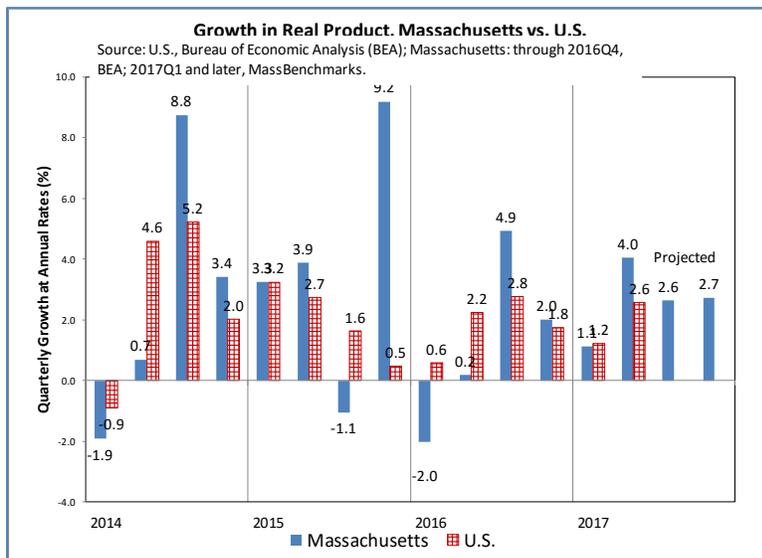


# Massachusetts Current and Leading Economic Indices

## Second Quarter of 2017

The Massachusetts Current Economic Index for June was 206.7, up 4.5 percent from May (at annual rates), and up 4.1 percent from June 2016. 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 1978–2016 period. Unless otherwise specified, all growth rates below are expressed at annual rates.



The Massachusetts Leading Economic Index for June was 2.7 percent, and the three-month average for April through June was also 2.7 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 2.7 percent over the next six months (through December 2017) if productivity were at recent average rates.

Massachusetts real gross domestic product grew 4.0 percent in the second quarter of 2017 according to *MassBenchmarks*.

Nationally, U.S. real gross domestic product grew 2.6 percent, according to the U.S. Bureau of Economic Analysis (BEA). Based on the latest available data, the BEA estimates that the state grew 1.1 percent in the first quarter of this year, versus 1.2 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
2017Q2	0.9	1.4	24.0	3.7
2017Q1	2.2	1.5	3.7	4.0
16Q2 to '17Q2	1.7	1.6	6.2	3.1

Sources: U.S. Bureau of Labor Statistics; U.S. Bureau of Economic Analysis; Mass. Department of Revenue/MassBenchmarks.

1. Massachusetts is derived from state withholding revenues for 2017Q2 and 2016Q2 to 2017Q2, and the U.S. BEA for 2017Q1; U.S. is from the BEA, projected for 2017Q2.

While growth in both the state and the U.S. accelerated from the first quarter, the surge in wage and salary growth in the second quarter in Massachusetts accounted for its relatively faster growth compared with the nation. Other indicators of state growth slowed somewhat from the first quarter. Wage and salary income for Massachusetts, as

estimated from state withholding taxes, shot up by 24.0 percent on an annual basis in the second quarter, after growing by 3.7 percent in the first quarter. U.S. wage and salary income is estimated to have grown 3.7 percent in the second quarter (BEA’s estimate will be released on August 1), and 4.0 percent in the first quarter of 2017. Relative to the second quarter of 2016, state wage and salary income is up 6.2 percent while national wage and salary income is up 3.1 percent.

Employment in both Massachusetts and the U.S. has continued to grow at modest rates typical of this long economic expansion. In the second quarter of this year, Massachusetts payroll employment expanded by 0.9 percent after growing by 2.2 percent in the first quarter. U.S. payroll employment grew 1.4 percent in the second quarter following 1.5 percent in the first quarter. Year over year, between the second quarter of 2016 and the second quarter of 2017, employment grew at virtually the same rate in both the state and the nation, by 1.7 percent and 1.6 percent respectively.

Unemployment Rates, Massachusetts and the U.S.				
	U-3 Rate		U-6 Rate	
	MA	US	MA	US
Jun-17	4.3	4.4	7.8	8.6
Mar-17	3.6	4.5	7.7	8.9
Dec-16	3.1	4.7	7.5	9.2

Sources: U.S. Bureau of Labor Statistics/ MassBenchmarks.

Unemployment rates in Massachusetts and the U.S. moved in opposite directions in the first two quarters of this year. Nevertheless, the labor market strengthened in both the state and nation. In Massachusetts, the unemployment rate rose from 3.1 percent in December 2016 to 3.6 percent in March and 4.3 percent in June; while the U.S. unemployment rate fell from

4.7 percent in December to 4.5 percent in March and 4.4 percent in June. According to the underlying numbers from the Bureau of Labor Statistics’ household survey, the rise in the state’s unemployment rate reflects a rapid increase in the labor force that outpaced rising employment both during the second quarter and for the whole first half of the year. This rapid increase in the labor force – indicative of a healthy labor market with confident job-seekers – explains the seeming paradox of both rising employment and a rising unemployment rate.

The broader U-6 unemployment rate, which counts as unemployed those who are working part-time but want full-time work and those who want to work but have not looked for work in the last four weeks, followed a similar pattern. In Massachusetts, the U-6 rate rose from 7.5 percent in December to 7.8 percent in June, while for the U.S. as a whole, it fell from 9.2 percent in December to 8.6 percent in June. The increase in the U-6 for Massachusetts does not reflect an increase in involuntary part-time workers or an increase in those marginally-attached to the labor force; rather it also reflects the rapid increase in persons rejoining the labor force or newly entering the labor force.

Consumer and business spending on items subject to the state regular sales and motor vehicle sales taxes declined slightly, by 1.4 percent in the second quarter, after rising by 9.3 percent in the first quarter. This spending in the second quarter was 2.9 percent higher than in the second quarter of last year. The dip in the first quarter reflects typical quarterly volatility in this measure

rather than a retrenchment of spending. Spending appears to continue to increase at a moderate pace, reflective of moderate increases in consumer confidence.

The Massachusetts Leading Index suggests that the state’s economy will continue to grow at a moderately strong pace for the second half of this year, at a 2.7 percent annual rate. This can happen as long as skilled job seekers are available. This will increasingly become a challenge as economic growth impinges on the demographic constraints of an aging workforce.

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 following table accounts for the contributions of each towards faster or slower growth than the recent underlying trend of 1.1 percent. The index value is their sum.

Contributions of Indicators to the Leading Index		
	June	April-June
Trend	1.1	1.1
Total Nonagricultural Employment	0.2	0.5
Withholding Taxes	0.7	0.7
Sales Taxes	-0.1	-0.1
Unemployment rate	0.0	0.0
Consumer Confidence	0.2	0.1
Interest rate spread (10-year less 3-month)	-0.1	-0.1
Bloomberg MA stock index	0.1	0.1
Initial Unemployment Claims	0.0	0.0
Construction Employment	0.0	0.1
Motor Vehicle Sales Taxes	0.6	0.4
Total	2.7	2.7
<i>Note: Numbers may not add exactly due to rounding.</i>		

In June, five indicators contributed to a forecast of above-trend growth: total nonagricultural employment, withholding taxes, consumer confidence, the Bloomberg stock index for Massachusetts, and motor vehicle sales taxes. Three indicators contributed to average-trend growth: the unemployment rate, initial unemployment claims, and construction employment. Two indicators contributed to below-trend growth: sales taxes, and

the interest rate spread between 10-year and 3-month U.S. Treasury securities.

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

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 1978-2016 trend in the growth of the ratio of output to employment. In the second quarter of 2017, these adjustments subtracted 0.6 percentage points from growth. In the first quarter of 2017, these adjustments subtracted 2.1 percentage points from growth. For the forecast of state domestic product growth in the third and fourth quarters of this year, productivity growth is assumed to be at the average of the last five 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 of 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 June, except for interest rates and the Bloomberg stock index for Massachusetts, which are through July 21. The MassInsight Consumer Confidence Index is 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.

Alan Clayton-Matthews  
*MassBenchmarks*  
Northeastern University, School of Public Policy and Urban Affairs

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