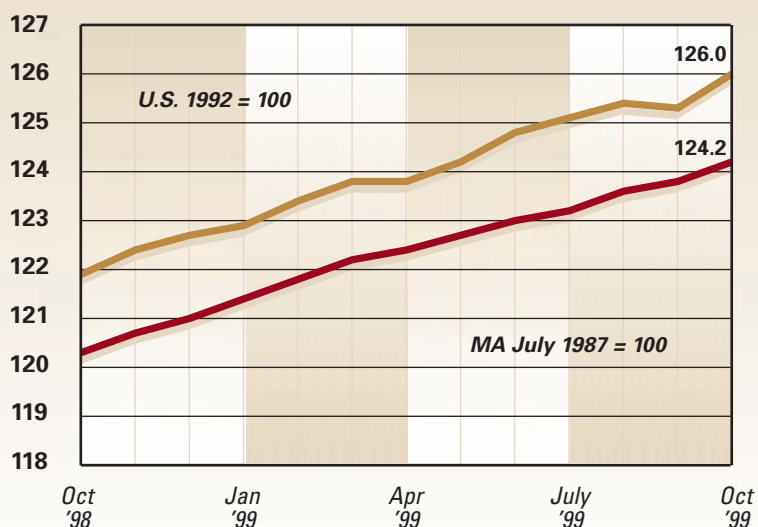
The Leading Economic Index is composed of indicators that are helpful in predicting the growth in the current index six months into the future. Since recent growth in the current index is a good predictor of itself, this index, and therefore indirectly its four indicators, is included in the leading index.

In addition, the leading index includes six other indicators. Four of them are statewide measures: the Bloomberg Stock Index for Massachusetts, initial unemployment claims, construction employment, and motor vehicle sales taxes. The fifth is consumer confidence in New England (a monthly confidence index is not available for Massachusetts). The sixth is the spread in interest rates between 10-year and three-month Treasury securities.

The leading index for October suggests that labor shortages will continue to slow growth in employment, though earnings growth and consumption spending will remain strong.

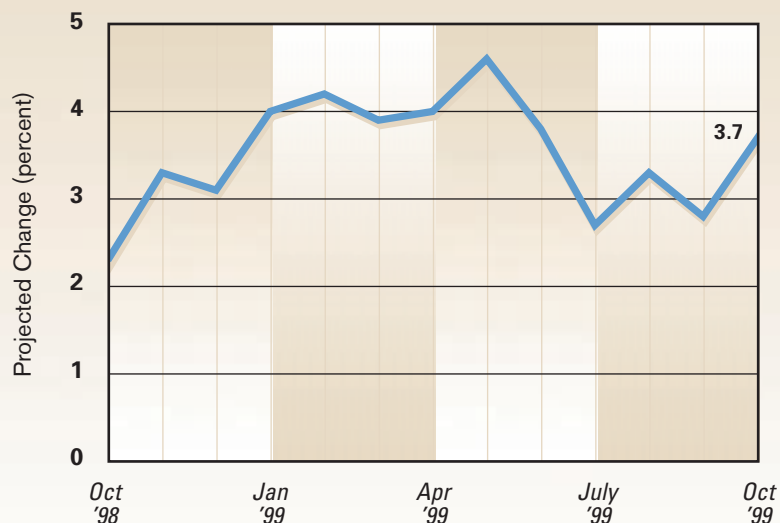
## Current Economic Index United States and Massachusetts

*The trends rather than the levels of these indices should be compared, due to different base points.*



## Massachusetts Leading Economic Index

*The leading index is the annualized, six-month projected change in the Massachusetts Current Economic Index.*



Sources: The Conference Board; University of Massachusetts; Federal Reserve Bank of Boston

### Conflicting Indicators Add Up to Slower Growth

Ten indicators form the basis for the Massachusetts Current and Leading Economic Indices.<sup>1</sup> In October, three of the ten indicators contributed to a forecast above the long-term trend rate of growth of 2.6 percent per year, while five contributed to a below-trend rate. For the three-month average August–October, above- and below-trend indications were evenly split at five each.

On the whole, these indicators suggest that Massachusetts is slowing from an unsustainably fast rate of growth to a more reasonable rate, closer to the long-term trend. The leading index for October predicts that real GSP will grow at an annualized rate of 3.7 percent over the next six months. The three-month average of the leading index, which may be more reliable, indicates a 3.2 percent rate of growth. The Massachusetts Current Economic Index suggests that year-over-year real GSP growth gradually decelerated from a 4 percent rate in the early summer of 1998 to 3.2 percent in September 1999. To put these growth rates in perspective, real GSP grew 4.4 percent in 1997, according to the most recent official data from the BEA. Nationally, real Gross Domestic Product grew 4.8 percent in the third quarter at annual rates and was 4.1 percent higher than in the third quarter of 1998.

### Job Growth Is Slowing

Nonagricultural job growth is slowing—both absolutely and relative to U.S. numbers. In the twelve months ending in October 1999, jobs in Massachusetts grew 1.4 percent, versus 2.2 percent nationally. In the year ending in September 1998, growth was 2.3 percent and 2.5 percent, respectively. Since the expansion began in mid-1991, employment growth has averaged 2.1 percent for Massachusetts and 2.5 percent nationally. The current rates of job growth for both the state and the nation are close to their average trends, since 1970, of 1.2 percent for Massachusetts and 2 percent for the United States.

The view that growth is supply-constrained rather than demand-constrained is supported by unemployment rates and wage-rate growth. The unemployment rate in Massachusetts was 3.2 percent in October, versus 4.1 percent nationally. At these low levels, virtually any skilled worker who wanted a job had one. According to the March 1999 Current Population Surveys, the Massachusetts unemployment rate for persons

over thirty years of age with a four-year college education was 1.6 percent. Even for those over thirty with only a high school education, the unemployment rate was a low 2.7 percent.

Initial unemployment claims tell a similar story. In October, they were 17.1 percent lower than a year earlier—roughly the same level they were in the summer of 1997, when the Asian crisis began. The shortage of additional available workers, and the slow growth in the labor force—one-half percent per year—means that employment growth will continue to decelerate over the next several months.

### Wage Rate Growth Is Accelerating—But by How Much?

Wage-rate growth appears to have accelerated through 1998 and into 1999. Good state-level data on wage rates are not available, but they can be estimated by dividing aggregate earnings by establishment employment. Two sources of earnings are available. One is quarterly wage and salary disbursements from the U.S. Bureau of Economic Analysis. The other is state withholding tax revenues, which we convert into an estimate of wage and salary disbursements.<sup>2</sup> The tax-based measure is useful, because it is reported monthly, and because it is available two quarters earlier than the BEA data.

The measures derived from both of these sources are not true wage rates, since they also reflect variations in weekly hours of work, but we believe that most of the variation in recent years reflects hourly compensation rates. These measures, which are usually in close agreement, diverged con-

siderably from each other in 1999. Wage rates based on the wage and salary disbursement data from the BEA support a relatively sanguine view. According to the most recent information available, wage rates rose by 5.1 percent from the second quarter of 1998 to the second quarter of 1999. This is not much higher than a similarly defined measure for the nation of 4.6 percent over the same period.

Although 5.1 percent is still indicative of a tight labor market, it is tame relative to wage-rate inflation based on withholding taxes. According to this measure, the average wage rate grew by 9.2 percent in the year ending in the second quarter of 1999 and by an even higher 10 percent in the year ending in the third quarter.

Which numbers tell the real story? Anecdotal evidence for highly skilled workers, particularly engineers, scientists,

## Employment Growth, Massachusetts vs. United States

*The shortage of available workers and the slow growth in the labor force mean that Massachusetts employment growth will continue to decelerate in the next several months.*



Source: Bureau of Labor Statistics

and those with computer skills, supports the view consistent with the tax data. Large salary increases and bonuses for these high-paid workers can pull average wage rates up. The tax-based measure is sensitive to phase-in errors, however, whenever there is a tax law change. This may have affected the measured growth in 1999. The personal exemption was doubled in 1998. Employers were supposed to change to the new withholding schedules in September 1998, but this was not accomplished until January 1999, according to the Department of Revenue.<sup>3</sup> To the extent that the phase-in is not actually complete, the tax-based measure of wage growth may have been too high in 1999.

The BEA-based estimate for the first quarter of 1999 should be very reliable, since is based on a complete enumeration of employers who contribute to the unemployment insurance system, which accounts for 98 percent of total employment. Employers report both employment and total wages and salaries paid during the quarter. The most recent quarterly estimate, for the second quarter of 1999, is not as reliable, because it is not based on the UI reports. Instead,

BEA's most recent quarterly estimate of wages and salaries is based on an extrapolation using the monthly nonagricultural employment survey. With the exception of manufacturing, the extrapolation does not use any measure of current state wages.

The most reliable estimate of current wage-rate inflation, therefore, is 6.2 percent, given by the BEA-based measure for the first quarter of 1999. The tax- and BEA-based data should resume their close agreement after the next couple of quarters, by which time the phase-in should be complete.

One last wrinkle to consider is that aggregate average wage-rate changes may understate inflationary potential at this stage of the business cycle. This is because recent new employment is likely to be weighted toward lower-skilled and/or lower-paid workers, which tends to pull the observed average wage down below what an ideal but unobserved quality-adjusted wage would indicate. Recent trends in unemployment rates for those with less than a high school education are consistent with this effect.

**Consumer Spending Is Still Strong, Confidence Is Stable**

On the whole, recent trends indicate that consumer spending is still strong. Real consumer spending in Massachu-

setts in October, as estimated by sales taxes, is up 7.5 percent over October 1998, versus 6 percent nationally.<sup>4</sup> The two figures are not strictly comparable, since Massachusetts sales taxes are weighted toward durable goods, and include taxable purchases by businesses. State sales tax data fluctuate markedly from month to month, and even the smoothed figures reported here can be difficult to interpret. Nevertheless, what appeared to be a slowing trend in consumer purchases in early 1999 appears to be over.

The trend in automobile purchases is somewhat different. Early last year, automobile purchases in Massachusetts, according to motor vehicle sales taxes, were growing rapidly.<sup>5</sup> Recently, purchases have slowed to below-trend levels. This slowdown is only relative, however. Spending on

automobiles grew 9.9 percent per year on average during this expansion (in nominal dollars). Over the twelve months ending in October 1999, automobile purchases grew by 8.5 percent.

The Conference Board's Consumer Confidence for New England is down from early 1999 but is still high on an absolute basis. The pattern for the MassInsight

Consumer Index for Massachusetts is similar. Movements in confidence, consumer spending, and stock markets have roughly paralleled each other over the past year or so, suggesting that recent gains in stock markets may support continued strength in consumer spending.

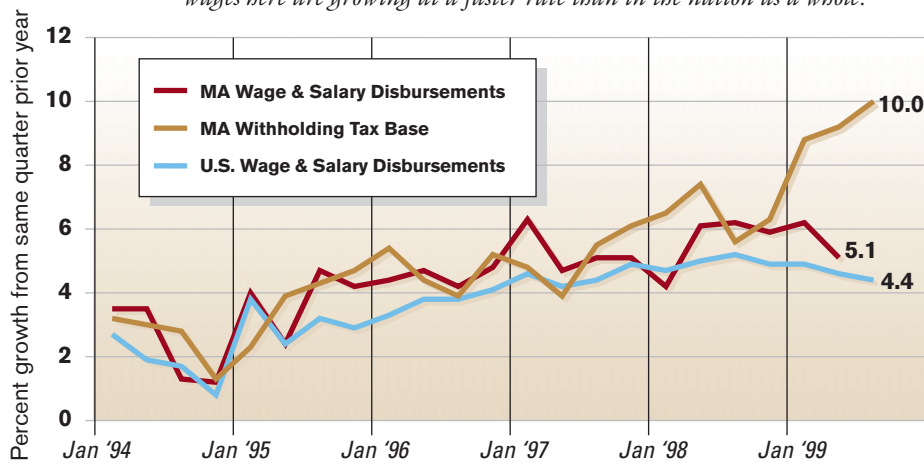
**Stock Markets Are Unstable –The Most Recent Swing Is Up**

Stock markets have exhibited dramatic volatility. The Dow Jones 30 Industrials fell more than 10 percent between late August and mid-October; the NASDAQ fell 10 percent in a single week in early October. As of late November, the Dow had risen 10.7 percent and the NASDAQ, 26.2 percent.

The Bloomberg Stock Index for Massachusetts, a price-weighted composite of 275 companies based—or primarily doing business—in Massachusetts, exhibited similar gyrations. Between mid-July and mid-August, it lost over 10 percent in value, most of which had been gained back by early September. In the week of October 11 through 18, it lost 6.2 percent in value. From that point, it gained 26.1 percent, reaching record heights in late November. This turbulence largely reflects the uncertainty that market ana-

**Growth in Nominal Wages Per Worker**

*As a likely consequence of Massachusetts' overly tight labor market, wages here are growing at a faster rate than in the nation as a whole.*



Sources: U.S. BEA, U.S. BLS, Mass. DOR, author's calculations

lysts have about current economic conditions and where the economy is headed.

The strength in the indices since mid-October, despite another interest-rate hike by the Fed in November, is supported by good economic news in Europe and Asia: Stock markets there were also sharply up in November, and there was confidence in continued productivity gains, largely driven by information technology. This explains why the technology-laden NASDAQ and the Massachusetts Bloomberg indices have risen so fast.

Massachusetts (Boston in particular) is among the nation's top hot spots in the IT sector, as it is defined in a Commerce Department study.<sup>6</sup> Massachusetts ranks third, behind Colorado and New Hampshire, in terms of the proportion of its workforce in IT jobs. In terms of sheer workforce size, Boston ranks first among the metropolitan areas, followed closely by San Jose.

### Real Estate and Construction Send Mixed Signals

Perhaps the strongest signs of the state's high-pressure economy are in residential real estate appreciation, where prices have been slowly but steadily accelerating since 1995. In the second quarter of 1999, the Fannie Mae/Freddie Mac repeat-sales index (which controls for quality changes, but includes only purchases financed by conventional mortgages) shows appreciation statewide to be 9.3 percent over the second quarter of 1998 and 10.1 percent in the Boston area. The National Association of Realtors index for Boston (which is affected by quality changes) indicates housing price appreciation of 14 percent over the same period. Housing prices nationwide increased 5.3 percent over the same period (Fannie Mae/Freddie Mac), so the already wide gap in housing costs between Massachusetts and the rest of the country is widening.

More recently, the Massachusetts Association of Realtors reported that the average sale price of single-family homes was up 16.6 percent in September over the prior year. For condominiums, the rate of price appreciation was 17.3 percent. These rates are still well below peak growth rates of 30 percent in the real estate bubble of the 1980s, but they are still too high to be sustainable.

At the same time, however, there are signs mitigating against another speculative bubble in real estate. Mortgage rates rose a full percentage point in 1999, and they appear to be restraining housing sales and permits. On a seasonally adjusted basis, housing permits over the three-month period

ending last August were at an annualized rate of 1,600 units, approximately the level that has persisted for several years. The Boston Fed, in its *Beige Book* of November 3, reported that its Massachusetts contacts indicated that price growth slowed in 1999 compared to 1998, and that the market was "more normal" now than in the prior two years. Finally, though sales were high in the second quarter of 1999, they were down from the prior quarter and have remained at an annual rate of roughly 100,000 for the last several quarters.

Consequently, construction employment growth has slowed. Although employment in October was up 5.8 percent from October 1998, the quarterly growth rate of (seasonally adjusted) construction employment was 3.3 percent, at annual rates, and the six-month growth rate was only 2.7 percent. In contrast, construction employment grew at an annual average rate of 6.2 percent in the expansion as of November.

### The Expansion Has Finally Arrived for Minorities and Unskilled Workers

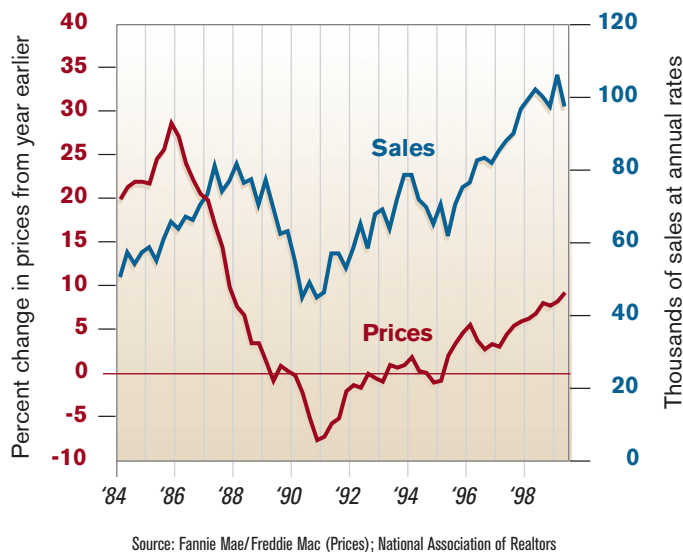
Economic expansions, if they last long enough, usually help those who are most vulnerable in the labor market, whether that vulnerability is due to discrimination or lack of skills. This expansion is no exception, as indicated by the March Current Population Surveys (CPS). These surveys are conducted monthly by the U.S. Bureau of Labor Statistics and the Census Bureau and are the source of the official unemployment rate statistics. Because of small sample sizes, some caution is necessary in analyzing the data for subpopulations at the state level.<sup>7</sup>

In March 1992, at the depth of the recession, the unemployment rate for Massachusetts residents was 10.1 percent. For minorities (non-Whites and Hispanics), the rate was twice as high, at 22.3 percent, while for White non-Hispanics it was 9 percent. Over the course of the expansion, unemployment rates for all groups fell, but the fall was greatest for minorities, whose unemployment rates declined to 12.4 percent in March 1997.

The last two years of the expansion have been particularly helpful for minorities. While the overall unemployment rate fell by 1.3 percentage points to 3.3 percent in March 1999, the unemployment rate for minorities fell by 8.1 percentage points, to 4.3 percent. As labor markets improved, minorities entered the labor force and got jobs. Participation rates for minorities rose from 54.9 percent in March 1997 to 69.6 percent in March 1999. In contrast, partici-

## House Price Growth and Sales Volume of Existing Homes

*Though sales are growing, recent price appreciation rates are well below peak growth rates in the real estate bubble of the 1980s.*



pation rates for White non-Hispanics remained unchanged at 68.4 percent over the same period.

The trend for low-skilled workers over the course of the recovery is equally impressive. Focusing on those over 30 years of age (in order to isolate the effect of education on employment), March unemployment rates for persons with less than a high school education fell from 18.8 percent in 1992 to 8.2 percent in 1997, and to 3.9 percent in 1999. For those with a high school education, unemployment rates fell from 10.6 percent in 1992 to 6 percent in 1997, and to 2.7 percent in 1999. College-educated workers never fared badly in this business cycle. Even in March

## Unemployment Rates for Massachusetts

(Selected years, not seasonally adjusted)

	March 1992	March 1997	March 1998	March 1999
<b>All Ages</b>				
All persons	10.1	4.6	4.8	3.3
White non-Hispanic	9.0	3.9	4.5	3.2
Minority (non-White or Hispanic)	22.3	12.4	6.9	4.3
<b>Persons Over 30 Years of Age</b>				
All persons over 30	8.9	3.6	3.8	2.5
Less than a high school education	18.8	8.2	9.5	3.9
High school education	10.6	6.0	4.8	2.7
Some college	8.5	3.1	3.7	3.2
BA/BS or more	4.6	1.2	1.7	1.6

Source: 1992, 1997, 1998, 1999 March Current Population Surveys; author's calculations

1992, their unemployment rate was only 4.6 percent. By 1997, their rate of unemployment fell to a mere 1.2 percent; in March 1999, it was 1.6 percent.

While this is good news for these workers and their families, the low unemployment rates for all demographic groups indicate just how tight labor markets have become in the past year, and therefore how limited the possibilities are for continued growth.

### Subduing Inflationary Risks

Inflationary risks are higher in Massachusetts than in the country as a whole. This problem is due in large part to demographics. The Massachusetts population and labor force grow at half the national rate, while in expansions state employment grows at roughly the same rate as the nation's. In long expansions, therefore, the state exhausts the pool of unemployed sooner, so wage inflation tends to accelerate sooner and more rapidly. Nevertheless, the Fed's recent actions have improved the prospects for a soft landing in Massachusetts. If higher interest rates subdue housing and stock markets, and consumption follows suit; and if actual wage-rate growth is only 6 percent (as the BEA-based measure suggests) rather than 10 percent (as suggested by withholding taxes), then the state may delay inflation while continuing to grow.

The Fed cannot solve the Commonwealth's demographic problem. The chief economic challenge facing Massachu-

setts in the long run is how to raise the growth rate of its skilled labor force. The keys to solving this challenge are lowering the state's housing costs and improving the quality and availability of education throughout the Commonwealth at all levels. High housing costs relative to other high-technology areas around the country are discouraging households in other states from relocating here and are encouraging our own skilled workers to move out.

Quality education is important for two reasons. One is that it upgrades the skills of our native workforce to offset low rates of domestic in-migration. The second, especially important in the K-12 grades, is closely connected to housing costs. Picture the choices available to a prospective highly skilled worker and his or her household on considering a decision to move to Massachusetts or to remain here. There are many communities around the state, close to jobs, that have affordable housing, but they often have school systems that are less than desirable. On the other hand, there are a handful of very desirable school systems, but they are in communities with unaffordable housing. Significantly improving the quality of the public K-12 school system throughout the state would effectively decrease the cost of housing by greatly expanding the supply of housing that is both affordable and desirable to such households.

Our very constrained labor market will continue to bring us slower growth in the near future. At the same time, portions of the state's population that were previously excluded from the benefits of the expansion are now seeing their job prospects grow. Overall, however, the risks associated with potential future inflation have increased. This could ultimately derail the economic expansion.

Submitted November 22, 1999

1. For a fuller description of these indices, see "New Current and Leading Indexes for Massachusetts," *Massachusetts Benchmarks*, Vol. 1, Issue 4, fall '98, p. 24, or visit our Web site at [www.massbenchmarks.org](http://www.massbenchmarks.org).
2. The procedure is available from the author.
3. According to Department of Revenue estimates, withholding schedules fully accounted for this change by January 1999. This is based on queries to the largest payroll firms, who collectively account for 70 percent of Massachusetts workers. To the extent that this phase-in is not complete, the withholding tax base may overstate wage growth in 1999.
4. The Massachusetts figure is the growth in the author's estimate of the real sales tax base. The national figure is for retail sales from the Census Bureau, deflated by the U.S. CPI-U.
5. Motor vehicle sales taxes include more than just autos (e.g., boats), but automobiles account for the vast majority of sales.
6. U.S. Department of Commerce, "The Emerging Digital Economy," p. A1-4. This report is available on the Internet at [www.ecommerce.gov/emerging.htm](http://www.ecommerce.gov/emerging.htm).
7. For example, the March 1999 CPS contains 2,352 sample individuals 16 years of age or older who are residents of Massachusetts. Only 358 of them are minority (non-White or Hispanic), however, and only 246 of these are in the labor force. If this were a simple random sample, the standard error of the minority unemployment rate would be 1.5 percentage points, while the standard error of the White, non-Hispanic unemployment rate would be 0.5 percentage points. Because the sampling frame is stratified and clustered, the actual standard errors are slightly higher.

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