

# **Background Report on College Affordability in Maine**

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For

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The National Center for Public Policy and Higher Education gave Maine an “F” grade for affordability of higher education in both *Measuring Up 2000* and *Measuring Up 2002*. In the 2000 report, Maine’s affordability score (54 on a 100-point scale) was 3<sup>rd</sup> worst in the nation (ahead of RI and NH). In the 2002 report, Maine’s affordability score (56) was in a three-way tie (with NY and VT) for 7<sup>th</sup> worst in the country (ahead of NH, RI, MT, OR, DE, OH). Although there are legitimate criticisms of the methodology for constructing these scores, it seems pretty clear that college affordability is an important barrier to attainment of higher education in Maine.

This report is an introduction to current issues on college affordability in Maine. It is meant to serve as a starting point for discussion. The goal of this report is to present the dimensions of the problem as best as possible while avoiding the temptation to evaluate the facts.

Wherever possible, data for Maine and all other states are provided to form a basis for comparison. In some cases, though, data are not readily available. Also, most of the data are for public colleges and universities. Public institutions are emphasized because we have much greater scope to influence public higher education than private colleges. Also, this allows us to narrow our focus, which could become overwhelming.

## **1. Student and Family Contributions**

### **A. Tuition and Fees**

As shown in Figure 1, over the seven academic years from 1994 through 2001, average in-state tuition and fees at Maine’s public universities and colleges were 50% higher than the national average, and 3.5% higher than the New England average. Average in-state tuition and fees in Maine were 4<sup>th</sup> highest in the country over this period, and 3<sup>rd</sup> highest in New England (VT and NH were the most expensive). In 2000-01 (the latest year of available data), Maine was 7<sup>th</sup> highest in tuition and fees nationally and 3<sup>rd</sup> highest in New England.

As shown in Figure 2, average in-state tuition and fees in Maine’s public two-year programs were particularly high relative to the rest of the country. From 1994 through 2001, tuition and fees in Maine’s public two-year programs were 96% higher than the U.S. average, and 19% higher than the New England average. In this category from 1994 to 2001 and in 2000-01, Maine was 4<sup>th</sup> highest in the nation and 3<sup>rd</sup> highest in New England (NH and VT were the most expensive).

As shown in Figure 2, average tuition and fees in Maine’s public four-year programs were not as disproportionately high compared to the rest of the nation and New England. From 1994 through 2001, in-state tuition and fees in Maine’s public four-year programs were 23% higher than the U.S. average and 13% lower than the New England average. In this category from 1994 to 2001, Maine was 13<sup>th</sup> highest in the country (12<sup>th</sup> highest in 2000-01) and the lowest in New England (but not as low as MA in 2000-01).

Maine’s relatively high overall public tuition and fees are partly due to its relatively low proportion of students in two-year programs. Since two-year programs are generally much less expensive than four-year programs, having relatively more students in four-year programs makes Maine’s average college tuition and fees relatively high. As illustrated in Figure 3, from 1994 to 2001 Maine had less than 17% of its public college students enrolled in two-year programs,

compared to the national average of almost 39% and the New England average of more than 30%. In this category from 1994 to 2001, Maine was 9<sup>th</sup> lowest nationally (7<sup>th</sup> lowest in 2000-01) and 2<sup>nd</sup> lowest in New England (ahead of VT).

### **Tuition and Fees Relative to Average Income**

Income per capita is lower in Maine than in the rest of New England and the rest of the country. Thus, in terms of tuition and fees as a percentage of per capita income, the price of higher education in Maine is relatively higher than suggested in the previous subsection. As shown in Figure 4, from 1994 through 2001, average in-state tuition and fees were more than 16% of average income in Maine, compared to 9% nationally and 12% in New England. The percentage difference was more than 72% higher than the national ratio, and almost 32% higher than the New England ratio (compared to the percentage differences of 50% and 3.5% in tuition and fees). In 2000-01, the percentage difference was 73% higher than the national ratio, and 45% higher than the New England ratio. Maine's rankings in this category are the same as those for tuition and fees. A similar picture emerges when comparing tuition and fees to median family income rather than per capita income.

### **Tuition Relative to Median Family Income in the Lowest Quintile**

*Measuring Up* reports a measure called “percentage of family income needed to pay for tuition at lowest priced colleges”. Although there are some problems with these data, it is a useful rough measure of relative college affordability for poor families. In 2000-01, the ratio in Maine was 20.7%, compared to 11.9% nationally. In this category Maine was 6<sup>th</sup> highest in the country and 3<sup>rd</sup> highest in New England (behind NH and VT).

### **B. Net Tuition**

In terms of average net in-state tuition (in-state tuition and fees less federal, state, and institutional grants), higher education in Maine is not as expensive as suggested by the numbers above. As shown in Figure 5, in terms of average net tuition, Maine's public college students paid \$973 more than the national average (compared to \$1,325 more in terms of gross tuition), and \$267 less than the New England average (compared to \$120 more in gross tuition). Net expenses in Maine were 13<sup>th</sup> highest in the country and 5<sup>th</sup> highest in New England (compared to 7<sup>th</sup> and 3<sup>rd</sup> for gross tuition).

College students in Maine receive relatively high amounts of grants on average. Students in Maine received almost 20% more than the national average and 22% more than the New England average. In this category, Maine was 6<sup>th</sup> highest nationally, and 2<sup>nd</sup> highest in New England (behind VT). Compared to the rest of the New England, Maine students receive 54% more need-based Federal aid (Pell Grants). In this category, Maine was 11<sup>th</sup> highest in the nation, and the highest in New England. Compared to the rest of the country, Maine students receive 53% more institutional aid. In this category Maine was 5<sup>th</sup> highest nationally and 3<sup>rd</sup> highest in New England (behind VT and NH). This is especially true in two-year institutions, where Maine was 3<sup>rd</sup> highest nationally and the highest in New England. This is shown in Figures 6 and 7. In these data, Federal and State grants are imputed to be the same for two- and four-year programs (which is probably an important limitation), thus only institutional grants are shown.

These figures also show the net tuition for the two types of institutions. Net in-state tuition in Maine's two-year programs was \$893 higher than the U.S. average (compared to \$1,240 more in terms of gross tuition), and \$55 higher than the New England average (compared to \$537 more in terms of gross tuition). In this category, Maine was 12<sup>th</sup> highest in the nation and 4<sup>th</sup> highest in New England (compared to 4<sup>th</sup> and 3<sup>rd</sup>).

Net in-state tuition in Maine's four-year programs was \$586 higher than the U.S. average (compared to \$753 more in terms of gross tuition), and \$464 lower than the New England average (compared to \$410 less in terms of gross tuition). In this category, Maine was 19<sup>th</sup> highest in the nation and the lowest in New England (compared to 12<sup>th</sup> and 5<sup>th</sup>).

### **Net Tuition Relative to Median Family Income**

In 2000-01, average net in-state tuition was 3.9% of median family income in Maine, compared to 1.7% nationally and 3.4% in New England (authors' calculations using data from *Measuring Up 2002* and the U.S. Census Bureau. Median family income is for 1999, but is adjusted for inflation to 2000-01 dollars). The percentage difference was 133% higher than the national ratio, and 14% higher than the New England ratio. In this category, Maine was 7<sup>th</sup> highest nationally and 3<sup>rd</sup> highest in New England (behind VT and NH).

Coincidentally, these are the same rankings as for gross tuition and fees in 2000-01 (although the percentage differences are much larger for net tuition relative to median family income). In other words, Maine's relatively high average amount of student grants and its relatively low income offset each other and leave the rankings unchanged.

### **C. Loans**

Despite having relatively high net tuition, college students in Maine are not relatively big borrowers on average. In the 2000-01 academic year, the average annual undergraduate student borrowing in Maine was \$3,205, which is almost 4% below the national average of \$3,333, and almost 15% less than the New England average of \$3,762 (authors' calculations using data on all students, not just those in public institutions, from *Measuring Up 2002*). In this category, Maine was 29<sup>th</sup> in the nation and the lowest in New England.

### **Loans Relative to Median Family Income**

Although borrowing for students in Maine is slightly less than the national average and much less than the New England average, college borrowing relative to median family income (or per capita income) is slightly above the U.S. and New England averages. In 2000-01, average annual undergraduate borrowing in Maine was 6.8% of median family income, compared to 6.4% nationally and 6.1% in New England (authors' calculations using data from *Measuring Up 2002* and the U.S. Census Bureau). In this category, Maine was 18<sup>th</sup> highest nationally and 3<sup>rd</sup> highest in New England (behind VT and RI).

### **D. Education Savings Accounts**

College savings plans can receive special tax exemptions under section 529 of the federal tax code. Maine supports the NextGen College Investment Plan®, which is administered by the

Finance Authority of Maine (FAME). Families can contribute up to \$50,000 per parent annually for each beneficiary without incurring federal gift taxes. Earnings and withdrawals (if used for higher education expenses) are exempt from state and federal taxation. During the financial aid process, these accounts are included in parents' assets, rather than students', and hence are not counted as heavily in calculations of estimated family contribution.

As of June 30, 2003, 6,687 Maine families held approximately \$48,264,611 in NextGen accounts. Involvement in this program varies across the state. Cumberland County had the highest overall participation (2,233 accounts averaging \$8,055) and Washington County had the lowest participation (51 accounts averaging \$3,003).

NextGen accounts are managed by Merrill Lynch, which gives the State 15 basis points annually on the total value of all holdings. That money goes toward account maintenance, as well as a State matching program. New account holders with family incomes at or below \$50,000 can receive a match up to \$200 on initial deposits. In following years, those account holders can receive up to \$100. Roughly 1000 account holders have taken advantage of this matching program. Maine's participation in NextGen is currently funding over \$500,000 in need-based scholarships for Maine students.

Annual administration fees on Maine's NextGen accounts equal 15 basis points. However, if the account holder or beneficiary is a Maine resident, FAME refunds paid fees in January of the following year. Only accounts with over \$1,000 are eligible for this refund. The minimum contribution for opening an account is \$250, or \$50 if participants arrange for monthly automated deposits of \$50 or more. These minimums are high compared to 529 plans in other states. Seven states have equivalent minimums, four have higher, and thirty-nine have lower minimum contribution levels. In twenty-six states, residents can open accounts with \$25 or less.

## **2. Employer Contributions**

Data on employer contributions for employees' education are difficult to find. Thus far, the only source that we have found is the 2001 report *Maine Department of Labor Training Services Survey*. The responses to this survey indicate that Maine employers are generally supportive of their workers continuing education. There are some inconsistencies in their answers, though. Thus, it is not clear that perception matches reality.

76% of the respondents indicated that they would be "very likely" and 15% indicated that would be "somewhat likely" to pursue additional training if their employers paid their salary while doing so. 68% said that they would be very likely and 20% said that would be somewhat likely to pursue additional training if their employers would pay their expenses. 58% said that they would be very likely and 28% said that would be somewhat likely to pursue additional training if their employers would allow the flexibility in their work schedule.

47% of the respondents indicated that their employers would pay their salary while in training. 50% said that their employers would pay their training expenses. 60% said that their employers would flexibility in their work schedule for training.

Given these responses, it is surprising that only 49% of the workers surveyed had actually taken advantage of the training opportunities offered by their employers. Moreover, disproportionately more of who had taken training already had college degrees.

Also, only 26% of the employers surveyed in the *Maine Labor Force Analysis* (conducted by the Center for Business and Economic Research at the University of Southern Maine in 1999-2000) provided education reimbursement benefits.

### **3. Industry, Foundations, and Alumni Contributions**

Although data for this category are not ideal, there is some useful information.

#### **A. Industry**

A measure for business contributions is “college and university research and development expenditures funded by industry” from the National Science Foundation. R&D funding helps to offset the overhead costs of higher education. In 2000, industry-funded R&D per full-time equivalent undergraduate in Maine was \$80, compared to \$227 nationally and \$377 in New England (authors’ calculations using NSF and NCES data on public and private institutions). In this category, Maine was 48<sup>th</sup> in the country and 5<sup>th</sup> in New England (above RI). The industry-funded share of total university R&D was 5% in Maine, compared to 7% nationally and 8% in New England. In this category, Maine was 38<sup>th</sup> nationally and 5<sup>th</sup> in New England (above RI).

#### **B. Foundations**

One measure for contributions from philanthropic foundations is “college and university research and development expenditures funded by nonprofits” from the National Science Foundation. In 2000, nonprofit-funded R&D per full-time equivalent undergraduate in Maine was \$65, compared to \$241 nationally and \$438 in New England. In this category Maine was 47<sup>th</sup> in the country and last in New England. The nonprofit-funded share of total university R&D was 4% in Maine, compared to 7.5% nationally and 9% in New England. In this category Maine was 38<sup>th</sup> nationally and 5<sup>th</sup> in New England.

Another measure for contributions from foundations is “current fund revenue from private gifts, grants, and contracts” from the National Center for Education Statistics. In 1999-2000, privately-funded revenues per full-time equivalent public undergraduate student in Maine were \$882, compared to \$934 nationally and \$726 in New England (authors’ calculations using NCES data for public institutions). In this category, Maine was 25<sup>th</sup> in the country and 3<sup>rd</sup> in New England (behind VT and NH). The privately-funded share of total public university current-fund revenues was 4.9% in Maine, compared to 4.8% nationally and 3.7% in New England. In this category Maine was 22<sup>nd</sup> nationally and 3<sup>rd</sup> in New England.

The difference in these measures of contributions from foundations in Maine (i.e., relatively low in research funding, but about average in total funding) suggests that Maine has a relatively high amount of privately-funded grants (i.e., scholarships and fellowships).

### **C. Alumni**

Data collected by the *U.S. News and World Report* indicate that the percentage of public undergraduate alumni that donate to their alma mater in Maine is very slightly below the New England average. In 2000-02, the percentage for Maine's public universities was 13.6%, compared to 14.0% for New England's public universities.

### **D. Total**

A measure of overall business, foundation, and alumni contributions is endowment income. In 1999-2000, public institutions' endowment revenues per full-time equivalent undergraduate in Maine were \$174, compared to \$146 nationally and \$84 in New England (authors' calculations using NCES data for public institutions). In this category Maine was 16<sup>th</sup> in the country and 3<sup>rd</sup> in New England (behind VT and NH). The endowment-income share of total public university current-fund revenues was 1.0% in Maine, compared to 0.7% nationally and 0.5% in New England. In this category Maine was 11<sup>th</sup> nationally and 3<sup>rd</sup> in New England.

## **4. Federal Contributions**

Although we cannot do anything about federal policies, we may be able to design policies to obtain more federal dollars. For example, probably not all of our students are taking full advantage of federal financial aid. Our universities might be able to obtain more Federal research dollars, which help pay university overhead and hence pay some of the costs of providing instruction.

### **A. Financial Aid**

In the 2001-02 academic year, federal aid accounted for 63.7% of total aid distributed nationwide. As mentioned earlier, federal financial aid is relatively high in Maine's public institutions of higher education. In 2000-01, average Pell Grants were \$803 per full-time equivalent student in Maine's public colleges, compared to \$675 nationally and \$521 in New England (from *Measuring Up*). In this category, Maine was 11<sup>th</sup> highest in the nation and the highest in New England by far.

Although Pell Grants are the primary federal financial aid program, they are not the only one. Thus, "U.S. Department of Education appropriations for student financial assistance" from the National Center for Education Statistics is a broader measure of federal financial aid. In 2000-01, this amount per undergraduate student in Maine was \$1,806, compared to \$1,489 in the U.S. and \$1,461 in New England (authors' calculations using NCES data for public and private institutions). In this category, Maine was 7<sup>th</sup> in the country and 2<sup>nd</sup> in New England (behind VT).

### **B. Aid to Institutions**

There are various U.S. Department of Education appropriations that provide aid to institutions. In 2000-01, these appropriations per undergraduate student in Maine were \$235, compared to \$173 in the U.S. and \$126 in New England (authors' calculations using NCES data for public

and private institutions). In this category, Maine was 16<sup>th</sup> in the country and 2<sup>nd</sup> in New England (behind VT).

### **C. Research Funding**

In 2000, federally-funded R&D per full-time equivalent undergraduate in Maine was \$672, compared to \$1,857 nationally and \$3,254 in New England (authors' calculations using NSF and NCES data on public and private institutions). In this category, Maine was 47<sup>th</sup> in the country and last (by far) in New England. The federally-funded share of total university R&D was 44% in Maine, compared to 58% nationally and 69% in New England. In this category, Maine was 42<sup>nd</sup> nationally and last (by far) in New England.

### **D. Total**

In 1999-2000, "current fund revenue from federal appropriations, grants, and contracts" per full-time equivalent undergraduate in Maine was \$1,514, compared to \$2,114 nationally and \$1,767 in New England (authors' calculations using NCES data for public institutions). In this category, Maine was 38<sup>th</sup> in the country and 5<sup>th</sup> in New England (ahead of CT). The federal share of total public university current-fund revenues was 8% in Maine, compared to 11% nationally and 9% in New England. In this category, Maine was 39<sup>th</sup> nationally and 5<sup>th</sup> in New England.

## **5. State Contributions**

There are various ways of measuring state support for higher education, and it is not clear which measure is best. However, most of them reveal the same basic story.

### **A. Taxpayer Contribution**

As illustrated in Figure 8, over the four fiscal years from 1996 through 2000, per capita state spending on higher education (which is ultimately paid through taxes) in Maine was 21% less than the national average. Per capita support for public higher education was 45<sup>th</sup> in the country over this period.

Per capita income in Maine was significantly lower than in the rest of the country, thus a better measure of the relative commitment of Mainers to public higher education is state spending on higher education as a proportion of income. As shown in Figure 9, from 1996 to 2000 this ratio was 1.48% in Maine, compared to the national average of 1.63%. The percentage difference in these ratios was a little less than 9%. Maine was 40<sup>th</sup> in this category.

### **B. Percentage of State Spending**

Public spending on higher education as a percentage of all state and local government spending reveals budget priorities. As shown in Figure 10, from 1996 to 2000 this ratio was 6.26% in Maine, compared to 7.47% nationally. The percentage difference in these ratios was more than 16%. Maine was ranked 42<sup>nd</sup> in this category.

### C. Net Spending per Student

Maine's relatively low state spending on higher education is partly due to its relatively low number of college students in Maine (mostly because of the high proportion of young Mainers leaving the state for college). Thus, it may be preferable to measure per-student state spending on higher education. Also, the state gets tuition revenues from students and their families. Hence, the real contribution of the state to higher education is its spending less these revenues. Figure 11 shows the real state contribution per student. Over the period 1996 through 2000, state spending per student in Maine was a little less than 5% below the national average.

In terms of net spending per college student *from* Maine, though, the state's contribution is relatively much lower, because of the high proportion of young Mainers leaving the state for college.

### D. Financial Aid

As shown in Figure 12, state need-based aid to students is relatively low in Maine. Need-based grants per student over the period 1994 to 2001 were more than 18% below the national average and more than 39% below the New England average. In this category over this period, however, Maine was 15<sup>th</sup> nationally and 4<sup>th</sup> in New England (above NH and RI).

Unlike many other states, all state scholarships and grants in Maine are need-based. Thus, in terms of overall grants, Maine is further behind the rest of the country than suggested above. In 2001-02, the average grant per full-time equivalent undergraduate was almost 36% below the national average (National Association of State Student Grant and Aid Programs). In this category, Maine was 28<sup>th</sup> nationally and 4<sup>th</sup> in New England.

A similar picture emerges from the measure "state need-based aid as a percent of federal Pell Grant aid" in *Measuring Up*. In 2000-01, the ratio of state need-based aid relative to Pell grants was 40% in Maine, compared to 44% nationwide and 70.5% in New England. In this category, Maine was 19<sup>th</sup> nationally and 4<sup>th</sup> in New England.

The Finance Authority of Maine (FAME) oversees several programs that benefit Maine students. The need-based Maine State Grant Program provides up to \$1250 for Maine residents to attend a private in-state institution, \$1000 to attend a public in-state institution, \$1000 for a private out-of-state institution, and \$500 for a public out-of-state institution. Students from Maine automatically apply when they file a FAFSA.

FAME also administers the Educators for Maine Program, Quality Child Care Education Scholarship (one-year, need-based scholarships for up to two courses per semester for child care professionals pursuing a professional degree), Robert C. Byrd Honors Scholarship (merit-based, federally-funded scholarship for recent high school graduates), University of Maine System License Plate Scholarship (need-based scholarships for UMS students), and tuition waver programs for foster children and survivors of firefighters, law enforcement officers, and emergency medical personnel killed on duty.

## **E. Employer Support**

Maine currently supports the following employment-based programs (note that “training” can refer to activities other than post-secondary education and for-credit courses):

The Governor’s Training Initiative provides partial reimbursement for the cost of worker training to employers meeting certain wage and benefit thresholds. Some benefit requirements are relaxed for small businesses. In 2002, the program serviced 83 employers and 7,992 employees: 1,753 were in newly-created jobs and 6,239 were retooling for their existing positions. State contributions totaled \$3,277,000 in that year.

The Maine Apprenticeship Program provides a structure for on-the-job and classroom instruction leading to certification in a trade. During the apprenticeship participants may be reimbursement up to \$100 per course for two courses per semester.

The Maine Quality Centers Program allows Maine’s community colleges to offer free training and recruitment services to businesses planning to create at least eight new full-time jobs with benefits. In 2001, \$837,304 was spent on 44 projects that trained 2,590 individuals. Some of those projects represent ongoing relationships with employers.

## **F. Total**

In 1999-2000, revenue from “state appropriations, grants, and contracts” was 43% of all current fund revenues in Maine’s public institutions of higher education, compared to 36% nationally and 40% in New England (authors’ calculations using NCES data). In this category, Maine was 12<sup>th</sup> highest nationally and 3<sup>rd</sup> highest in New England (behind CT and MA).

## **6. Costs**

### **A. Cost per Student**

In the 1999-2000 academic year, “educational and general expenditures” per full-time equivalent undergraduate student in Maine’s public degree-granting institutions were \$15,503, compared to \$14,164 nationally and \$16,278 in New England (authors’ calculations using NCES data). That is, the per-student cost of public higher education in Maine was 9.5% higher than the national average and 4.8% below the New England average. In this category, Maine was 22<sup>nd</sup> highest nationally and 3<sup>rd</sup> highest in New England (behind VT and CT).

### **B. Categories of Costs**

We were unable to find complete data on categories of costs. We were able to put together a very rough comparison between broad categories of costs in the University of Maine System in 2001-02 and the national average for public degree-granting institutions in 1999-2000. This is shown in Figure 13. The cost categories that are shown account for most, but not all, expenditures. Some spending categories were not consistently reported by the university system and the NCES. A much more complete analysis of costs would be necessary before entertaining suggestions for potential cost efficiencies. The chart is only meant as a possible starting point.

**Figure 1**

**Figure 5**  
**Annual In-State Tuition and Fees per Full-time Undergraduate Student**  
**(Adjusted for Inflation - in 2000 \$)**

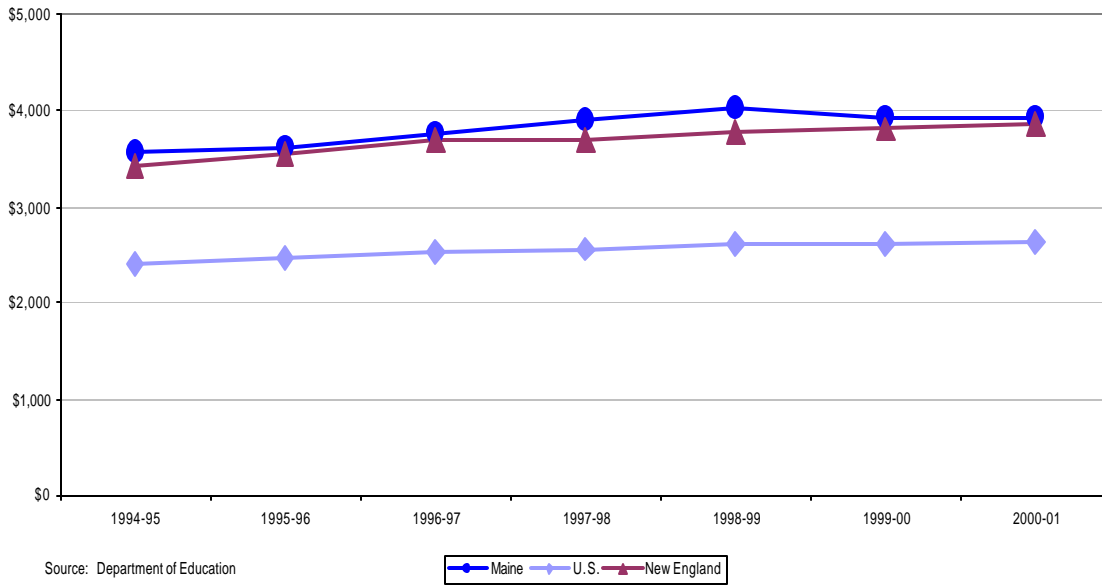


Figure 2

Figure 27  
Average Annual In-State Tuition and Fees  
(Adjusted for Inflation - in 2000 \$)

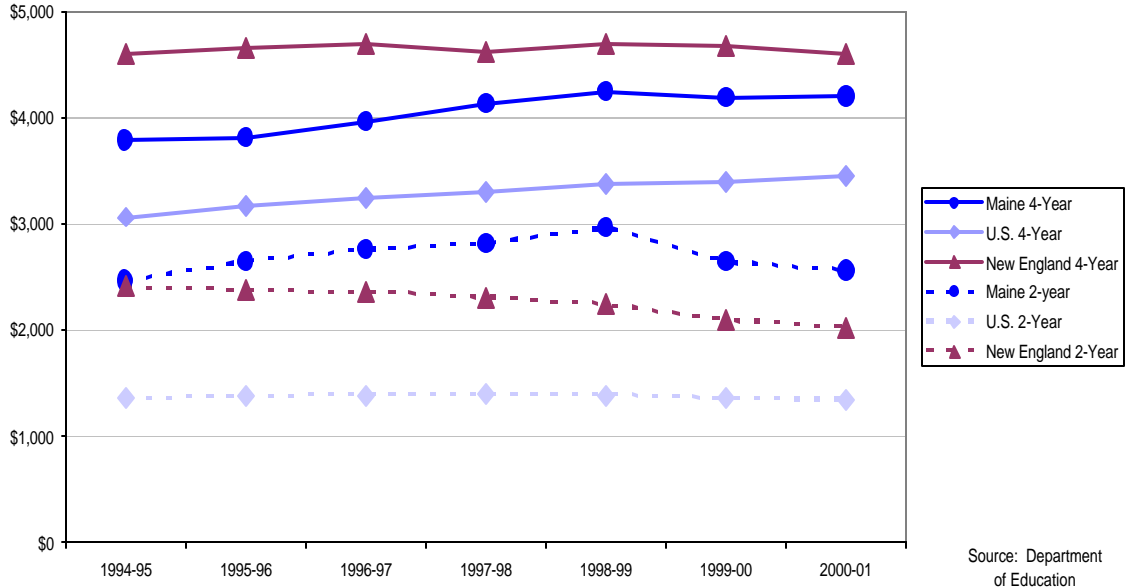


Figure 3

Figure 28  
Percentage of Public Undergraduate Students Enrolled in Two-Year Programs

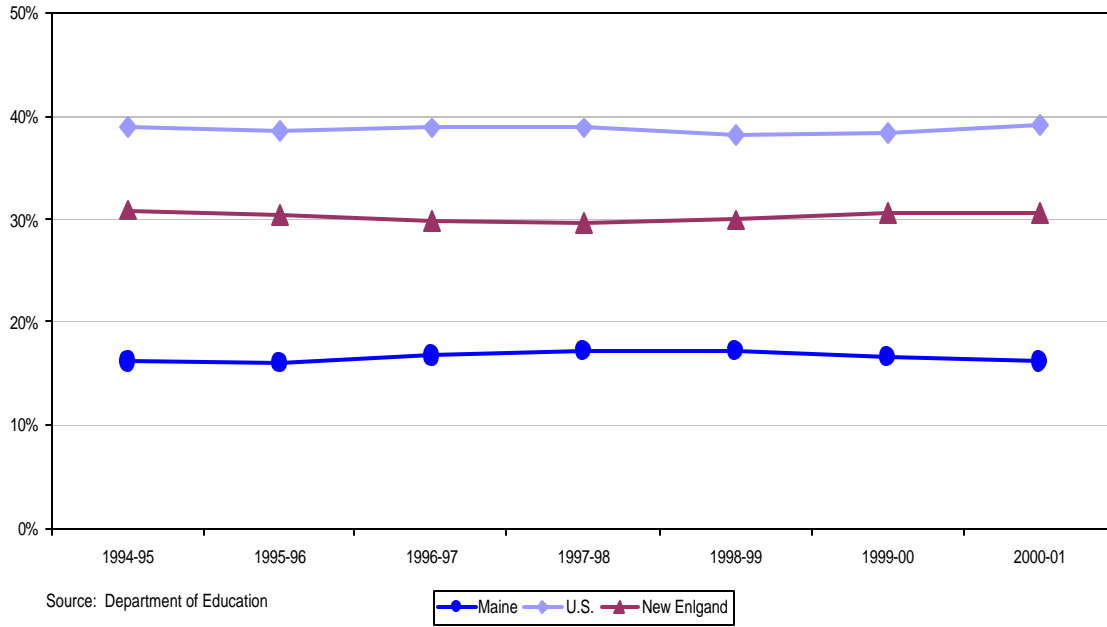
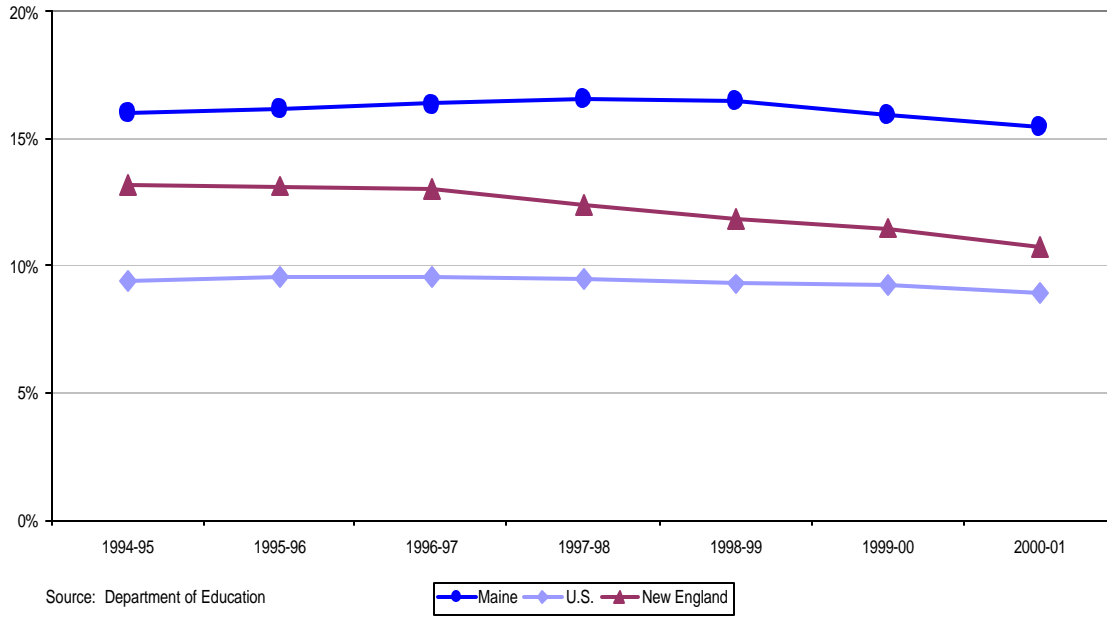
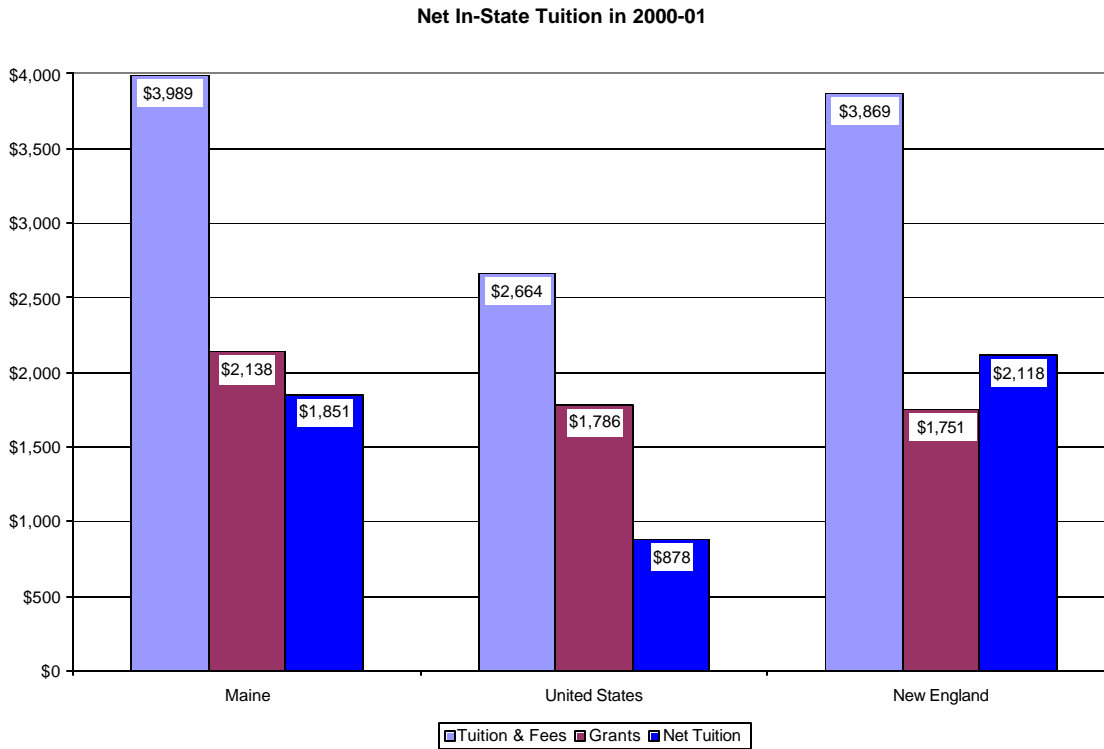


Figure 4

Figure 25  
Average Annual In-State Tuition and Fees as a Percentage of Per Capita Income

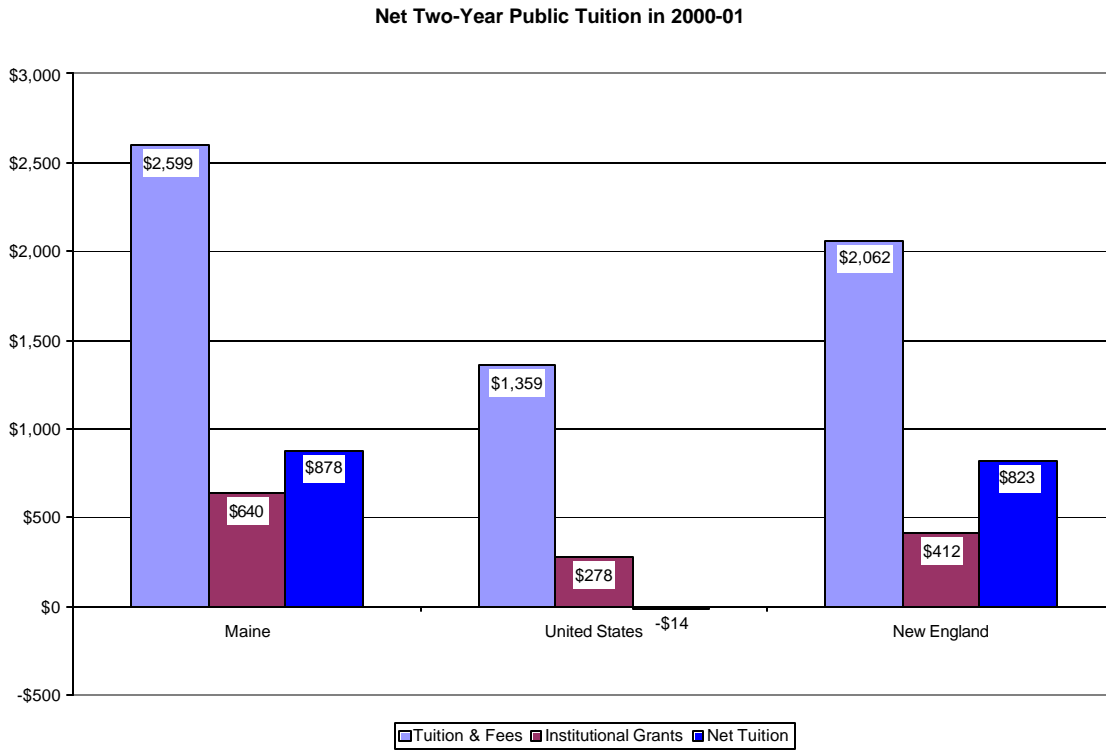


**Figure 5**



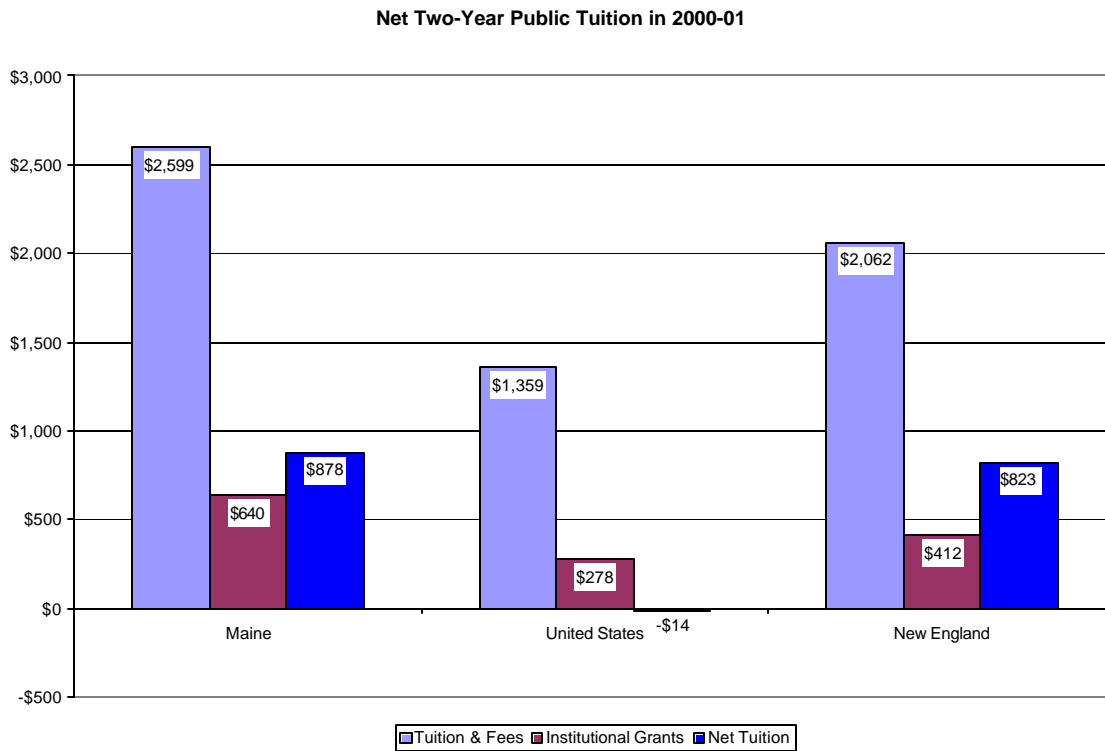
Authors' calculations using data from *Digest of Education Statistics*, National Center for Education Statistics and *Measuring Up 2002*, National Center for Public Policy and Higher Education.

**Figure 6**



Data from *Measuring Up 2002*, National Center for Public Policy and Higher Education.

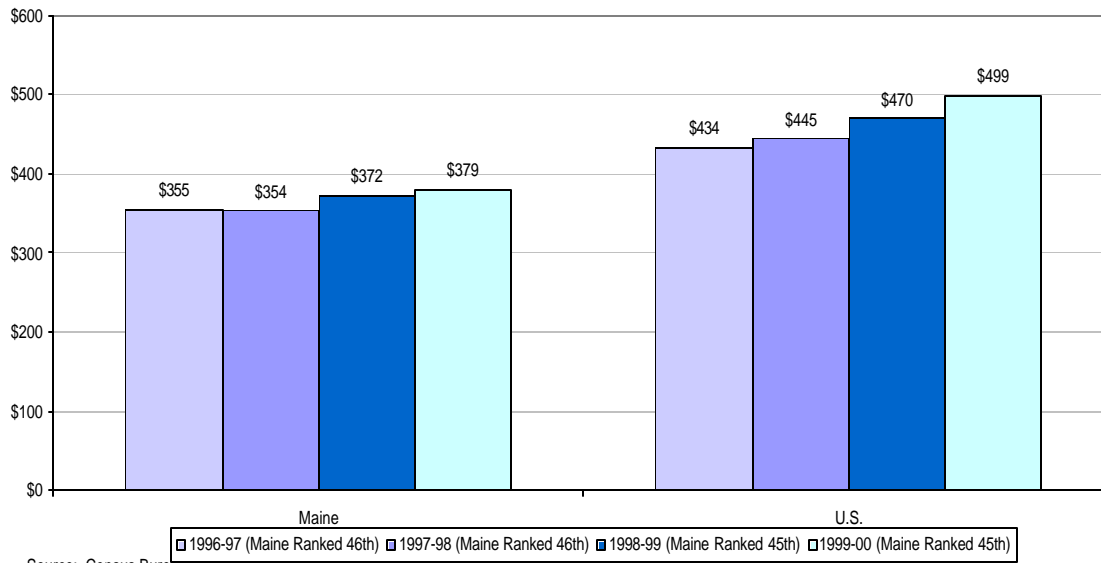
**Figure 7**



Data from *Measuring Up 2002*, National Center for Public Policy and Higher Education.

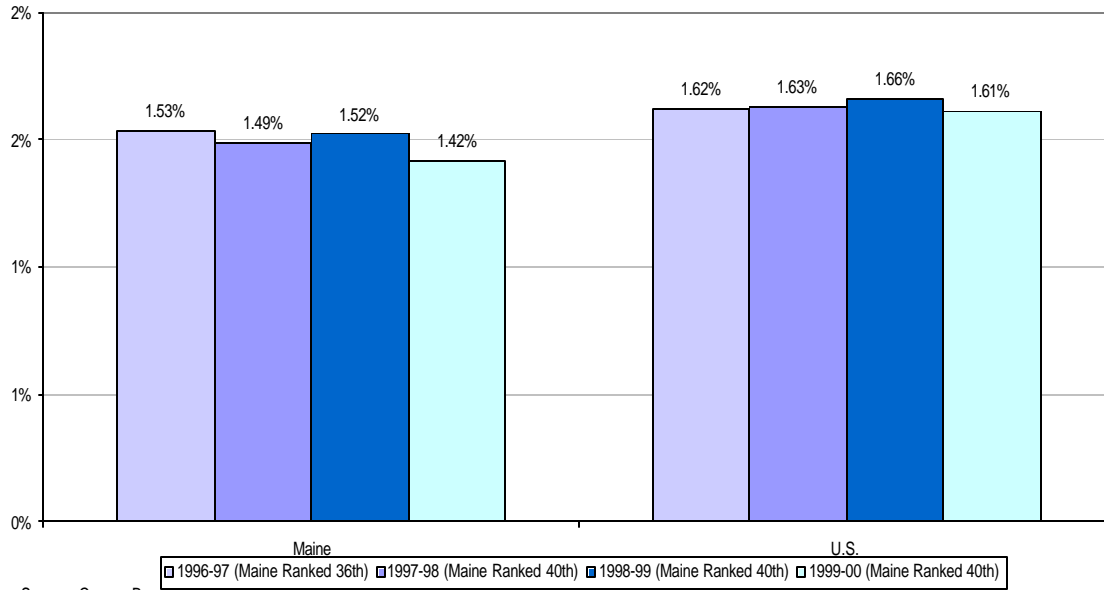
**Figure 8**

**Figure 17**  
**Per Capita Public Spending on Higher Education**  
**(Adjusted for Inflation - in 2000 \$)**



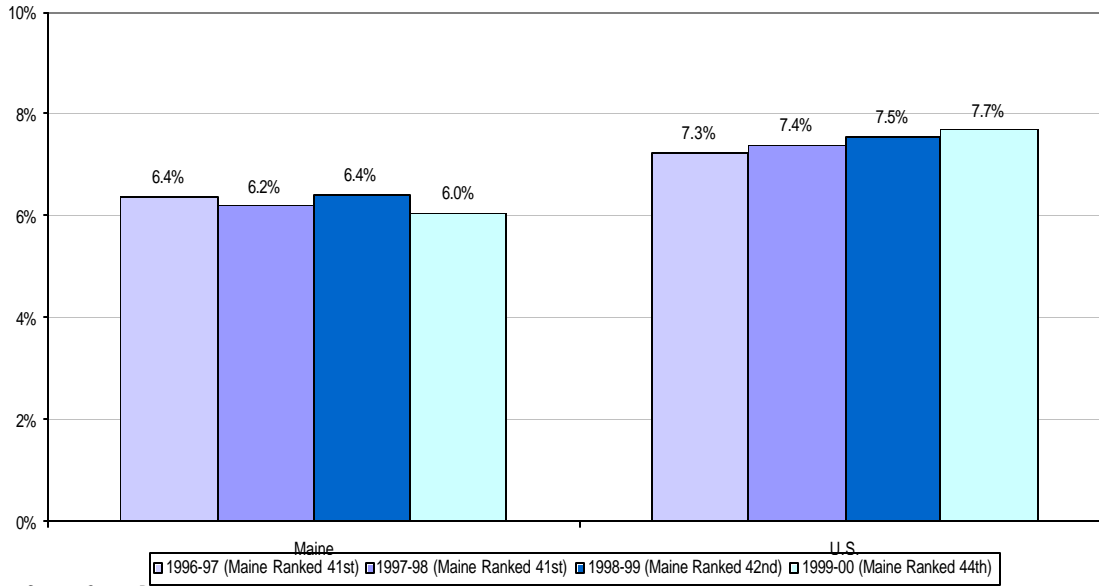
# Figure 9

Figure 19  
Percentage of Income Spent on Public Higher Education

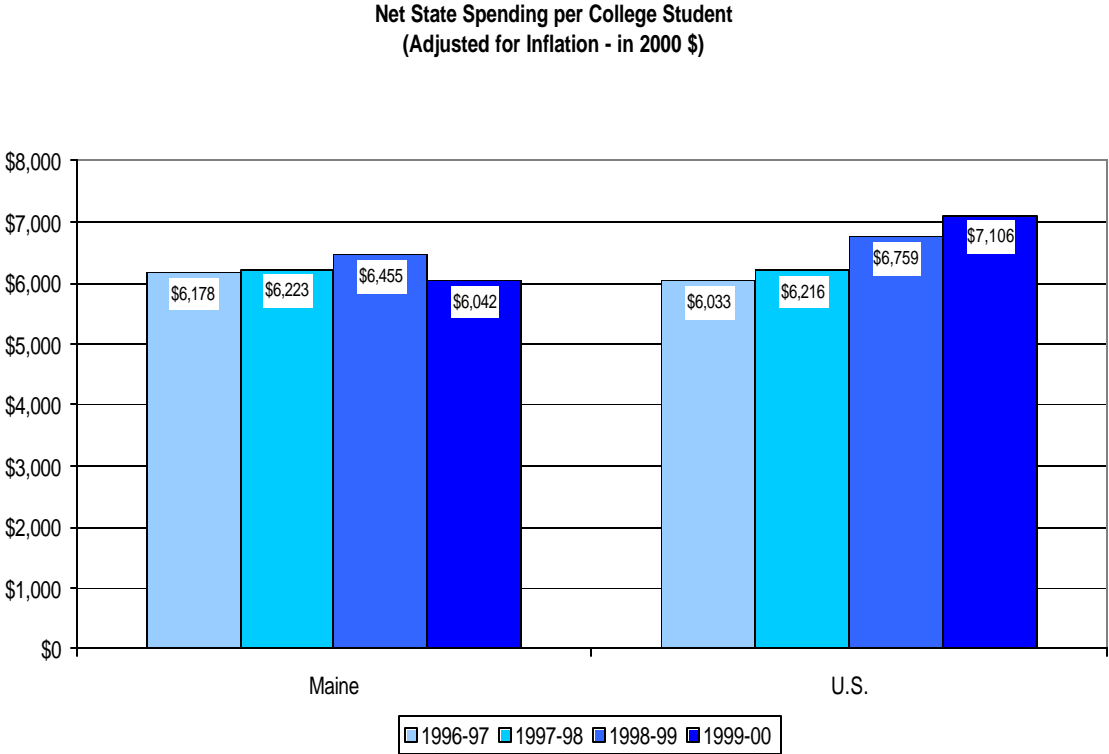


**Figure 10**

**Figure 21**  
**Percentage of State and Local Government Expenditures on Higher Education**



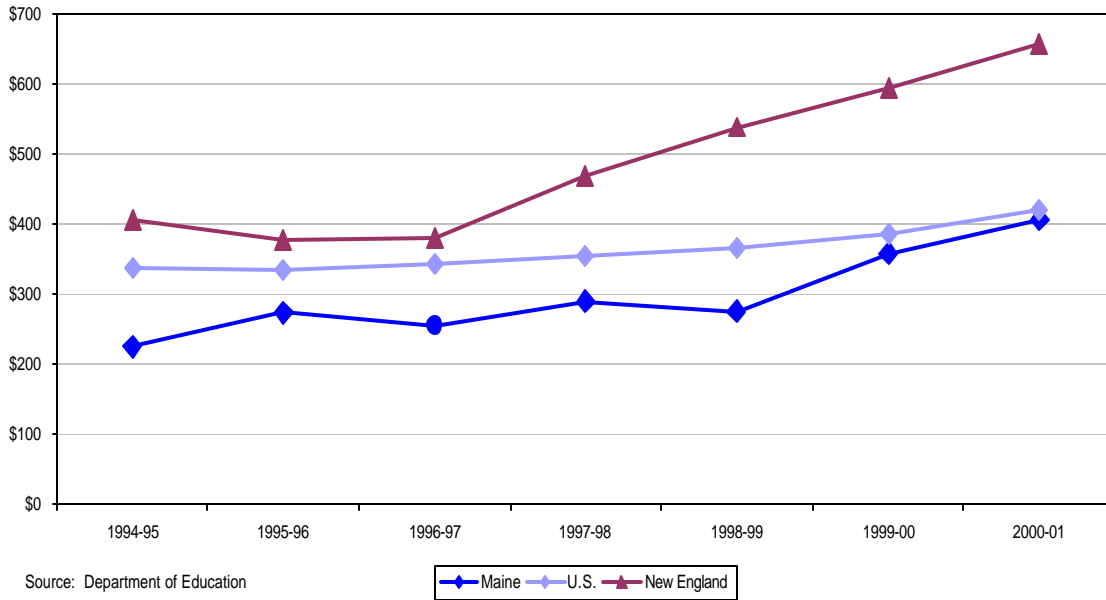
**Figure 11**



Authors' calculations using data from the National Center for Education Statistics and the U.S. Census Bureau.

**Figure 12**

**Figure 26**  
**State Need-Based Scholarships and Grants per Student**  
**(Adjusted for Inflation - in 2000 \$)**



**Figure 13**

