Method or Madness? Inside the U.S. News & World Report College Rankings

Introduction
Since most people can remember, college guides, in order to help high school students decide where to apply, have been providing information about the characteristics of different undergraduate institutions. Barron’s Profile of American Colleges 2003–2004 (updated every other year), The Fiske Guide to Colleges 2005, Peterson’s Four Year Colleges 2005, and the Insider’s Guide to Colleges 2005 represent the 25th, 21st, 35th, and 31st editions, respectively, of these venerable publications. In addition to providing detailed data and narratives about each college, many of the long-standing guides group institutions into broad categories. Barron’s, for example, ranks each institution by the selectivity of its entering freshman class (measured by entrance test scores), grouping institutions into broad categories, such as highly selective, selective, nonselective and open enrollment. No attempt is made, however, to differentiate between institutions within each group. Similarly, The Fiske Guide awards up to five stars to each institution on three dimensions thought to be important to potential students; academics, social life and quality of life.

U.S. News & World Report (USNWR) shook up the college guide industry when it began publishing its annual rankings of colleges in 1983. Each fall, its summary of annual undergraduate institutions rankings again becomes that year’s best-selling issue and, together with its more comprehensive annual America’s Best Colleges publication, it has become the “gold standard” of the college-ranking business.

USNWR’s rapid rise to the top derives from its rankings’ appearance of scientific objectivity (institutions are rated along various dimensions, with explicit weights being assigned to each dimension), along with the fact that USNWR then ranks the top 50 institutions in each category (for example national universities and liberal arts colleges). Each year immediately before and after the USNWR college rankings issue hits the newsstand, stories about the USNWR rankings appear in virtually every major newspaper in the United States.

Why Americans Have Become Obsessed with College Rankings
As Caroline Hoxby (1999) pointed out, American higher education has experienced a dramatic change in its market structure during the last 60 years. In 1949 about 93 percent of all undergraduate college students attended college in the state in which they went to high school, this figure fell to about 85 percent in the early 1960s, 77 percent in the early 1980s, and 75 percent by the mid 1990s. Accompanying this increased mobility of students across state lines is an increased stratification of students and colleges by students’ academic backgrounds. For example, average SAT scores of entering students now vary much more across colleges than they did in the past, and within each college, the range of SAT scores of entering students has declined. These changes have been attributed to a number of factors, including reductions in transportation and communication costs; the establishment of federal financial aid programs and a shift to need-blind admission at many colleges.

1 This number increased to 126 for the top national universities and 110 for the top national liberal arts colleges in the 2004 USNWR rankings.
2 Caroline Hoxby (1998a), Table 1a. The changes have been even more dramatic for private higher education—falling from about 85 percent to 56 percent during the period.
3 Hoxby (1998a), Tables 3 and 5.

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institutions in the 1970s; the growing use of standardized admission tests in admission decisions; and the growth of tuition reciprocity agreements by public institutions, which allow students from one state to attend another state’s public colleges and universities (if they qualify for admission) at less than the second state’s normal out-of-state tuition. As a result of these changes, colleges and universities have increasingly found themselves competing for students in a national market.

During the 1980s and 1990s, many dimensions of distribution of earnings in the U.S. became more unequal. The earnings of college graduates grew at a much more inflated rate than did the earnings of high school graduates. For example, the ratio of the mean earnings of male college graduates ages 35–44 to the mean earnings of male high school graduates in the same age range rose from 1.41 to 1.76 between 1980 and 1999, and the comparable ratio for females rose from 1.36 to 1.79. Perhaps more important, the dispersion of earnings among college graduates also grew. For example, in 1980 male college graduates ages 25–34 at the 80th percentile of the earning distribution of their group earned about 2.27 times the earnings of similar male college graduates at the 20th percentile of the earnings distribution. By 1997, this ratio had increased to 2.54. Not only is obtaining a college degree becoming increasingly important for an individual’s economic well-being, but increasing the chances of making it into the upper earnings bracket among college-graduates is also a concern of many students.

With one exception, virtually all studies by economists suggest that attending higher-quality colleges, as measured by the average SAT scores of entering students at the institution, is associated with higher post-college earnings and higher probabilities of enrolling in top graduate programs. As such, parents, especially those with top-scoring students, have become increasingly preoccupied with, in Robert Frank’s terminology, “buying the best.” Thus the competition for slots at top schools has amplified. Put simply, American high school graduates are increasingly seeking to go to the “best college” they can.

The average SAT score of the entering class is not the only characteristic of an academic institution that matters when it comes to factors that influence post-college success. By providing an ordinal ranking, based upon a more comprehensive set of characteristics, USNWR helps to fuel the competition for slots at the top institutions. However, it is important to stress that it is only exacerbating the pressures that already exists and is not the major cause of these pressures.

Academic institutions regularly claim that they pay no attention to their USNWR rankings, when, of course, they do. Well they should; an econometric study, by James Monks and this researcher, of the experiences of 31 selective private colleges and universities found that when an institution improved in the rankings, other factors held constant and the next year it received more applications, and could then accept a smaller fraction of these applications (which made it look more selective), then would have a greater fraction of its applicants accept its offers of admission (which further made it look more selective). As a result, its entering students had higher SAT scores (which again would make it look more selective). The institution could accomplish all these things by offering somewhat less generous financial aid packages. Conversely, if it fell in the rankings, then the reverse would occur. Lest one think that the USNWR rankings are of concern only to selective private colleges and universities, in Reaching for the Brass Ring, the author documents that lesser privates and public institutions also are concerned.

How Higher Education Institutions Try to Manipulate the USNWR Rankings Table 1 displays the seven categories (academic reputation, student selectivity, faculty resources, graduation and retention rate, financial resources, alumni giving, and graduation rate performance) that USNWR uses to rank national universities and liberal arts colleges in its 2003 and 2004 rankings, the weight it assigns to each category, the sub-factors (if any) within each category, and the sub-factor weights within each category. The only changes in USNWR’s methodology between the two years was the elimination of an institution’s yield on admitted applicants from its student selectivity ranking and changes in the sub-factor weights for the remaining sub-factors included in this category.

The most important category, worth 25 percent, is an institution’s academic reputation, as measured by a survey of presidents, provosts and deans of admission at peer institutions. While institutions always like to publicize all of the wonder-

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4 Hoxby (1998a) and Michael Rizzo and Ronald Ehrenberg (2004).
5 Ronald G. Ehrenberg and Robert S. Smith (2003), Chapter 14
6 Ehrenberg and Smith (2003), Table 14.3
7 Ehrenberg and Smith (2003), Table 14.5
8 See for example, Dominic Brewer, Eric Eide and Ronald Ehrenberg (1999), Eric Eide, Dominick Brewer and Ronald Ehrenberg (1998), Caroline Hoxby (1998b) and Caroline Hoxby and Bridget Terry (1999). The one exception is Stacy Dale and Alan Krueger (2002). However, Dale and Krueger did find that attendance at colleges that had higher expenditures per student was associated with higher earnings—a point that I will return to below.
9 Robert Frank (2001)
ful things happening on their campuses to prospective students, recently some institutions have resorted to sending expensive publicity materials to key administrators at their competitor institutions as a way of influencing the rankings.\textsuperscript{12} Hard data on the cost of such PR actions does not exist, but one must wonder whether the resources involved in such activities could have been more profitably devoted to further improving what is going on at the institutions. Informing competitors of all of the wonderful things an institution is doing puts pressure on competitors to emulate the other institution or create new tactics of their own, and thus fuel the already-existing higher education expenditure race that puts upward pressure on tuition.

Student selectivity has a weight of 15 percent in the \textit{USNWR} rankings. The institution’s acceptance rate, the proportion of its freshman applicants to whom it offers admission, counts for 10 percent of this category’s weight in 2004, down from 15 percent in 2003. Inclusion of the acceptance rate encourages institutions to reject otherwise outstanding applicants, who it believes are unlikely to enroll, encourages institutions to generate large pools of applicants who have little chance of being admitted to the institution, and encourages institutions to admit students early decision because, other things equal, the higher the proportion of students admitted early, the fewer the number of students that need to be admitted to generate any given class. The first practice increases potential students’ uncertainty, since they can’t be sure that their “safety schools” will admit them, the second puts extra workloads on the institutions admission officers and leads to many more students’ hopes being dashed, while the third increases the pressure on students to apply early. Indeed, in response to the academic community’s concerns that they were further contributing to this pressure by including an institution’s yield (fraction of admitted students that accept an offer of admission), \textit{USNWR} eliminated yield from its rankings methodology in 2004.

The final two sub-factors in the student selectivity category are the proportion of the institution’s entering first-year class that is ranked in the top 10 percent of their high school classes, and the average SAT (or ACT) score of all enrolled freshman who took the test. Increasingly, high schools are not reporting the class rank of their students, for example 48 percent of Cornell’s enrolled freshman in the class of 2008 did not have their class rank reported to the university, so the usefulness of this measure is unclear.\textsuperscript{13} Just as there has been concern expressed that top 10 percent admission rules, such as those used by public higher education institutions in Texas prior to the recent Supreme Court ruling, may discourage students from attending challenging high schools with several top students, \textit{USNWR}’s use of the top 10 percent criteria may influence who institutions admit at the margin and, via this route, where high school students go to school.\textsuperscript{14}

Use of the average SAT score for all enrolled freshman (who report such

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\textsuperscript{12} Amy Argetsinger (2002).


\textsuperscript{14} Edward Blum and Roger Clegg (2003).
increases in the shares of part-time and full-time non-tenure-track faculty members at an institution, other factors held constant, are both associated with a decrease in the students who submitted their scores.

Of officers rated these students higher than they otherwise would have ranked them and that students who withheld their SAT scores had lower GPAs at Mount Holyoke than man applicants. They found that students who “under-performed” on the SAT relative to their high school GPA’s were more likely not to submit their scores, that admission decisions, especially public ones that have a special obligation to provide access to all qualified applicants, need to seriously consider if the focus on improving their students’ average test scores is really in the public interest.

The third category, with a weight of 20 percent in the USNWR rankings, is faculty resources. The largest sub-factor in this category, with a weight of 35 percent, is faculty compensation, which is defined as the average pay and benefits of full-time assistant, associate and full professors, adjusted for regional cost-of-living. An institution that hired full-time lecturers, at lower salaries, to do more of its undergraduate teaching and devoted the resources that it saved from doing so to increasing the average salaries of its tenure-track faculty would, other factors held constant, go up in the rankings and would suffer no penalty for this substitution. Its full-time faculty would be better paid and happier, but would its students be disadvantaged by having a smaller share of their classes taught by tenure and tenure track faculty?

An academic’s inclination is to say yes, but there are surprisingly few studies that have addressed this question. This is a fundamental question facing public higher education which has seen this type of substitution, as well as increased substitution of part-time for full-time faculty occurring in recent years. For example, between the fall of 1992 and the fall of 2001, the percentage of undergraduate credit hours generated by tenured and tenure track faculty fell from 81.0 to 58.4 percent at the four SUNY (NY) university centers (Albany, Binghamton, Buffalo, and Stony Brook). Unless the higher education community can demonstrate the negative impacts that such changes have on students, state policymakers are unlikely to consider taking actions to reduce these trends.

USNWR’s next category, with a weight of 20 percent in the rankings, is the institution’s graduation and retention rate averaged over a number of years. The most important sub-factor in this category is the institution’s six-year graduation rate for entering freshman (with a weight of 80 percent) and its freshman retention rate (with a weight of 20 percent). Given the characteristics of admitted students, an institution can improve both rates by improving its instructional program and providing more support services to students or by relaxing its standards. Hopefully, institutions will not choose the latter course, but the rankings cannot distinguish between these two methods of improvement.

As the author discusses in Tuition Rising, transfer students make up a large share of many academic institutions populations of new students. For example, of the 3622 new undergraduate students enrolling at Cornell University in the fall of 2002, 558 (or 15.4 percent) were transfer students. At the SUNY four-year campuses, the percentages are typically much higher, ranging from 20.1 to 53.3 across the campuses in the fall of 1999. While academic institutions have an educational interest, as well as a financial interest, in seeing their transfer students succeed through to graduation, USNWR’s preoccupation with the success of full-time freshman, provides an incentive for academic institutions to worry more about these students than their transfer student classmates.

A related problem, associated with the retention and graduation rate variables, is that USNWR cannot distinguish between people leaving the institution because of academic, personal or financial problems, and people leaving because of the opportunity to attend a more selective institution. Binghamton University (NY) has a six-year graduation rate that hovers around 80 percent, which always places it at or near the top of the campuses in the SUNY system on this measure, but

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15 Michael Robinson and James Monks (2002) study the early experiences at Mount Holyoke College after the college made submission of SAT scores optional for freshman applicants. They found that students who “under-performed” on the SAT relative to their high school GPA’s were more likely not to submit their scores, that admission officers rated these students higher than they otherwise would have ranked them and that students who withheld their SAT scores had lower GPAs at Mount Holyoke than students who submitted their scores.

16 It would suffer a penalty if it increased its usage of part-time faculty, but this sub-factor only has a weight of five percent in this category.

17 A recent study, Ronald G. Ehrenberg and Liang Zhang (2005) analyzed institutional level data obtained from the College Board and other sources, and concluded that increases in the shares of part-time and full-time non-tenure-track faculty members at an institution, other factors held constant, are both associated with a decrease in the institution’s undergraduate students’ graduation rate.

18 Ronald G. Ehrenberg and Daniel B. Klaff (2003), Table 2.


20 Ronald G. Ehrenberg and Christopher L. Smith (2004), Table 2.
well below the six-year graduation rates of over 90 percent at Ivy League colleges. Part of the reason for Binghamton’s low score is that a number of its top students transfer to Ivy League institutions, such as Cornell, at the end of their first semester or first year. Indeed, Cornell makes it easy for many of these students to do this by guaranteeing them a transfer when they initially apply. Should Binghamton be penalized in the rankings because some of its students leave to go to higher-rated institutions? If it enrolled fewer top students, it might actually have a higher six-year graduation rate.

Financial resources, the fifth USNWR category, has a weight of 10 percent in the overall ranking. Financial resources are measured by the amount that the institutions spend per student on instruction, research, public service, academic support, student services, institutional support and operations and maintenance. Inclusion of expenditures per student in the ranking penalizes institutions that attempt to hold down their expenditures and thus puts upward pressure on tuitions. Inclusion of research expenditures in this measure provides institutions with extra incentives to push their faculty to generate more research expenditures in this measure than otherwise might be optimal for them. Similarly, many institutions have learned that the marginal cost of raising funds from a few major donors is much lower than the marginal cost of raising an equivalent amount of money from many small donors. The USNWR ratings methodology provides an incentive for these institutions to devote more resources to alumni fund raising than otherwise might be optimal for them. The USNWR rating methodology penalizes them for concentrating on large donors and provides an incentive for them to devote more resources to fundraising (to attract more small donors) than is otherwise optimal.

The final category USNWR includes is graduation rate performance. Its weight is also five percent in the ratings methodology. Graduation rate performance is computed by comparing an institution’s actual six-year graduation rate to its predicted six-year graduation rate, the latter is obtained from a model that specifies that graduation rates are a function of student characteristics (such as entering test scores) and institutional characteristics (such as expenditures per student). As noted above, an institution’s predicted graduation rate may be higher than its actual graduation rate because it is doing a poor job educating its students or because it has the misfortune of having its better students attracted to more selective institutions as transfer students.

What’s Wrong with the Ratings
One may reasonably ask, if the USNWR rankings are flawed, why do academic institutions participate in it? The answer, quite simply, is that it is in their best interest to do so. Institutions that do well in the rankings trumpet their success on their Web pages and in published materials. Institutions that do not rank as well as they had hoped ignore the rankings and publicize other things that make the institutions look good. Indeed, what is included on institutional Web pages and what the institutions brag about vary from year to year. If an institution’s graduates win several prestigious awards, such as Rhodes and Marshall Scholarships in a year, this certainly will be widely publicized. However, if the institution’s graduates fail to win any of these awards the next year, this fact will never be mentioned. Academic institutions always put a positive spin on things, never mentioning their shortcomings.

The real problem with the USNWR rankings does not lie with the categories and the subcategory factors that it uses. Each of these provides information that some students and their parents feel is very useful in deciding to which colleges to apply. Indeed, many institutions actually provide all of the information that they submit to USNWR and other college guides directly on their own Web sites in the form of their submissions to the Common Data Set (CDS). The CDS was developed via a collaborative process that involved many publishers of college guides, the academic community, high school counselors and the National Center for Education Statistics. The goal was to ease institutions’ reporting burdens by asking questions across a wide number of surveys in a standard way so that one response would satisfy the needs of all users of the data.

Rather, the real problem is USNWR’s arbitrary assignment of weights to each category and to each subcategory factor within a category. For a given student, how one institution compares to another will depend upon a whole set of factors that are not included in the ranking scheme including, but not limited to, the match of

22 For example, Cornell currently has all of its data for the 1999–2000 to 2003–2004 academic years on line at http://dpb.cornell.edu/rp/cds.htm.
a student’s interests with the curriculum offered by the institution, the costs of attendance and the availability of financial aid, the region of the country from which the student is coming and in which the institution is located, the rural/urban nature of the campus, whether the student’s parents are alumni of the institution, the religious orientation of the student and the institution, the interests of the student in participating in intercollegiate athletics, intramural athletics and the whole range of other student activities, the athletic programs and other activities that the institution offers and the availability of support services for students with special needs. No set of weights, regardless of whether they are determined by USNWR or any group of “experts,” will accurately rank which of two schools a given student should attend.

USNWR understands this and repeatedly counsels readers of its publications not to choose which schools to apply to based solely upon its rankings.23 Indeed, its 2004 rankings issues also talked about eight types of programs thought to be associated with student success; these include the nature of first year experiences, the presence of learning communities, study-abroad options, opportunities for undergraduate research and service learning, USNWR asked presidents, provosts and deans to list 10 institutions with outstanding programs in each area and then it listed alphabetically the institutions that appeared frequently on these lists.24 However, as the Monks/Ehrenberg study indicated, prospective students don’t always take USNWR advice seriously. The ratings do matter to students and their families, and therefore, they matter to the institutions.

The data elements that USNWR collects may not be the problem with the ratings, but they also may not be the best or only elements upon which to judge higher education institutions. Most of them relate to the resources that the institution has available to educate students, and measure of the academic quality of the entering first-year class and the academic reputation of the institution, which is presumably highly-correlated with the quality of the entering students and the wealth of the institution.25 Only one of the data elements, the comparison of actual and predicted graduation rates, is at all related to the value added by an institution, and this variable only has a weight of five percent in the rating formula. Unfortunately, one can always quibble with the methodology used to obtain such comparisons and argue that a different methodology might have yielded different results.

It is not an accident that none of the top 20 national universities in the 2004 USNWR ranking was a public institution. Over the last several decades, the restricted financing of public higher education has led the publics to increasingly lag behind the privates in expenditures per student and in average faculty salaries. The implication of the USNWR rankings methodology is that the high-quality publics, such as the Universities of Michigan, North Carolina, Virginia, Wisconsin, and California–Berkeley, appear to be increasingly less attractive places to study—the focus on resource levels, rather than on the nature of the undergraduate curriculum and how it is delivered to students surely overstates the changes that have occurred.

Similarly, the heavy weight that student selectivity has in the ratings and the institutions’ quests to become “more selective” may lead public higher education away from one of its most fundamental historic goals, to provide access to all qualified students. Nowhere in the rankings methodology (save in the comparison of actual and predicted graduation rates) is there any mention of the income distribution of an institution’s students’ families, the education levels of the institution’s students’ parents, nor the fraction of its students for whom English is a second language. Institutions that recruit students from underrepresented and disadvantaged populations—students that tend to have lower scores on entrance exams—and that do a wonderful job educating these students through to graduation should be more highly valued than the USNWR methodology currently permits.

Concluding Remarks
USNWR is not the evil empire. It has repeatedly modified the way it computes its rankings of institutions over time in response to requests from an academic advisory panel and the more general academic community.26 While some have pointed out that the repeated change in its formula invariably leads to changes in the rankings of institutions, which provides a larger market for each fall’s new rankings issue, at face value, USNWR makes efforts to improve the information it provides its readers.

The problem with the USNWR rankings lies not in its presentation of the information on individual data elements, but in its effort to aggregate these elements into a single index. If it stopped doing this, many of the objections that people have about its ratings would disappear. Of course, so too would the rankings; the annual USNWR college issue would begin to look more and more like other college guides.

The rankings exacerbate, but are not the major cause of the increased

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23 See for example, Robert J. Morse and Samuel M. Flanagan (2003).
24 Morse and Flanagan (2003).
25 No study has looked at determinants of academic reputation of undergraduate programs, although Ronald G. Ehrenberg and Peter J. Hurst (1998), among others, have done this for graduate programs.
26 As far back as 1986, a researcher expressed the concern that the use of average faculty salaries in the faculty resource category penalized institutions located in low cost-of-living areas that did not have to offer high salaries to attract high quality faculty. USNWR quickly responded to his concern by deflating an institution’s average faculty salaries by an area cost-of-living index and using this measure in its ratings formula.
competition in American higher education that has taken place over the last few decades. The real shame is that this competition has institutions focusing on improving the selectivity of their entering first-year classes. Institutions appear to be increasingly valued for the test scores of the students they attract, not for their value added to their students and to society.

This problem appears to be particularly acute for our public higher education institutions at which the vast majority of American college students are educated. Cutbacks in state appropriations have led tuitions to rise at many of these institutions. At the same time, the institutions are increasingly pouring money into merit scholarships to attract high test-score students, leaving fewer funds available for institutional need-based financial aid. More and more students from low-income families find that attendance at two-year public institutions is the only way that they can begin their higher education careers.

The public four-year institutions need to remember their responsibilities to provide access to a broad range of citizens of their states. They and their private counterparts also need to do a better job of facilitating the transfer of students from two-year institutions and of improving the academic success rates of students who transfer to them.

USNWR could contribute to these improvements by incorporating additional data elements into its rankings methodology. Public institutions (at the least) should be given “credit” for enrolling (and graduating) students from lower-income and disadvantaged backgrounds. Given the large and growing importance of transfer student enrollments at most institutions, institutions should be required to provide information on transfer student success that is analogous to the six-year graduation rate data for freshman and the two success rates weighted by the proportions of new students that enroll in each category to help judge how well an institution is performing on this dimension.

REFERENCES


