Changing Patterns in U.S. Higher Education Financing

and How the American University Affects Economic Development
Distinctions among U.S. Higher Education Institutions

1) PUBLIC vs. PRIVATE

2) Carnegie Classification of Institutions of Higher Education
   • Among doctorate-granting universities there are 3 categories:
     1. Very High Research (e.g. University of Utah)
     2. High Research
     3. Doctoral/Research
# Historic Financing Trends

<table>
<thead>
<tr>
<th>PUBLIC REVENUE ($)</th>
<th>PRIVATE REVENUE ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Tuition..........................LOW</td>
<td>1. Tuition................MEDIUM to HIGH</td>
</tr>
<tr>
<td>2. Private donations........LOW</td>
<td>2. Private donations........HIGH</td>
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<tr>
<td>3. State support........HIGH</td>
<td>3. State support....LOW to ZERO</td>
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<tr>
<td>4. Federal.....MEDIUM to HIGH</td>
<td>4. Federal........MEDIUM to HIGH</td>
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</tbody>
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New Trends in Financing as % of Total Budget

PUBLIC

1. State support ↓
2. Federal research funds ↑
3. Tuition revenue ↑
4. Pursuit of private donations ↑

PRIVATE

1. Tuition ↑
2. Federal research funds ↑
3. Private donations ↑
Budget Shifts in Public Sector over 20 years

- Tuition
- State Support
- Private gifts, grants, contracts
Then and Now... The University of Utah

Budget by Source

1985
- State: 29%
- Hospitals: 21%
- Government Grants: 17%
- Auxiliary Enterprises: 10%
- Sales & Services: 9%
- Tuition: 7%
- Private Gifts, Grants, Contracts: 4%
- Other: 2%
- Endowment Income: 1%

2007
- State: 11.0%
- Patient Services: 38.0%
- Government Grants: 11.0%
- Auxiliary Enterprises: 5.0%
- Sales & Services: 2.0%
- Tuition: 6.5%
- Private Gifts, Grants, Contracts: 6.5%
- Other: 10.0%
- Investment Income: 18.0%
Tuition & its Challenges

1. Closely observed by state legislature.
2. Negotiate with students.
3. Specifically designed uses.
4. Prices out disadvantaged students.
State Support & its Challenges

1. Designated for certain purposes.

2. Small increases do NOT keep pace with inflation.

3. Occasionally secure funds for large projects. (e.g. USTAR)
Federal Support & its Challenges

1. Limited resource.

2. Does NOT keep pace with inflation.

3. Peer reviewed, but innovative projects often not initially funded. (e.g. Nobel Laureate & Utah Professor, Mario Capecchi)
Corporate Support & its Challenges

1. Sponsor may influence results.

2. Little funds available for basic research.

3. Skew professor’s intellectual agenda.
Clinical Revenue & its Challenges

1. Public sources (Medicare/Medicaid) subject to budget constraints by federal government.

2. Private sources subject to competition and changes in the market.
Fund Raising & its Challenges

1. Donors direct priorities.

2. Resources NOT distributed ideally throughout system.
Commercialization

**BENEFITS**

1. Resource for University.
2. Provides jobs, tax revenue.
3. Brings work into real world.

**CHALLENGES**

1. Too much emphasis on applied research.
2. Creates great technicians, but not necessarily great citizens.
The National Science Foundation has estimated that more than half of the U.S. economic growth since WWII is directly attributable to advances in technology – advances made possible by research universities.

Richard Rosan, President, Urban Land Institute

According to a study by the Association of University Technology Managers, $33.5 billion of U.S. economic activity can be traced to universities’ licensing technology . . . .

Businesses used to locate near sources of raw materials: water, cheap power, timber. Today, the raw materials of the new economy are knowledge, ideas, creativity.

Jon Eliassen, President & CEO, Spokane Economic Development Council
<table>
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<tr>
<th>STANFORD</th>
<th>MIT</th>
<th>UC-BERKELEY</th>
<th>UTAH</th>
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<tr>
<td>Hewlett Packard</td>
<td>Raytheon</td>
<td>Medarex</td>
<td>Adobe Systems</td>
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<td>Charles Schwab</td>
<td>Gillette</td>
<td>Oncobionic</td>
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<td>Thermo Electron</td>
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<td>Lotus Development</td>
<td>CommandCAD</td>
<td>Pixar Animation</td>
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<td>Lumiphore</td>
<td>Novell</td>
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<td>Yahoo!</td>
<td>PictureTel</td>
<td>Molecular Dynamics</td>
<td>Terratek</td>
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<td>Genentech</td>
<td>Calimetrics</td>
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Technology Venture Development

Established in 2005

1. Technology Commercialization Office
2. Lassonde Entrepreneur Center
   1. Lassonde New Venture Development Center
   2. Utah Entrepreneur Challenge
3. Bureau of Economic & Business Research
4. Utah Engineering Experiment Station
U.S. National Rankings: Utah Commercialization

• Ranked 2\textsuperscript{nd} in starting companies
  – Utah: 20 companies in 2006
  – MIT: 23 companies in 2006

• Ranked 9\textsuperscript{th} in commercialization activity

• Ranked 19\textsuperscript{th} in commercialization revenue
Utah Model of Entrepreneurship

1. Faculty Culture of Entrepreneurship.
2. Faculty Outreach Program.
3. Education Program Contributions.
4. Technology Commercialization supports funding and advising.
5. Funded through commercialization returns. ($28 million in 2008)
Utah Science, Technology and Research (USTAR): A Success Story

• 2006: $400 million investment by the state to commercialize technology at the University of Utah, a major research university.

• Funds for: relocating exceptional faculty, building laboratory facilities.

• Goal: bolster Utah’s research strength and increase technology commercialization to create more jobs.
USTAR Return on Investment

- $25 Million annual state investment & $250 Million for buildings
- $4.9 Billion new external research funds
- 422 new companies
- 123,406 new jobs paying $62 Billion in salaries
- $5 Billion in new tax revenues for Utah
Past as Prologue

By adjusting to these challenges, the American research university will remain at the forefront of the economy for the foreseeable future.