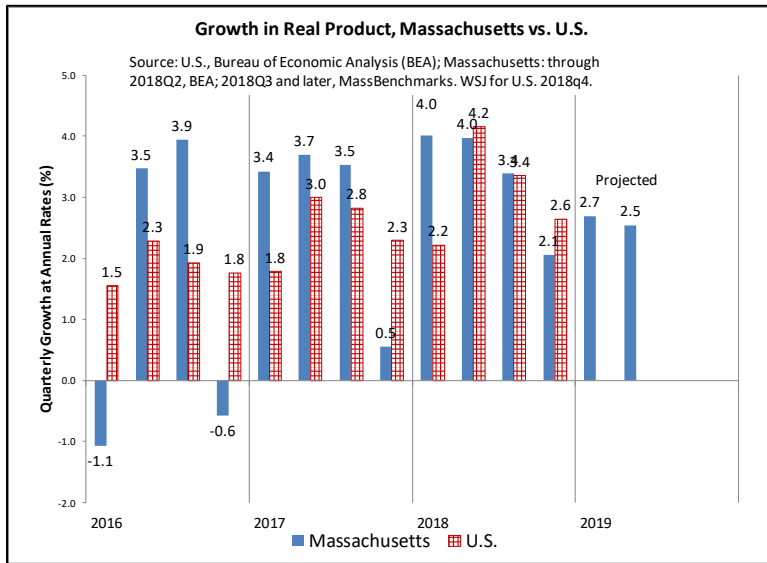


Massachusetts Current and Leading Economic Indices

The Massachusetts Current Economic Index for December was 224.0, up 3.9 percent from November (at annual rates), and up 3.8 percent from December 2017. The current index is normalized to 100 in July 1987 and is calibrated to grow at the same rate as Massachusetts real gross domestic product over the 1978–2017 period. Unless otherwise specified, all growth rates below are expressed at seasonally-adjusted annual rates.



The Massachusetts Leading Economic Index for December was 2.5 percent, and the three-month average for October through December was 2.2 percent. The leading index is a forecast of the growth in the current index over the next six months, expressed at an annual rate. Thus, it indicates that the economy is expected to grow at an annualized rate of 2.5 percent over the next six months (through June 2019) if productivity were at recent average rates.

In the fourth quarter of 2018, Massachusetts real gross domestic product grew 2.1 percent according to MassBenchmarks, while U.S. real gross domestic product grew between 2.6 and 2.7 percent according to recent estimates by a Wall Street Journal survey of economists and by the New York and Atlanta Federal Reserve Banks’ “Nowcasts.” The Massachusetts economy grew by 4.0 percent in the first quarter of 2018 and 4.0 percent in the second quarter according to the U.S. Bureau of Economic Analysis (BEA), and by 3.4 percent in the third quarter according to MassBenchmarks. BEA’s estimates for U.S. economic growth through the first three quarters of 2018 are 2.2 percent, 4.2 percent, and 3.4 percent respectively.

Based on these estimates, average annual economic growth last year (2017-2018) was 3.1 percent for Massachusetts versus 2.9 percent for the U.S. For the prior year (2016-2017), the BEA estimated economic growth of 2.6 percent for Massachusetts versus 2.2 percent for the U.S.

The Massachusetts economy is strong and is operating at near full capacity. Most of the slack in the labor market has been wrung out by steady job growth during the long expansion that began in the summer of 2009. At 3.3 percent, the unemployment rate is near lows seen during the cyclical peaks of the dot.com boom in 2000 and the “Massachusetts Miracle” in 1987. The demographics of an aging population suggest that annual labor force growth may slow to half a percentage point going forward. Increases in work intensity and net in-migration are sources of future extra labor input, but the potential size of these increases is small. There are still 25,000 more part-time workers who would like to work full-time than prior to the last recession. The population estimates for July 2018 recently released by the Census Bureau show a modest increase in net migration of 2,400 from 2017, led by increases in net international migration.

These potential increases to labor input are not large enough to significantly offset the demographic constraints on growth.

Unemployment Rates, Massachusetts and the U.S.				
	U-3 Rate		U-6 Rate	
	MA	US	MA	US
Dec-18	3.3%	3.9%	6.7% /1	7.6%
Sep-18	3.6%	3.7%	6.7%	7.5%
Dec-17	3.5%	4.1%	7.1%	8.1%

Sources: U.S. Bureau of Labor Statistics/ MassBenchmarks.
 1. The rate is for November. December not available.

As a result, job growth appears to be slowing. Payroll employment in the fourth quarter rose at an annual rate of 0.9 percent for Massachusetts, versus 1.8 percent for the U.S. On a year-over-year basis – taking into account expected downward revisions in job counts for the first half of 2018 – payroll employment in Massachusetts in the fourth quarter was 1.2 percent higher than in the prior year, versus 1.7 percent for the U.S.

U.S.

Despite slowing job growth, wage and salary income growth was strong in the fourth quarter, rising 7.2 percent in Massachusetts on an annualized basis versus 4.3 percent for the U.S. Year-over-year, wage and salary income was 4.9 percent higher than in fourth quarter of 2017 in Massachusetts, versus 4.3 percent for the U.S.

Employment and Earnings Growth at Annual Rates, Massachusetts and the U.S.				
	Payroll Employment		Wage and Salary Income /1	
	MA	US	MA	US
2018Q4	0.9%	1.8%	7.2%	4.3%
2018Q3	2.0%	1.7%	5.0%	4.4%
17Q4 to '18Q4	1.2%	1.7%	4.9%	4.3%

Sources: U.S. Bureau of Labor Statistics; U.S. Bureau of Economic Analysis; Mass. Department of Revenue/MassBenchmarks. For Massachusetts, payroll employment incorporates expected revisions to employment in the first and second quarters of 2018.
 1. Massachusetts is derived from state withholding revenues for 2018Q4. U.S. is estimated by MassBenchmarks for 2018Q4.

Spending in Massachusetts, estimated from regular sales tax receipts and motor vehicle sales, continued to grow at a healthy pace in the fourth quarter, rising by an annual rate of 5.9 percent. Year-over-year such spending was 7.3 percent higher than in the fourth quarter of 2017.

Massachusetts economic growth is expected to pick up slightly in the first and second quarters of this year, with growth projected to be 2.7 percent in the first quarter and 2.5 percent in the second quarter. This is below the average growth for last year of 3.1 percent, and reflects demographic constraints on labor force growth, a waning of the fiscal stimulus spurred by the Tax Cuts and Jobs Act, and rising interest rates.

The 10 indicators that comprise the leading index usually do not all move in tandem. Typically, some may indicate an expectation of faster than average growth, while at the same time others may indicate an expectation of slower than average growth. The accompanying table accounts

for the contributions of each towards faster or slower growth than the recent underlying trend of 1.9 percent. The index value is their sum.

Contributions of Indicators to the Leading Index		
	December	October-December
Trend	1.9	1.9
Total Nonagricultural Employment	0.2	0.4
Withholding Taxes	-0.1	-0.1
Sales Taxes	0.2	0.1
Unemployment rate	0.1	0.0
Consumer Confidence	0.0	0.1
Interest rate spread (10-year less 3-month)	-0.1	-0.2
Bloomberg MA stock index	0.1	-0.3
Initial Unemployment Claims	-0.1	0.0
Construction Employment	-0.1	0.1
Motor Vehicle Sales Taxes	0.4	0.1
Total	2.5	2.2
<i>Note: Numbers may not add exactly due to rounding.</i>		

In December, five indicators contributed to a forecast of above-trend growth: total nonagricultural employment, sales taxes, the unemployment rate, the Bloomberg stock index for Massachusetts, and motor vehicle sales taxes. One indicator, consumer confidence, contributed to average-trend growth. Four indicators contributed to below-trend growth: withholding taxes, the interest rate spread between 10-year and 3-month U.S. Treasury securities, initial unemployment claims, and

construction employment.

For the three-month period October through December, five indicators contributed to a forecast of above-trend growth: total nonagricultural employment, sales taxes, consumer confidence, construction employment, and motor vehicle sales taxes. Two indicators contributed to average-trend growth: the unemployment rate, and initial unemployment claims. Three indicators contributed to below-trend growth: withholding taxes, the interest rate spread between 10-year and 3-month U.S. Treasury securities, and the Bloomberg stock index for Massachusetts.

The current and historical quarterly estimates for state domestic product growth include adjustments for changes in productivity growth. These adjustments are estimates of the quarterly deviations from the 1978-2017 trend in the growth of the ratio of output to employment. In the fourth quarter these adjustments subtracted 0.9 percentage points from growth. In the third quarter these adjustments subtracted 0.1 percentage points from growth. In the second quarter, these adjustments added 0.7 percentage points to growth. In the first quarter, these adjustments subtracted 1.2 percentage points from growth. For the forecast of state domestic product growth in the first and second quarters of this year, these adjustments are expected to subtract 1.3 percent points from growth, the average of the last five years.

The current and historical quarterly estimates also include “cyclical” adjustments, as the relationship between the growth in the current indicators and that of gross domestic product changes over the course of the business cycle. In the fourth quarter, these adjustments subtracted 0.8 percentage points from growth. In the third quarter, these adjustments subtracted 0.4 percentage points from growth. In the second quarter, these adjustments subtracted 0.0 percentage points from growth. In the first quarter, these adjustments added 0.3 percentage points to growth. For the forecast of the first and second quarters of this year, these adjustments are expected to add 0.1 percentage points to growth, the average amount of the last two years.

Several recent months of the indices are revised each release. These revisions are a result of the statistical method used to create the index, as well as revisions in the underlying indicators.

All the indicators except interest rates refer to Massachusetts. The current index is composed of four indicators: nonagricultural employment, withholding taxes, sales taxes, and the unemployment rate. The leading index includes these four current indicators plus the other six (leading) indicators in the contributions table. All the indicators are as of December, except for interest rates and the Bloomberg stock index for Massachusetts, which are through January 18, 2019. The MassInsight Consumer Confidence Index is usually released every third month. Intervening months are interpolated, and changes in the Conference Board's Consumer Confidence Index for the U.S. are used to extrapolate to the current month of the index, as needed. Series measured in current dollars or values, i.e., withholding taxes, sales taxes, the Bloomberg stock index, and motor vehicle sales taxes, are deflated by the U.S. consumer price index for all urban consumers, excluding food and energy.

For a description of the methodology used to construct these indices, see: Alan Clayton-Matthews and James H. Stock, "An application of the Stock/Watson index methodology to the Massachusetts economy," *Journal of Economic and Social Measurement*, vol. 25 (1998/1999), pp. 183-233.

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