

THE STATEWIDE ECONOMIC IMPACT OF THE UNIVERSITY OF MAINE SYSTEM¹

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² Feedback was provided by Drs. Todd Gabe and Jonathan Rubin

EXECUTIVE SUMMARY

The University of Maine System contributes directly to the Maine economy through day-to-day operations, capital improvements, and the spending of students and visitors³. These direct effects accounted for an estimated \$846 million in statewide economic output during the 2016 fiscal year. When considering multiplier effects, the University of Maine System contributed \$1.5 billion in total output to the state economy. We estimate a “leverage factor” (total statewide economic impact divided by the statewide Legislative appropriation) of 7.5 for the 2016 fiscal year. This suggests that every \$1.00 invested by the state in the University of Maine System is associated with \$7.50 in total statewide economic activity.

HIGHLIGHTS OF MAIN FINDINGS

- The University of Maine System (UMS) had 10,568 employees (5,715 of which are student workers) and 18,898 full-time students enrolled across the state during the 2016 fiscal year⁴.
- The statewide economic impact of the UMS has two main components. First, the UMS generates an economic impact through its day-to-day operations⁵ (e.g., employment, payroll and purchases of goods and services from Maine businesses) and capital improvements. Second, the System generates an economic impact through the local spending of students and visitors from outside the area.
- The day-to-day operations of the UMS has an annual statewide economic contribution, including multiplier effects, of an estimated \$1.2 billion in output, 15,128 full and part-time jobs, and approximately \$595 million in labor income (see Table 2)⁶
- The System’s spending on capital improvements in fiscal year 2016, including multiplier effects, accounts for \$71.9 million in statewide economic output, 477 jobs, and about \$21 million in labor income (see Table 3)⁷

³ Economic contribution measures the change in economic activity associated with an event/industry/policy in an existing economy and economic impact measures the change in new economic activity associated with an event/industry/policy in an existing economy. For our purposes here (given we are examining economic activity that is both original and new to the region) we will use the phrases interchangeably.

⁴ Only full-time students were considered for this analysis

⁵ Operations include educational, research, and outreach activities

⁶ Economic impact analysis and multiplier effects are estimated using an input-output (IMPLAN) model of the Maine economy. Employment impacts in the IMPLAN model do not distinguish between full and part-time jobs. This direct employment figure also includes student workers, which is part-time, seasonal, and variable.

⁷ Data were provided by the UMS Office of Finance and Budget

Economic Impact of the University of Maine System: Fall 2017

- Students and visitors to the UMS spend an estimated \$144 million annually on lodging, gas, groceries, entertainment, clothing, and hobbies/books locally⁸. The total economic impact of this spending, including multiplier effects, is an estimated \$196 million in output, 1,337 full and part-time jobs, and \$38 million in labor income (see Table 4)
- The *overall* annual statewide economic contribution of the UMS – including the System’s day-to-day operations, spending on capital improvements, student and visitor spending, and their associated multipliers – is an estimated \$1.5 billion in output, 16,942 jobs, and \$653.7 million in labor income (see Table 5).
- The estimated “leverage factor” (total statewide economic impact divided by the statewide Legislative appropriation) for the 2016 fiscal year is 7.5. This suggests that every \$1.00 invested by the state in the University of Maine System is associated with \$7.50 in total statewide economic activity.

⁸ Estimates of student spending come from a 2016 survey (Gabe, Todd. “Economic Impact of UMaine’s Out-Of-State Undergraduate Students,” School of Economics Staff Paper 626, August 2016); for student spending figures related to lodging and food purchases, only spending that took place off-campus is included (as on campus spending is included in the UMS day-to-day operations figures); student spending also does not include money earned from on-campus employment as the impacts of student payroll are included in the UMS day-to-day operations figures; visitor spending is assumed to be equal to 14% of non-payroll spending on operations and construction per a report by the Association of Public and Land-grant Universities (Gabe, Todd. "University of Maine's Statewide Economic Contribution," School of Economics Staff Paper 593, June 2011).

UNIVERSITY OF MAINE SYSTEM EXPENDITURES

Total UMS expenditures during FY 2016 were approximately \$847 million (Table 1). Direct expenditures are costs associated with the day-to-day operations of the UMS. The largest expense is payroll (\$420 million), but expenditures also include direct purchases of goods and services. The System directly employs 10,568 full and part-time workers; 5,715 of these are student workers. In addition to daily operations, UMS spent \$42.9 million on capital improvements.

UMS students and visitors spent an estimated \$144 million on expenses such as lodging, gas, food, clothing, entertainment, and hobbies/books.

Table 1. Total UMS Expenditures for Fiscal Year 2016

Expenditure	Amount (\$, millions)
Operations	
Direct Purchases*	240.5
Annual Payroll*	420.2
SUBTOTAL	660.7
Capital Improvement*	42.9
Student (non-payroll) & Visitor Spending**	143.6
TOTAL	847.2

**UMS expenditures were provided by the UMS Office of Finance and Budget; **Estimates of student spending come from a 2016 survey (Gabe, Todd. "Economic Impact of UMaine's Out-Of-State Undergraduate Students," School of Economics Staff Paper 626, August 2016); student spending does not include money earned from on-campus employment or spending which took place on campus, those figures are included in the UMS operations; visitor spending is assumed to be equal to 14% of non-payroll spending on operations and construction (Gabe, Todd. "University of Maine's Statewide Economic Contribution," School of Economics Staff Paper 593, June 2011).*

UNIVERSITY OF MAINE SYSTEM REVENUE

One of the largest sources of revenue for the University of Maine System is Legislative appropriation. In fiscal year 2016, the Maine Legislature allocated \$201 million to the UMS, representing 31% of the System's total revenue. However, the greatest source of revenue was from student tuition and fees (less scholarships and waivers) at \$236 million (36%). Other sources of revenue include \$136.1 million for research and development from public and private sources, \$34.3 million in educational sales and services, \$29.2 million from other auxiliary enterprises and indirect cost recovery, and \$25.8 million from gifts, endowments and investment income.

ECONOMIC MULTIPLIERS

Every dollar that is spent on local purchases by the University of Maine System’s campuses, centers, system-wide services, employees, students and visitors circulates throughout Maine’s economy and is used by other businesses and organizations to pay their employees, taxes, and purchase more goods and services. This “multiplier effect” is a crucial component to consider when studying the total statewide economic contribution of the UMS.

Table 2. Annual Statewide Economic Contribution of the University of Maine System's Operations

	Direct Impact	Multiplier Effects***	Total Impact***
Output	\$659,350,000	\$576,214,600	\$1,235,564,600
Income*	\$420,190,274	\$174,684,717	\$594,874,991
Employment**	10,568	4,560	15,128

Direct impact of labor income is the total university payroll, including benefits and student payroll; **Direct impact of employment includes student employment, which is part-time, seasonal, and highly variable; *Estimated using an economic impact model (IMPLAN) of the Maine economy.*

Table 3. Annual Statewide Economic Contribution of the University of Maine System's Capital Improvements

	Direct Impact*	Multiplier Effects**	Total Impact**
Output	\$42,900,000	\$28,989,410	\$71,889,410
Income	\$11,832,652	\$8,848,716	\$20,681,368
Employment	267	210	477

**Direct income and employment figures are estimated using an economic impact model (IMPLAN) of the Maine economy; **Estimated using an economic impact model (IMPLAN) of the Maine economy.*

Table 4. Annual Statewide Economic Contribution of University of Maine System Students and Visitor Spending*

	Direct Impact*	Multiplier Effects**	Total Impact**
Output	\$143,616,515	\$51,962,070	\$195,578,585
Income	\$22,650,891	\$15,470,691	\$38,121,582
Employment	960	377	1,337

Student spending does not include money earned from on-campus employment or on-campus spending – this impacts are included in Table 1; **Direct income and employment figures are estimated using an economic impact model (IMPLAN) of the Maine economy; *Estimated using an economic impact model (IMPLAN) of the Maine economy.*

OVERALL IMPACT

The *overall* annual statewide economic contribution of the UMS – including the System’s day-to-day operations, spending on capital improvements, student and visitor spending, and their associated multipliers – is an estimated \$1.5 billion in output, 16,942 jobs, and \$653.7 million in labor income.

Table 5. Total Annual Statewide Economic Contribution of the University of Maine System

	Direct Impact*	Multiplier Effects**	Total Impact**
Output	\$845,866,515	\$657,166,080	\$1,503,032,595
Income	\$454,673,817	\$199,004,124	\$653,677,941
Employment	11,795	5,147	16,942

**All impact figures are the sum of the values shown in Tables 2-4.*

By dividing the total statewide economic contribution by the 2016 statewide Legislative appropriation (\$201 million), we arrive at a leverage factor of 7.5. This suggests that every \$1.00 invested by the state in the University of Maine System is associated with \$7.50 in total statewide economic activity.

The state and its communities gain from the presence of Maine’s public universities in a variety of other ways as well. The System provides access to professional consulting, computer, and library services, seminars, conferences, and workshops. UMS students, faculty, and staff also work to improve the state’s well-being by donating thousands of hours each year to local, state, and national boards, organizations and commissions. These contributes are not insignificant, yet they are immeasurable given the scope of this study and were not included in the analysis.