Understanding the Impact of Higher Education Policies on the Academic Profession in the United States

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Director, Higher Education Doctoral Program
University of Massachusetts Boston
Qualifications of the Presenter

- Expertise in organizational theory and organizational behavior in higher education
- Extensive research on faculty development and the academic workplace
- Author of books and articles on college and university leadership

Jay R. Dee, Associate Professor
Outline of the Presentation

- Overview of the U.S. Higher Education System
- Policy Context: Effects on Academic Profession
- Market Forces: Effects on Academic Profession
- Academic Careers and Workplaces
- Research Areas: Questions for Further Study
### U.S. Higher Education System

**Institutional Types and Enrollment**

<table>
<thead>
<tr>
<th></th>
<th>Number and percentage of institutions</th>
<th>Number and percentage of student enrollments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public institutions</td>
<td>1,704 36.8%</td>
<td>14,996,000 70.9%</td>
</tr>
<tr>
<td>Private institutions</td>
<td>1,714 37.0%</td>
<td>3,976,000 18.8%</td>
</tr>
<tr>
<td>For-profit institutions</td>
<td>1,216 26.2%</td>
<td>2,175,000 10.3%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>4,634</td>
<td>21,147,000</td>
</tr>
</tbody>
</table>

### U.S. Higher Education System

#### Institutional Types and Faculty Members

<table>
<thead>
<tr>
<th>Type</th>
<th>Number of Institutions</th>
<th>Percentage of Institutions</th>
<th>Number of Faculty</th>
<th>Percentage of Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public institutions</td>
<td>1,704</td>
<td>36.8%</td>
<td>967,000</td>
<td>61.8%</td>
</tr>
<tr>
<td>Private institutions</td>
<td>1,714</td>
<td>37.0%</td>
<td>442,000</td>
<td>28.2%</td>
</tr>
<tr>
<td>For-profit institutions</td>
<td>1,216</td>
<td>26.2%</td>
<td>157,000</td>
<td>10.0%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>4,634</strong></td>
<td></td>
<td><strong>1,565,000</strong></td>
<td></td>
</tr>
</tbody>
</table>

# U.S. Higher Education System

## Appointment Type by Institutional Type

<table>
<thead>
<tr>
<th></th>
<th>Public</th>
<th>Private, non-profit</th>
<th>For-profit</th>
<th>All institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-time faculty</td>
<td>52.8%</td>
<td>56.7%</td>
<td>26.3%</td>
<td>51.1%</td>
</tr>
<tr>
<td>Part-time faculty</td>
<td>47.2%</td>
<td>43.3%</td>
<td>73.7%</td>
<td>48.9%</td>
</tr>
</tbody>
</table>

### U.S. Higher Education System

#### Appointment Type, All Faculty

<table>
<thead>
<tr>
<th>Appointment Type</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part-time faculty</td>
<td>765,000</td>
<td>48.9%</td>
</tr>
<tr>
<td>Full professor (top rank)</td>
<td>236,300</td>
<td>15.1%</td>
</tr>
<tr>
<td>Full-time, non-tenure</td>
<td>200,300</td>
<td>12.8%</td>
</tr>
<tr>
<td>Assistant professor</td>
<td>184,700</td>
<td>11.8%</td>
</tr>
<tr>
<td>Associate professor</td>
<td>178,400</td>
<td>11.4%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,565,000</td>
<td></td>
</tr>
</tbody>
</table>

# U.S. Higher Education System

## Appointment Type, Tenure Appointment Faculty

<table>
<thead>
<tr>
<th>Appointment Type</th>
<th>Salary</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assistant professor</td>
<td>184,700</td>
<td>30.8%</td>
</tr>
<tr>
<td>Associate professor</td>
<td>178,400</td>
<td>29.9%</td>
</tr>
<tr>
<td>Full professor</td>
<td>236,300</td>
<td>39.3%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>599,400</strong></td>
<td></td>
</tr>
</tbody>
</table>

## U.S. Higher Education System

### Women Faculty by Academic Rank

<table>
<thead>
<tr>
<th></th>
<th>Assistant professors</th>
<th>Associate professors</th>
<th>Full professors</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Women</strong></td>
<td>46%</td>
<td>38%</td>
<td>23%</td>
<td>38%</td>
</tr>
<tr>
<td><strong>Men</strong></td>
<td>54%</td>
<td>62%</td>
<td>77%</td>
<td>62%</td>
</tr>
</tbody>
</table>

Source: American Association of University Professors, Salary Report, 2012
Higher Education Policy Context

- Research funding
- Technology transfer
- Accountability
Higher Education Policy Context

Research Funding

- **Increasing competition**: The academic as entrepreneur

- Growing emphasis on **relevance** (“third mission”): technology transfer, economic development, and public value (community/regional engagement)

- U.S. university research: **75% basic, 25% applied** (National Science Foundation, Science and Engineering Indicators, 2012)
Higher Education Policy Context

Sources of Research Funding: U.S. Universities

- Federal (61.0%)
- State/local (5.6%)
- University (20.8%)
- Industry (5.0%)
- Foundations (6.1%)
- Other (1.4%)

TOTAL: $65.77 billion

## Higher Education Policy Context

**Total U.S. Higher Education Research Expenditures by Field**

<table>
<thead>
<tr>
<th>Field</th>
<th>Expenditures</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical sciences</td>
<td>$20.36 billion</td>
<td>31.0%</td>
</tr>
<tr>
<td>Biological, agricultural, &amp; other life sciences</td>
<td>$16.86 billion</td>
<td>25.6%</td>
</tr>
<tr>
<td>Engineering</td>
<td>$10.30 billion</td>
<td>15.7%</td>
</tr>
<tr>
<td>Physical sciences</td>
<td>$4.72 billion</td>
<td>7.2%</td>
</tr>
<tr>
<td>Psychology &amp; other social sciences</td>
<td>$3.24 billion</td>
<td>4.9%</td>
</tr>
<tr>
<td>Environmental sciences</td>
<td>$3.17 billion</td>
<td>4.8%</td>
</tr>
<tr>
<td>Computer sciences and mathematics</td>
<td>$2.49 billion</td>
<td>3.8%</td>
</tr>
<tr>
<td>Education</td>
<td>$1.23 billion</td>
<td>1.9%</td>
</tr>
<tr>
<td>Other fields and uncategorized</td>
<td>$3.39 billion</td>
<td>5.1%</td>
</tr>
<tr>
<td><strong>TOTAL R&amp;D</strong></td>
<td><strong>$65.77 billion</strong></td>
<td></td>
</tr>
</tbody>
</table>

Higher Education Policy Context

Technology transfer

- Research discoveries with **commercial applications**, especially in biotechnology, pharmaceuticals, engineering
- **Partnerships** between university faculty and scientists in industry
- **Triple helix** (university-industry-government): market mechanisms rather than state steering

National Science Foundation (NSF)

- **Three programs**: Industry-University Cooperative Research Centers, Science and Technology Centers, Engineering Research Centers
- Partially funded by NSF and fees from industrial partners
Higher Education Policy Context

Accountability
- Concerns regarding graduation rates -- 57% graduation rate in public universities, 66% in private universities (NCES, 2012)
- Concerns regarding employability and skills

Quality assurance: Shift from inputs to outcomes
- Accreditation associations
- State government policies for public institutions (performance-based funding)

Impact on academics
- Assessment of student learning outcomes
- Participation in institutional improvement initiatives
- Documentation of public value of academic work
Market Forces

- International rankings
- Institutional striving and mission stretch
- Privatization
- Academic capitalism
Market Forces

International competition and rankings
- Global rankings of universities and academic programs by the media
- University strategies: pursue revenues and prestige

Institutional striving and mission stretch
- **Isomorphism**: Teaching-oriented institutions seeking to become research universities – with the goal of attracting prestige and revenues
- “Arms race” between universities
- **Implications**: Reductions in institutional diversity; expansion of expectations for academics; stratification of pay and working conditions
Market Forces

Privatization

- U.S. public higher education institutions: 27% of revenues from state governments -- 43% in 1985 (U.S. Department of Education, National Center for Education Statistics, 2010)

Academic capitalism

- Engagement of managers, academics, and students in entrepreneurial activities aimed at revenue generation (Slaughter & Rhoades, 2004)

Implications: tension between academic values and market values; professional identities of academics: scholars or entrepreneurs
Academic careers and workplaces

- Managerialism
- Interdisciplinary work
- Teaching-research nexus
- Faculty development
**Managerialism**

- Growth in number and type of administrative units
- Decline in the role of academics in university decision making

<table>
<thead>
<tr>
<th></th>
<th>Germany</th>
<th>UK</th>
<th>US</th>
<th>Korea</th>
<th>China</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is good communication</td>
<td>29%</td>
<td>22%</td>
<td>30%</td>
<td>30%</td>
<td>35%</td>
</tr>
<tr>
<td>between management and academics.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>There is collegiality in</td>
<td>31%</td>
<td>14%</td>
<td>31%</td>
<td>18%</td>
<td>36%</td>
</tr>
<tr>
<td>decision-making processes.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Interdisciplinary Work

Research centers can bring together faculty from different departments to engage in interdisciplinary research.

Faculty affiliation with a research center may have positive effects on productivity.

Bunton & Mallon (2007): in a study of life sciences, center-affiliated faculty published more and were more likely to attract external grant funding.
Academic Careers and Workplaces

Universities may begin to evolve toward a **matrix structure** in which faculty have affiliations with both an academic department and a research center.
### Teaching-research nexus

- Teaching-only and research-only appointments
- Universities: tenured faculty focusing more on research

Hours worked per week, annualized.
Full-time university academics with teaching and research responsibilities

<table>
<thead>
<tr>
<th></th>
<th>Teaching</th>
<th>Research</th>
<th>Admin.</th>
<th>Service</th>
<th>Other</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>U.S. universities</strong></td>
<td>15.9</td>
<td>17.6</td>
<td>7.4</td>
<td>5.2</td>
<td>3.1</td>
<td>49.3</td>
</tr>
<tr>
<td><strong>German universities</strong></td>
<td>12.7</td>
<td>22.5</td>
<td>4.7</td>
<td>6.2</td>
<td>3.5</td>
<td>49.6</td>
</tr>
</tbody>
</table>

Academic Careers and Workplaces

Faculty Development Programs at Colleges and Universities

- Workshops on teaching practices
- Workshops on instructional technology
- Faculty Learning Communities (FLC)
  - groups of faculty work collaboratively in seminars and workshops to refine and advance their pedagogical expertise
  - FLCs are typically cross-disciplinary
  - FLCs may focus on developing faculty skills in a particular pedagogical area, such as service learning, collaborative learning, or technology
Changes in the **university environment** have influenced faculty work activities

- Competition for research funding
- Policy emphasis on relevance of research for industry and economic development
- Accountability systems
- Competition for rankings and prestige
Effects on the Work of Academics

- Higher levels of interdisciplinary activity
- Higher levels of collaboration with industry, government
- Higher levels of research productivity
- Decline in authority in institutional governance

- Complicated effects on faculty autonomy – “academic” research vs. “relevant” research
- Complicated effects on faculty identity – scholars and entrepreneurs
- Increasing separation of teaching and research roles
Faculty appointments

How will hiring more part-time faculty affect institutional outcomes such as student learning?

- Ehrenberg & Zhang, 2005; Gappa & Leslie, 1993; Umbach, 2007

Shared governance: academics and managers

How can power and authority be shared between academics and managers, given new demands for accountability?

Research Areas

**Academic capitalism and striving**
- How are academics balancing the pursuit of revenue with the pursuit of knowledge?
- Will the balance between basic and applied research change as a result of academic capitalism?
- How are academics affected by institutional striving (mission stretch)?
  - Eckel, 2007; Fairweather, 2005; Gardner, 2010; Geiger, 2004; Gonzales, 2012; Mendoza, 2007; Morphew, 2009; O’Meara, 2007; Slaughter & Rhoades, 2004

**Interdisciplinary activity**
- How can institutions promote interdisciplinary activity when most academics have primary affiliations with academic departments?
  - Hart & Mars, 2009; Holley, 2009; Lattuca, 2001
Teaching-research nexus

- To what extent are teaching-only and research-only appointments decoupling the nexus?
- Does maintaining the nexus contribute to institutional effectiveness (student learning outcomes)?
  - Colbeck, 1998; Milem, Berger, & Dey, 2000; O’Meara, 2005; Schuster & Finkelstein, 2006

Faculty diversity

- How can the pathways to the academic profession be improved for women and other under-represented groups?
  - Baez, 2000; Perna, 2005; Turner & Myers, 1999; Ward & Wolf-Wendel, 2007
Research Areas

- **Academic work environment**
  - How can the academic work environment promote faculty job satisfaction and intent to stay in the profession (attract and retain the “best and brightest”)?
    - Daly & Dee, 2006; Gappa, Austin, & Trice, 2007; Rice, Sorcinelli, & Austin, 2000; Rosser, 2004; Trower, 2012

- **Faculty development**
  - How can faculty development programs provide incentives for ongoing professional improvement?
    - Baldwin & Chang, 2006; Beach & Cox, 2009; Cox, 2004; Dee & Daly, 2009; Sorcinelli, Austin, Eddy, & Beach, 2006


Bibliography


Bibliography


For more information

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