

Global College Rankings

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Abstract: It is difficult to find consensus regarding the global criteria for college rankings. The worldwide open market for intellectual professionals would be less problematic if there are some standards. There is a question of costs, and which party would be responsible for the expenses. In all the most widely known global rankings, U.S. colleges still generally rule the college rankings. The total research budget in the U.S.A. continues to dominate in the world. Most academic publications on this subject are about the original college ranking used, and many of the newer college ranking systems are not mentioned. The current work serves to fill this gap. The reputation factor is very important in college rankings. As with human reputation (which is the only thing that survives when a human dies) college reputation seems to be one of the few lasting characteristics. If affordability is an important factor, then one of the newer college rankings would be more useful.

Keywords: Reputation, affordability, universities, graduation rates, retention rates, costs, prices.

1. BACKGROUND

Human services and hence, human capital is viewed as an important global commodity. A higher education or college education is considered essential in developing human and social capital. As a result, government policies have been created in many countries to extend the participation and access to higher education.

Up until recent years, affordability has not been considered in college rankings. In the U.S.A., the U.S. News and World Report (USNWR) college rankings have been used as the standard for a while. The criteria used by USNWR are focused on reputation. Access, affordability and value for money invested for education were not considered. In the current time, the world rankings most popularly used is the Shanghai Jiao Tong University college ranking.

College ranking may have been based on the concept that there is one path to academic success. In developed and developing countries, the drive to attend the top universities starts at the kindergarten level, or even before (because of the need for pre-registration at birth to get into some kindergartens). The children live by a script, a script defined by the admission criteria of certain top schools or Cadillac schools. As Mercedes and the Maserati challenge the Cadillac in the world of the luxury automobile, the 'Ivy Leaguers' of the United States of America (U.S.A.) have been challenged by top universities throughout the world. The Ivy League is a collegiate athletic conference made up of sports teams from 8 private universities located in the

northeastern part of the U.S.A. The eight universities are Brown University (U.), Columbia U., Cornell U., Dartmouth College, Harvard U., Princeton U., the U. of Pennsylvania, and Yale U. Except for Cornell, the seven universities were all founded during colonial times of the United States of America (U.S.A.). The name 'Ivy League' has implications of academic excellence and choosiness in admissions.

"The USNWR ranking criteria does not relate anything with educational quality", critiqued Bruni [1], a writer. University education should not be treated like washing machines, and be ranked by a single number, he explained. The selection of a university for one's college-bound son or daughter should not be trivialized to the level of selection of household machines. Ferguson [2] has written to aid parents and students navigate the complex college selection and admissions process.

2. COLLEGE RANKINGS

College rankings have been taken up by various organizations. It seems to be a profitable business. It does provide a service to parents and students. The granddaddy of them all, the U.S. News and World Report, and some selected ranking systems are reviewed in this work.

Back in 1999 [3], the influence of USNWR rankings on the final admissions and costs at private universities were examined. A year later, there was a study about the problem about these rankings [4]. In [5], it was found that the socioeconomic demographics and composition of races of the universities at the top levels may also be impacted by movements in rank reported by the USNWR. In 2005, Carey reported about the change in matrix of evaluations used by the USNWR

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[6]. In [7], the researchers re-assert the seemingly obvious, that the ones most susceptible to the hierarchical status of colleges are the administrators and faculty and to a lesser extent, students and alumni.

3. U. S. NEWS AND WORLD REPORT RANKING

The indicators they employ to encapsulate academic quality can be classified into these categories: “assessment by administrators at peer institutions, retention of students, faculty resources, student selectivity, financial resources, alumni giving, graduation rate performance [8].”

Undergraduate academic prestige carries 22.5%. The academic peer valuation survey gives the chance to leaders in academia, presidents, provosts and deans of admissions, to rate by taking into consideration intangibles at colleges, e.g. faculty devotion to teaching [3].

The retention factor carries another 22.5% of the points [8]. The greater the fraction of freshmen who came back for the second year and ultimately graduate, the more probable a college will be offering the classes and services that students need to graduate. This category has 2 parts, the 6-year graduation rate (80% of the retention-factor points) and the freshman retention rate (20%) [8]. The graduation rate is an indication of the fraction who graduate in no more than six years. They looked at freshman classes that started from the time period fall 2004 through fall 2007 [8]. Freshman retention is shown by the average fraction of first-year students who registered in the college in the fall of 2009 through fall 2012 and came back the following fall semester [8].

The faculty resources factor make up 20% of the total points. Research has produced the understanding that the better satisfied students are about their own communications with professors, the better they will be educated and the greater the probability that they will graduate. They use 6 factors from the 2013-2014 academic year to evaluate a school's obligation to teaching. Class size has 2 parts: “the fraction of classes with fewer than 20 students (30% of the faculty resources score) and the fraction with 50 or more students (only 10% of the score) [8].”

“Faculty salary (35%) is the average faculty pay, including benefits, during the 2012-2013 and 2013-2014 academic years, edited for regional variations in the cost of living using indexes from the consulting firm

Runzheimer International. They also weigh the fraction of professors with the highest degree in their fields (15%), the student-faculty ratio (5%) and the fraction of faculty who are not part time (5%) [8].”

“The careful admission factor of students constitutes 12.5%. A school's academic atmosphere is determined in part by the aptitudes and motivations of the students. This measure has 3 components. They factor in the admissions test scores for all registrants who took the Critical Reading and Math portions of the SAT and the composite ACT score (65 percent of the selectivity score). They also consider the fraction of registered first year students at National Universities and National Liberal Arts Colleges who graduated in the highest 10% of their secondary school classes or the fraction of enrolled freshmen at Regional Universities and Regional Colleges who graduated in the uppermost quartile of their classes (25% of the points). [8].” Part three is the acceptance rate or approval for entry. In other words, the ratio of students permitted to enroll to applicants make up 10% of the points [8].

“Financial resources count for 10%. Liberal expenditure per student shows that a college can offer a large range of services and programs. U.S. News measures financial resources by using the average expenditure per student on teaching, research, student services and associated scholastic expenditures in the previous 2 fiscal years that were available [8].”

“Graduation rate performance accounts for 7.5%. For the second year in a row in 2015, the graduation rate performance indicator has been used in all of the Best Colleges ranking categories [8].”

The fact that alumni gave to the college garners 5 percent of the total. “This is the average fraction of the living alumni with their first college degrees who donated to their college during 2011-2012 and 2012-2013, which gives a measure of student contentment [8].”

To determine a school's rank, U.S. News first computed the weighted sum of its scores. The sum totals were rescaled so that the leading college in each group had a score of 100. The other schools' totals were computed as a fraction of that leading score. Totals were rounded to the nearest whole number and the colleges were registered with the leading college first and the others following with the weakest at the

bottom. Colleges that are tied are listed in alphabetical order of their names and are noted as ranked the same.

With universities struggling to hold down tuition and continue to pay their top administrators top dollar, and in an ever increasing competitive market for research funding, some private universities have gone the route of admitting more students to pay their fees. Under the USNWR criteria, it is expected that the ranking will plummet. If the number of faculty remains the same and the enrollment has increased, the impact on the criteria is manifold. The result is that student class sizes go up and student/professor ratio go up. In addition, the selectivity of the university has gone done. All three of these will cause the ranking to tank.

Table 1: National and Global Ranking of Some Colleges according to U.S. News

Name of University	National Ranking	Global Ranking
Harvard	2	1
Drexel	95	396
Duke	8	20
Mass. Inst. of Technology	7	2
Nat. U. of Singapore	1	55
Shanghai Jiao Tong U.	6	148
Tulane	54	358
University of Rochester	33	120
Vanderbilt University	16	89
Washington U. at St. Louis	14	41

In Table 1 is shown a selection of 10 universities with their national and global rankings. Harvard U. is selected to represent the Ivy Leaguers, and Massachusetts Institute of Technology is chosen for having one of the top engineering college in the world. Drexel U. and Tulane U. are popularly known universities handpicked for comparison purposes, and so are the other 4 American universities. Of the international universities, National University of Singapore is nominated for quality, and so is Shanghai Jiao Tong University. Moreover, the later is one of the centers around the world collecting data for ranking universities.

4. INTERNATIONAL RANKING

The Shanghai Jiao Tong University (SJTU) criteria are now presented, since they are apparently the most

extensive in covering universities throughout the world. The four major criteria [9] used by SJTU are the "quality of education (as gauged by alumni), the quality of faculty (Nobel Prizes, Field Medal Awards, highly cited researchers in 21 broad categories), research output (papers published in Nature and Science, as well as papers indexed in Science Citation and Social Science Citation), per capita performance (research expenditure per faculty)." The percentages allocated to each of the 4 broad categories are 10%, 40%, 40% and 10% respectively. The SJTU has been in business since 2003.

As an example, with these objective criteria, National University of Singapore is ranked number one in the island nation, and in the 101-150 group in the world. Universities within a group of tied scores are not further differentiated. Harvard University has been consistently ranked number 1 institutionally since 2003. Vanderbilt University is ranked 35 nationally, and 54 internationally.

In Table 2 is listed the same 10 universities selected in Table 1. It was deemed not useful to combine the tables together because they have different figures and thus confusing. The different criteria used by these two popular ranking systems pre-determine that the results would be rather different.

Table 2: National and Global Ranking of Some Colleges according to SJTU

Name of University	National Ranking	Global Ranking
Harvard	1	1
Drexel	105-125	301-400
Duke	23	31
Mass. Inst. of Technology	3	3
Nat. U. of Singapore	1	101-150
Shanghai Jiao Tong U.	1-3	101-150
Tulane	105-125	301-400
University of Rochester	49	90
Vanderbilt University	35	54
Washington U. at St. Louis	24	32

5. US DEPARTMENT OF EDUCATION RANKINGS

The US Department of Education (USDOE) has entered the ranking business, to help the public search for colleges in the most expensive and the least

expensive categories [10]. In this interactive website, the public can generate a cost report for the various categories of colleges viz. Public not-for-profit, Private not-for-profit, Private for-profit, in each of the 3 types of colleges based on the lengths of time for degrees. These 3 types of colleges are 4-years or above, 2-years, and less-than 2 years, thus producing 9 different categories of colleges. The third characteristic available for selection is whether the report should be regarding the highest tuition, the highest net prices, the lowest tuition, or the lowest net prices. Each report presents about 65 colleges each time. The reports generated are true, objective aids to parents and prospective students. It is interesting to note that the traditional 'Ivy Leaguers' are not in the list of Private not-for-profit institutions with the highest net costs. However and as a few examples, Duke University, the University of Rochester and Washington University at St. Louis do show up on the list of those with the highest tuition.

6. MONEY MAGAZINE RANKINGS

Of the about 1500 colleges in the USA, Money Magazine (Time.com) screened out most of them and was left with over 700 colleges. The principal criterion used for the first cut was that the colleges had to have a six-year graduation rate that was at or superior to the middle value for its group (public or private). The other criteria were related to financial problems. The magazine corporation then ranked the 700 odd colleges on 21 factors in 3 equally weighted categories. "These categories were quality of education, affordability and outcomes. Under quality of education, the measurements were the college's six year graduation rate, student standardized test scores, the student-faculty ratio, Rate My Professors grades, and the value-added graduation rate, which reflects the difference between a school's actual graduate rate and its anticipated rate, based on the economic and academic situations of the student body [11]." The affordability category was found by student and parent borrowing and student-default rates, governmental national data on affordability for low- and moderate-income students, and the predicted average net costs of a degree, that takes into account a college's fees, tuition inflation, institutional financial aid, and the usual time needed to graduate [11]. The outcomes category comprises early (within 5 years) and mid-career earnings data from PayScale.com, including modifications for value added and majors, including a Brookings institution skills examination, career-services staffing and programs linking students with graduated ones [11].

In this Money Magazine rankings, the traditional 'Ivy Leaguers' in general kept their high positions. However, the private universities where their leaders played the USNBR ratings criteria game, fared badly in Money's rankings. The reason is the affordability category of factors. One may argue that the results reflecting the different criteria should be expected. However, the level of difference between the USNBR and Money rankings can be safely taken as a point of note. One depends on the factors contributing to affordability, while the other does not. It can be argued that the outcomes category includes some factors related to reputation. The USNBR ranking criteria, being the grandfather of rankings, is much more concentrated on the reputation of the institution.

In Table 3 is listed the national ranking according to Money Magazine [12] of the 10 universities previously studied in Tables 1 and 2. Since the Money Magazine college ranking is new and features affordability as a prominent criterion, some of the private universities which are non-Ivy League, show a big drop in rank. Vanderbilt University, on the other hand, has one of the most generous financial aid packages in the nation which results in a strong ranking.

Table 3: National Ranking of Some Colleges for 2015-16 according to Money Magazine

Name of University	National Ranking
Harvard	6
Drexel	546
Duke	21
Mass. Inst. of Technology	3
Nat. U. of Singapore	N/A
Shanghai Jiao Tong U.	N/A
Tulane	620
University of Rochester	216
Vanderbilt University	50
Washington U. at St. Louis	66

7. FORBES RANKING

Forbes magazine company joined the college ranking skirmish in 2008. They selected a methodology that comprised the following point allocations: Alumni entry in the 2008 Who's Who in America (25%); appraisals of professors from Ratemyprofessors.com (25%); "4-year graduation rates (16 2/3%); enrollment-adjusted numbers of students and faculty receiving

nationally competitive awards (16 2/3%)” [13]; average four year debt accrued *via* student loans (16 2/3%). Forbes.com separated universities into private and public institutions.

In the latest rankings, Vanderbilt U. is ranked 54 [14]. Vanderbilt U. is ranked almost identically by Money.com and Forbes.com. Harvard U. is ranked 7, Duke University is ranked 23, University of Rochester is ranked 62, Washington University at St. Louis is ranked 63, Tulane U. is ranked 147, and Drexel University is ranked 327. It is interesting to note that Tulane University is still an Association of American Universities (AAU) member. The AAU assists U.S. and Canadian universities in developing policies regarding academic issues. The AAU also only allows a fixed number of universities to be invited to remain as members, at any one time. The body is very selective and acts as the caretaker of reputation amongst institutions of higher education in the U.S.A. and Canada Table 4.

Table 4: National Ranking of Some Colleges according to Forbes Magazine

Name of University	National Ranking
Harvard	7
Drexel	327
Duke	23
Mass. Inst. of Technology	5
Nat. U. of Singapore	N/A
Shanghai Jiao Tong U.	N/A
Tulane	147
University of Rochester	62
Vanderbilt University	54
Washington U. at St. Louis	63

8. DISCUSSION AND CONCLUSION

Finding the universally acceptable global criteria for college rankings may be difficult to achieve. It is understandable that the global marketplace for intellectual labor would like to have at least some minimum standards. It is neither easy nor affordable to establish these standards, and auditing these standards in the various countries. The current variety of global rankings for universities/colleges throughout the world serves as a workable measure, however flawed.

The established ranking systems and the new challengers have been presented. There are many differences, especially noticeable in the less established universities that were looked at. It really depends on the prospective students and their parents to use a ranking that makes most sense to them, as an aid to making a final decision about college selection.

The current review has shown that in general, the U.S. colleges still dominate the college rankings in the global scene. It might be due to the fact that the total research expenditure in the U.S.A. continues to beat all other nations. If it is the quality of a program/discipline one is interested, most academics use rankings not mentioned here because these are known and more understandable by academics rather than the general public. The organizations that rank undergraduate and graduate programs do not normally rank the colleges or universities as a whole. The current review distills the general fact that reputation is still the single factor of great significance to college rankings. As for a human being, her/his reputation is the only thing which remains when she passes on. So it is with college reputation. If affordability is an important consideration, then one of the newer college rankings would be more helpful for parents and students to consult.

When affordability is considered, it was observed that the ‘Ivy Leaguers’ remained highly ranked in the newer rankings and they did not come under the radar of the U.S. Department of Education. The reason is that most of these top universities have huge endowment funds (in the billions) and can award many scholarships to deserving students. One reason for the lack of affordability would be the lack of scholarships. Other reasons would include the high salaries of top-level administrators, football coaches, costs of gyms, swimming pools, etc. which drive up the costs of operation. If the cost of private universities become more affordable so that students are not saddled with such large debts on graduation, it would go a long way to reducing inequality in society, one of the 17 U.N. global goals [15, 16] to resolve around the world.

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