Higher Education and the Maine Economy: The Role of Faculty

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James Breece, Ph.D.
University of Maine System
It is well understood how the economy influences the work environment of faculty:
- State Appropriations
- Enrollments
- R&D funding

But how does the faculty influence the economy?
Outline

1. An Economic Overview
   • Current Economic Drivers
   • Long Term Trends
   • Possible Solutions

2. State Expectations of Higher Education

3. Student Profile

4. Thoughts on the Role of Faculty
Current Economic Drivers

- Sluggish National Economy - Stagflation
- High Oil Prices
- Weak Housing Market - Depressed Prices
  - Fall in household wealth
- Fragile Credit Markets
- Volatile Stock Market
- Weak Dollar
- Transitioning Economy
- The War Effort

“R” word ???

or

“D” word ???
Long Term Trends in Maine

- Employment
- Value Added Economic Activities
- Demographics
- Business Attraction Factors
Monthly Total Employment Index
January 1969 - October 2007
US, New England & Maine

Data: Federal Reserve Bank of Boston
Monthly Total Employment Index
January 1969 - October 2007
US, New England & Maine

Data: Federal Reserve Bank of Boston
• Just getting back to ’89 and ’00 levels
• Maine being left behind.
• Why??
Maine Manufacturing Employment
1990 - 2006

**1990 - 2000**
- Leather & Allied Products: -52% (-5,586)
- Transportation Equipment: -36% (-5,052)
- Paper Manufacturing: -26% (-4,493)
- Textile Mills: -47% (-2,512)
- Total Change: -15% (-14,952)

**2000 - 2006**
- Paper Manufacturing: -30% (-3,851)
- Computer & Electronic Prod. Man.: -47% (3,226)
- Leather & Allied Products: -52% (-2,681)
- Wood Product Manufacturing: -16% (-1,429)
- Textile Mills: -47% (-1,359)
- Total Change: -22% (-18,089)

**Total Manufacturing Change**: -34% (-33,050)

Source: Bureau of Economic Analysis
Long Term Trends in Maine

- Employment
- Value Added Economic Activities
- Demographics
- Business Attraction Factors
Value-Added Economic Activity
(real GDP per Worker)

Data: Bureau of Economic Analysis
Value-Added Economic Activity
(real GDP per Worker)

Data: Bureau of Economic Analysis
Relative Value-Added
(real GDP per worker compared to national average)
1997-2006
New England States

Data: Bureau of Economic Analysis
Relative Value-Added
(real GDP per worker compared to national average)
1997-2006
New England States

Data: Bureau of Economic Analysis
2006 State Rankings
Maine

• Personal Income Per Capita 39th
• Gross Domestic Product 44th
• Value-Added Activity 47th

Maine is being left behind
Long Term Trends in Maine

• Employment
• Value Added Economic Activities
• Demographics
• Business Attraction Factors
Projection of Maine High School Graduates

Data: Western Interstate Commission for Higher Education, 2008
Population of Maine by Age Cohort and Gender (1990)

Source: Maine State Planning Office
Population of Maine by Age Cohort and Gender (2030)

Source: Maine State Planning Office
Long Term Trends in Maine

• Employment
• Value Added Economic Activities
• Demographics
• Business Attraction Factors
Business Attraction Factors: Maine’s Advantage?

- Skilled Labor Force
- Work Ethic
- Energy Costs
- Transportation Costs
- Telecommunications
- Taxes
- Cultural and Environmental
- Labor Costs
### Business Attraction Factors:
#### Maine’s Advantage?

<table>
<thead>
<tr>
<th>Factor</th>
<th>YES</th>
<th>NO</th>
<th>YES/NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skilled Labor Force</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work Ethic</td>
<td>YES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Energy Costs</td>
<td>NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transportation Costs</td>
<td>NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Telecommunications</td>
<td>NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taxes</td>
<td>NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cultural and Environmental</td>
<td>YES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labor Costs</td>
<td>YES/NO</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NO:** Only 27% of ME pop. with a BA
NE average is 34%
Overall Assessment for Maine

• The combination of:
  – Low value-added activity
  – An aging workforce
  – Few business attraction factors

• Does not yield a robust and vibrant economy in the long run
What is the Answer for Maine?
What is the Answer for Maine?

Generate more high VALUE-ADDED economic activities
# Examples of High Value-Added

<table>
<thead>
<tr>
<th>Industry</th>
<th>Not Just</th>
<th>Original Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Precision manufacturing</td>
<td>not just</td>
<td>welding</td>
</tr>
<tr>
<td>Coated publication papers</td>
<td>not just</td>
<td>pulpwood</td>
</tr>
<tr>
<td>Eco-tourism</td>
<td>not just</td>
<td>lodging</td>
</tr>
<tr>
<td>Building materials</td>
<td>not just</td>
<td>logs</td>
</tr>
<tr>
<td>Furniture</td>
<td>not just</td>
<td>stump wood</td>
</tr>
<tr>
<td>Composites</td>
<td>not just</td>
<td>lumber</td>
</tr>
<tr>
<td>Financial services</td>
<td>not just</td>
<td>banking</td>
</tr>
<tr>
<td>Telecommunications</td>
<td>not just</td>
<td>phone-lines</td>
</tr>
<tr>
<td>Yachts</td>
<td>not just</td>
<td>boats</td>
</tr>
<tr>
<td>Yogurt</td>
<td>not just</td>
<td>milk</td>
</tr>
<tr>
<td>Vodka</td>
<td>not just</td>
<td>potatoes</td>
</tr>
</tbody>
</table>
How to Accomplish?

– Entrepreneurial management

– R&D activities based on Maine’s natural resources

– Reverse “brain-drain”; generate a “brain-gain”

– Skilled/educated workforce in critical areas

– A strong higher education system
How to Accomplish?

- Entrepreneurial management
- R&D activities based on Maine’s natural resources
- Reverse “brain-drain”; generate a “brain-gain”
- Skilled/educated workforce in critical areas

A strong higher education system
  - Based on partnerships with businesses, government, and non-profits
A Thought…

If the % of Maine’s population with a BA degree were to reach the New England average of 34%…

…then Maine’s economy would be 27% larger, and its value-added activities would match that of New Hampshire.
Outline

1. An Economic Overview
   • Current Economic Drivers
   • Long Term Trends
   • Possible Solutions

2. State Expectations of Higher Education

3. Student Profile

4. Thoughts on the Role of Faculty
State Expectations of Higher Education

From:
- Business leaders
- State leaders (Governor and Legislature)
- Media
- Public at large
State Expectations of Higher Education

• Quality education
• Geographic access
• Affordability
• Public service/outreach
• Cultural activities
• Reverse Brain-Drain (Brain-Gain)
• Appropriate R&D and commercialization
• Entrepreneurship activities
• Leadership and guidance on social/economic issues
• Well trained workforce in essential disciplines
Agenda for Action

Developed by the Chancellor and Presidents; approved by the Trustees

– Student Success  #1 priority – working with students
– Strengthening the Economy of Maine (R&D&E)
– Environmental Stewardship
– Financial Sustainability
– Higher Education Advocacy
Outline

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Student Profile

• The typical classroom is not dominated by traditional age, full-time, residentially based, undergraduate students.

• Our students are diverse and the student body is ever changing.
Gateways to Maine’s Public Universities

- Traditional aged undergraduate in-state students: 40%
- Traditional aged undergraduate out-of-state students: 8%
- Web-based instructional students: 4%
- Students at centers and sites: 8%
- International students; both undergraduate and graduate: 3%
- Graduate students: out-of-state: 1%
- Work-force development: on and off site: n/a
- Non-traditional aged undergraduate students: 39%
- Non-degree students: 15%
- Graduate students; in-state: 11%

High School Aspirations / Early College: 2%
Transfer students from the MCCS: 2%
Transfer students from other universities: 5%
## Average age of UMS Student

<table>
<thead>
<tr>
<th>Year</th>
<th>Average Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>1982</td>
<td>25.4</td>
</tr>
<tr>
<td>1985</td>
<td>26.6</td>
</tr>
<tr>
<td>1990</td>
<td>27.4</td>
</tr>
<tr>
<td>1995</td>
<td>28.9</td>
</tr>
<tr>
<td>2000</td>
<td>28.1</td>
</tr>
<tr>
<td>2005</td>
<td>27.6</td>
</tr>
<tr>
<td>2007</td>
<td>27.2</td>
</tr>
</tbody>
</table>

The diagram above shows the average age of UMS students from 1982 to 2007, indicating a trend of increasing age from 25.4 in 1982 to a peak of 28.9 in 1995, followed by a decline to 27.2 in 2007.
UMS Student Headcount by Enrollment Status
1982 - 2007

<table>
<thead>
<tr>
<th>Year</th>
<th>Full-Time</th>
<th>Part-Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1982</td>
<td>17,458</td>
<td>10,298</td>
</tr>
<tr>
<td>1985</td>
<td>16,711</td>
<td>11,338</td>
</tr>
<tr>
<td>1990</td>
<td>19,019</td>
<td>14,994</td>
</tr>
<tr>
<td>1995</td>
<td>16,425</td>
<td>14,690</td>
</tr>
<tr>
<td>2000</td>
<td>18,433</td>
<td>13,939</td>
</tr>
<tr>
<td>2005</td>
<td>20,777</td>
<td>13,468</td>
</tr>
<tr>
<td>2007</td>
<td>20,812</td>
<td>12,814</td>
</tr>
</tbody>
</table>
Total Headcount by Gender by Enrollment Status
1982 - 2007

<table>
<thead>
<tr>
<th>Year</th>
<th>Full-Time Men</th>
<th>Full-Time Women</th>
<th>Part-Time Men</th>
<th>Part-Time Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>1982</td>
<td>8,705</td>
<td>8,753</td>
<td>3,850</td>
<td>6,448</td>
</tr>
<tr>
<td>1985</td>
<td>8,236</td>
<td>8,475</td>
<td>4,278</td>
<td>7,060</td>
</tr>
<tr>
<td>1990</td>
<td>9,013</td>
<td>10,006</td>
<td>5,145</td>
<td>9,849</td>
</tr>
<tr>
<td>1995</td>
<td>7,483</td>
<td>8,942</td>
<td>4,878</td>
<td>9,812</td>
</tr>
<tr>
<td>2000</td>
<td>7,740</td>
<td>10,693</td>
<td>4,451</td>
<td>9,488</td>
</tr>
<tr>
<td>2005</td>
<td>8,824</td>
<td>11,953</td>
<td>4,113</td>
<td>9,355</td>
</tr>
<tr>
<td>2007</td>
<td>8,965</td>
<td>11,847</td>
<td>3,998</td>
<td>8,816</td>
</tr>
</tbody>
</table>
Average Credit Hours per UMS Student

- 10.3 (2007)

Yearly data for the period from 1974 to 2007.
Web-Based Instructional Credit Hours
### Fall 2004 Cohort Submitting FAFSA

<table>
<thead>
<tr>
<th>Poverty Threshold</th>
<th>Income Threshold*</th>
<th>Full-time, First-time, First-year Students</th>
<th>% of Cohort Submitting FAFSA</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;=$19,157</td>
<td>405</td>
<td>11.9%</td>
<td></td>
</tr>
<tr>
<td>150%</td>
<td>&gt; $19,157</td>
<td>305</td>
<td>9.0%</td>
</tr>
<tr>
<td></td>
<td>&lt;=$28,736</td>
<td></td>
<td></td>
</tr>
<tr>
<td>200%</td>
<td>&gt; $28,736</td>
<td>370</td>
<td>10.9%</td>
</tr>
<tr>
<td></td>
<td>&lt;=$38,314</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt; $38,314</td>
<td>2,317</td>
<td>68.2%</td>
</tr>
</tbody>
</table>

Source: Poverty threshold data - US Census Bureau; Retention & UMS income data - internal.

*Note: Poverty income threshold are assuming a household of four people, with two dependents.
University of Maine System 1999 Cohort Persistence and Completion Rates

<table>
<thead>
<tr>
<th></th>
<th>1999 Cohort (Fall 1999)</th>
<th>First to Second Year Persistence</th>
<th>Second to Third Year Persistence</th>
<th>Third to Fourth Year Persistence</th>
<th>Completers within 150% of normal time (from original campus) (Spring 2005)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL</td>
<td>3,605</td>
<td>2,599</td>
<td>2,016</td>
<td>1,731</td>
<td>1,652</td>
</tr>
<tr>
<td></td>
<td>72%</td>
<td>78%</td>
<td>86%</td>
<td>46%</td>
<td></td>
</tr>
</tbody>
</table>
Outline

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Thoughts on the Role of Faculty:

A view from the system level and over 30 years in the classroom……..

Support the key elements of the Agenda for Action and each university’s tripartite mission:

– Student Success (quality instruction)
– R&D&E (scholarship and creative activities)
– Public Service/Outreach
Nationally, the role of faculty at public institutions is evolving:

- More engaged with their students
- More active in the community
- More linked to economic and community development
Thoughts on the Role of Faculty:

– Student Success (quality instruction)
– R&D&E (scholarship and creative activities)
– Public Service/Outreach
Student Success

Contributes to a knowledge-based economy: building human capital and a skilled/educated workforce

What is Student Success?
- Earning a BA/BS degree?
- Obtaining a job?
- Admissions to graduate school?
- Passing a credentialing exam?
- Retained knowledge/skills?

All the above
Student Success

For a vibrant economy, Maine must be competitive in a global economy.

– It is imperative that our students have a quality and relevant education.

How can you help?
Student Success

1. Recognize and teach to the diversity of our student body:
   - Age
   - Socioeconomic backgrounds
   - Readiness (academic, social, emotional)
   - Interests, desires, and learning styles
   - Constraints (family, work, location)

   Be flexible in schedules, assignments, and delivery
   One size does not fit all
   Maintain your standards
2. Be innovative and engaged:

- Quality instruction and enriched presentations
- Action oriented student engagement
- Meaningful student research
- Civic-based service learning and community projects
- Relevant student internships
- Thoughtful academic advising
- Supportive career counseling

Be a mentor
Student Success

3. Curriculum development and program offerings:
   – General Education requirements
   – Essential skills and knowledge
   – Appropriate “majors” and course content
   – Build a sense of community
   – Collaborate with other colleagues across the UMS
   – Encourage entrepreneurial spirit

Take a risk
Try something new
Thoughts on the Role of Faculty:

– Student Success (quality instruction)
– R&D&E (scholarship and creative activities)
– Public Service/Outreach
The Creative Economy: basic and applied research, technology transfer, and innovation:

• Strive for national and international recognition
• Seek external funding
• Include students in your work
• Create partnerships (private, public)
• Apply your research to Maine, to enrich:
  – People and community
  – Resources

Think globally
Act locally
Thoughts on the Role of Faculty:

- Student Success (quality instruction)
- R&D&E (scholarship and creative activities)
- Public Service/Outreach
Public Service/Outreach

In Maine, YOU are the resident expert in your field:

– Be willing to participate on State and local workgroups and commissions
– Be available for media interviews
– Be available to give speeches at public events
In Summary

• Higher education and UMS are key elements in securing a vibrant Maine economy.

• The State of Maine is relying on YOU and YOUR students to be successful.