College Rankings

TAKU ONOZATO AND DIDAR ZHAKANBAYEV
Contents

- Historical Context
- *U.S. News & World Report*’s Rankings
- International College Rankings
- Critique of College Rankings
- Recommendations
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Historical Context (Stuart, 1995)

First college ranking
- U.S. Bureau of Education (1870-1890)
  - Statistical data

First true ranking
- Cattell’s *American Men of Science* (1910-1933)
  - Eminent scientists’ alma maters / employers
  - Ratio of eminent scientists to all faculty
Historical Context (cont.)

Invention of reputational ranking
- Hughes's *A Study of the Graduate Schools of America* (1925)
- Hughes’s new survey (1934)
  - Adequateness and “star”

Public attention to college rankings
- Manly’s *Chicago Tribune* articles (ca. 1946)
  - Story of AAU’s unpublished internal ranking
  - Six rankings using consultants
    - 10 best universities, coeducational, men’s, women’s, law, engineering
Historical Context (cont.)

Revival of reputational rankings

◦ Keniston’s study (1959)
  ◦ Reputational ranking of 25 leading universities

◦ Cartter’s *An Assessment of Quality in Graduate Education* (1966)
  ◦ Quality of the graduate faculty and rating of doctoral training

◦ Roose and Anderson’s *A Rating of Graduate Programs* (1970)
  ◦ Replicated Cartter’s study, attempted to minimize the importance of an absolute rank order
Historical Context (cont.)

Rankings of Professional Schools
   ◦ Blau and Margulies (1973-1975)
     ◦ Low response rate of deans has been criticized
     ◦ Relatively low correlation between the reputation of the professional schools and its institution
   ◦ Cartter and Solmon (1977)
     ◦ Despite the methodological differences, similar to Blau and Margulies
Historical Context (cont.)

National Academy of Science

- *Assessment of Research-Doctorate Programs in the United States* (Jones, Lindzey, and Coggeshall, 1982)
  - Multimeasure study of 32 disciplines at 228 universities
  - Standardized scores on each measure
  - Up to 16 measures for 2,699 graduate programs
  - Not designed to rank institutions, but has been used to rank
Historical Context (cont.)

Contemporary College Rankings

◦ Emphasis on undergraduate education and student outcomes
◦ Became popular among people (non higher education professionals)
  ◦ Public awareness of admission policies, public’s loss of faith in higher education institutions, major changes on campus (Hunter, 1995 cited in Holub, 2002)
◦ Criteria vary based on author’s intent
◦ *U.S. News & World Report* started its ranking in 1983
  ◦ America's Best Colleges (1990-)
  ◦ America's Best Graduate Colleges (1992-)
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U.S. News & World Report’s Rankings

NATIONAL UNIVERSITIES RANKINGS

- Offer a full range of undergraduate majors, master's and doctoral programs
- Committed to producing groundbreaking research.
E.g. Princeton, Harvard, Yale

LIBERAL ARTS COLLEGES RANKINGS

- Emphasize undergraduate education and award at least half of their degrees in the liberal arts fields of study.
E.g. Williams College, Amherst College
Ranking Model Indicators of *U.S News*

- Undergraduate academic reputation (22.5 %)
- Retention (22.5 %)
- Faculty resources (20 %)
- Student selectivity (12.5 %)
- Financial resources (10 %)
- Graduation rate performance (7.5 %)
- Alumni giving rate (5 %)
Undergraduate academic reputation (22.5 %)

Assessed by:
- Presidents
- Provosts
- Deans of admission
- High school counselors
Retention (22.5 %)

- 6 year graduation – 80%
- 1 year retention – 20%
Faculty resources (20 %)

6 Factors:
- Class size under 20 students – 30%
- Class size over 50 students – 10%
- Salary of faculty – 35%
- Proportion of professors – 15%
- Student-faculty ratio – 5%
- Full time faculty – 5%
Student selectivity (12.5 %)

3 components:

- SAT, ACT scores – 65%
- Top high school students – 25%
- Acceptance – 10%
Financial resources (10 %)

- Average spending per student on educational expenditure

NOTE: dorm, sports etc. are not included
Graduation rate performance (7.5 %)

Depends on US News predictions, after controlling for spending and student characteristics

- If the school’s actual rate is higher than predicted, it is overperforming
- If the school’s actual rate is lower than predicted, it is underperforming.
Alumni giving rate (5 %)

Percentage of living alumni who gave to their schools in 2012-2013 and 2013-2014
U.S. News College Compass
Times Higher Education World University Rankings

- **Teaching** (the learning env.) – 30%
  - Reputation survey: 15%
  - Staff-to-student ratio: 4.5%
  - Doctorate-to-bachelor’s ratio: 2.25%
  - Doctorates awarded-to-academic staff ratio: 6%
  - Institutional income: 2.25%

- **Research** (vol, income & rep.) – 30%
  - Reputation survey: 18%
  - Research income: 6%
  - Research productivity: 6%

- **Citations** (research influence) – 30%

- **International outlook** (staff, students and research) – 7.5%
  - Intl-to-domestic-student ratio: 2.5%
  - Intl-to-domestic-staff ratio: 2.5%
  - Intl collaboration: 2.5%

- **Industry income** (knowledge transfer) – 2.5%
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<th>Total students/academic staff</th>
<th>PhD awards/bachelor</th>
<th>PhD Academic staff</th>
<th>Reputation Survey (teaching)</th>
<th>Institutional income/Academic staff</th>
<th>Scholarly papers/Academic Staff</th>
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<th>Ratio of international to domestic staff</th>
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</table>
QS Top Universities

- QS links high achievers with leading business schools and employers
- QS organizes the largest business education events
- QS is the leading global career and education network
- One of the world’s leading media, events and software company in the higher education field.
QS World University Rankings: Methodology

1. Academic reputation (40%)
2. Employer reputation (10%)
3. Student-to-faculty ratio (20%)
4. Citations per faculty (20%)
5. International faculty ratio (5%)
6. International student ratio (5%)
# Academic Ranking of World Universities

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Indicator</th>
<th>Code</th>
<th>Weight</th>
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</thead>
<tbody>
<tr>
<td>Quality of Education</td>
<td>Alumni of an institution winning Nobel Prizes and Fields Medals</td>
<td>Alumni</td>
<td>10%</td>
</tr>
<tr>
<td>Quality of Faculty</td>
<td>Staff of an institution winning Nobel Prizes and Fields Medals</td>
<td>Award</td>
<td>20%</td>
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<tr>
<td></td>
<td>Highly cited researchers in 21 broad subject categories</td>
<td>HiCi</td>
<td>20%</td>
</tr>
<tr>
<td>Research Output</td>
<td>Papers published in Nature and Science*</td>
<td>N&amp;S</td>
<td>20%</td>
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<td>Papers indexed in Science Citation Index-expanded and Social Science Citation Index</td>
<td>PUB</td>
<td>20%</td>
</tr>
<tr>
<td>Per Capita Performance</td>
<td>Per capita academic performance of an institution</td>
<td>PCP</td>
<td>10%</td>
</tr>
<tr>
<td>Total</td>
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<td>100%</td>
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</table>

* For institutions specialized in humanities and social sciences such as London School of Economics, N&S is not considered, and the weight of N&S is relocated to other indicators.
## Comparison of Rankings

<table>
<thead>
<tr>
<th>Times Higher Education</th>
<th>QS Top Universities</th>
<th>ARWU</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Caltech</td>
<td>1. MIT</td>
<td>1. Harvard University</td>
</tr>
<tr>
<td>8. Imperial College London</td>
<td>8. Imperial College London</td>
<td>8. Columbia University</td>
</tr>
<tr>
<td>75. Penn State</td>
<td>101. Penn State</td>
<td>60. Penn State</td>
</tr>
</tbody>
</table>
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Power to College Rankings

College administrators rely on rankings (Holub, 2002).

As marketing tools,

Severe financial situations have forced colleges to compete for students.

Rankings attract students, alumni, and potential donations, faculty, and administrators.

Example:

One rank (in US News) improvement means 1% increase of applications (Luca and Smith, 2013).

Mission

To prepare individuals for researching, analyzing, and managing the critical problems in postsecondary education.

Criticism of College Rankings (Stuart, 1995)

Flawed methodology
- Editors often change methodologies
  - In 1990s, *US News* changed its methodology 6 times

Definition of Quality
- How to compare different institutions?
  - Large, public, land-grant university in a rural valley and famous for its football team v. small, private Jewish university in Manhattan and not famous for its football team? (Gladwell, 2011)
Criticim of College Rankings (cont.)

Definition of Quality (cont.)

- Is reputation equal to quality?
  - Opinion have been related to many factors
    - Size, number of “star” faculty, selectivity, citations, publications, geography, familiarity
  - Rater bias
    - Past affiliation, geographical distance
  - Halo effect
    - Good quality in one department spills over to other departments
"Although rankings are designed largely for stakeholders outside of higher education, their strongest influence is on those within the higher education field."

(Bastedo and Bowman, 2011, p.3)
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Recommendations

- Do not completely rely on rankings
- Use rankings as a benchmark to compare with similar colleges
- Use more specific aspects which are not included in rankings
  E.g. College Scorecard [https://collegescorecard.ed.gov/](https://collegescorecard.ed.gov/)
College Scorecard

Find Schools

Compare schools now

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FIND SCHOOLS
References


Discussion Questions

- How can we use rankings without being tossed about them?

- What measures would you add to / eliminate from rankings?