Ranking Law Schools: Using SSRN to Measure Scholarly Performance[†*]

BERNARD S. BLACK[**] AND PAUL L. CARON[***]

*There are several methods for ranking the scholarly performance of law faculties, including reputation surveys (*U.S. News, *Leiter); publication counts (Lindgren and Seltzer, Leiter); and citation counts (Eisenberg and Wells, Leiter). Each offers a useful but partial picture of faculty performance. We explore here whether the new "beta" SSRN-based measures (number of downloads and number of posted papers) can offer a different, also useful, albeit also partial, picture. Our modest claim is that SSRN-based measures can address some of the deficiencies in these other measures and thus play a valuable role in the rankings tapestry. For example, SSRN offers real-time data covering most American law schools and many foreign law schools, while citation and publication counts appear sporadically and cover a limited number of U.S. schools. The SSRN measures favor work with audiences across disciplines and across countries, while other measures are more law-centric and U.S.-centric. SSRN is relatively new and thus favors younger scholars and improving schools, while other measures favor more established scholars and schools. At the same time, the SSRN measures have important field and other biases, as well as gaming risks. We assess the correlations among the different measures, both on an aggregate and on a per-faculty-member basis. We find that all measures are strongly correlated; that total and per faculty measures are highly correlated; and that SSRN measures based on number of papers are highly correlated with measures based on number of downloads. Among major schools, all measures also correlate with school size.*

For commentary on this article and the role of SSRN in law faculty rankings, see:
- *Lawrence A. Cunningham, Commentary,* Scholarly Profit Margins and the Legal Scholarship Network: Reflections on the Web, *81 IND. L.J. 271 (2006).*
- *Theodore Eisenberg, Commentary,* Assessing the SSRN-Based Law School Rankings, *81 IND. L.J. 285 (2006).*

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** Hayden W. Head Regents Chair for Faculty Excellence, School of Law, and Professor of Finance, McCombs School of Business, University of Texas. Bernard Black is Managing Director of the Social Science Research Network (http://www.ssrn.com) and editor of the SSRN email abstracting journals in Corporate, Securities, and Finance Law. He wishes to thank Ralph Dandrea and Sean Flaherty at ITX and Gregg Gordon and Michael Jensen at SSRN, for their creativity and support in developing the SSRN law school measures on which this paper is based. He is unsure whether to thank his coauthor for getting him into one more fascinating project. Bernie and SSRN solicit feedback on the SSRN measures and how they can be improved. Email: bblack@law.utexas.edu.

*** Charles Hartsock Professor of Law and Director of Faculty Projects, University of Cincinnati College of Law. Editor of the SSRN email abstracting journals in Tax Law & Policy. Email: paul.caron@uc.edu.

I. INTRODUCTION

Rankings have been an important element of the law school environment since *U.S. News & World Report* ("*U.S. News*") first published law school rankings in 1987.[1] This Symposium reflects the growing recognition that legal scholars can neither cede to a news magazine the task of measuring our performance, nor pretend that the *U.S. News* rankings do not matter, nor simply complain about their weaknesses and hope they will improve over time. Instead, we need to produce our own measures that capture attributes that *U.S. News* misses.

This Article contributes to that effort by exploring whether data about papers posted on the Social Science Research Network (SSRN)[2] can supplement existing methods for

1. The most recent *U.S. News* rankings are available at USNEWS.COM, AMERICA'S BEST GRADUATE SCHOOLS 2006 (2005), http://www.usnews.com/usnews/edu/grad/rankings/rankindex_brief.php. For a history of the *U.S. News & World Report* law school rankings, see Paul L. Caron & Rafael Gely, *What Law Schools Can Learn from Billy Beane and the Oakland Athletics*, 82 TEX. L. REV. 1483, 1509–13 (2004) (reviewing MICHAEL LEWIS, MONEYBALL: THE ART OF WINNING AN UNFAIR GAME (2003)).

2. Social Science Research Network (SSRN), http://www.ssrn.com. The SSRN law school

ranking law school faculties. We summarize past attempts to measure law faculty scholarly performance and then explore the strengths and weaknesses that SSRN data bring to the rankings effort.

The methods for ranking the scholarly performance of law faculties include reputation surveys (*U.S. News*, Leiter[3]); publication counts (Leiter, Lindgren and Seltzer[4]); and citation counts (Leiter, Eisenberg and Wells[5]). Each offers a useful but partial picture of faculty performance. Our modest claim is that SSRN-based measures can offer a different, also useful, albeit also partial, picture that has its own set of limits and biases, but at the same time can address some of the deficiencies in other measures.

For example, SSRN offers real-time data covering most American law schools and many foreign law schools, while citation and publication counts appear sporadically and cover a limited number of U.S. schools. The SSRN measures favor work with audiences across disciplines and across countries, while other measures are more law-centric and U.S.-centric. SSRN is relatively new and thus favors younger scholars and improving schools, while other measures favor more established scholars and schools. These differences in emphasis suggest that the SSRN measures can complement other measures and play a valuable role in the rankings tapestry.

At the same time, however, the SSRN measures have important field and other biases, as well as gaming risks. To name a few: they favor law-and-economics scholars, (reflecting SSRN's origins), scholars in internet-savvy fields (cyberlaw, say), and papers with popular as well as scholarly appeal; downloads of individual papers are sensitive to publicity through blogs and news stories; not all authors post their work; and books do not count (unless an author posts chapters). Some of the limitations of the SSRN measures for individual authors will average out at the school level, but not fully.

We assess the correlations among the different measures, both on a whole-school and on a per-faculty-member basis. We find that all measures are strongly correlated; total and per-faculty measures are highly correlated; and SSRN measures based on number of papers posted are highly correlated with measures based on number of downloads. Among major schools, all measures correlate with school size.

Our hope is that the SSRN measures, combined with other measures, can offer a serious alternative to *U.S. News*. As we show below, the SSRN measures appear to offer a respectable alternative even in their current "beta" version. In particular, if the two measures diverge greatly, this offers initial evidence that the *U.S. News* survey methodology may be missing something. A closer look at each particular school is then appropriate to determine if *U.S. News* or SSRN is closer to the mark, or if the truth lies somewhere in between.

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rankings are at SSRN, Top Law Schools, http://hq.ssrn.com/Tournaments/Tournament_display.cfm?TRN_gID= 1&TMY_gID=2.

3. Brian Leiter's recent efforts can be found on his law school rankings website, Lieter's Law School Rankings, http://www.leiterrankings.com (last visited Nov. 18, 2005). *See also* Brian Leiter, *Measuring the Academic Distinction of Law Faculties*, 29 J. LEGAL STUD. 451 (2000) [hereinafter Leiter, *Measuring Academic Distinction*].

4. *See* James Lindgren & Daniel Seltzer, *The Most Prolific Law Professors and Faculty*, 71 CHI.-KENT L. REV. 781 (1996).

5. *See* Theodore Eisenberg & Martin T. Wells, *Rankings and Explaining the Scholarly Impact of Law Schools*, 27 J. LEGAL STUD. 373 (1998).

Like any numerical effort to quantify the quality or impact of legal scholarship, the SSRN measures pose risks of misuse. But they also offer the potential for significant evolution and improvement. Only time will tell whether that potential will be realized.

This paper proceeds as follows: Part II surveys the existing methods for ranking legal scholarship. Part III provides an overview of the different measures that SSRN provides, and how they relate to each other. Part IV compares the SSRN measures to existing methods. Part V presents case studies of the download measures as applied to top-downloaded authors in two selected fields: corporate law and tax. Part VI discusses the extent to which the SSRN are subject to "gaming" by authors or schools, and SSRN's current and likely future responses to gaming risk. Part VII concludes. This article assesses only the SSRN rankings of law *schools*. We plan in future work to discuss the separate SSRN rankings of top law *authors*.

II. EXISTING METHODS

Existing methods for ranking the scholarly performance of law faculties fall into three categories: reputation surveys, publication counts, and citation counts. This Part summarizes these methods and their principal limitations, as deployed to date. In Part IV, we compare the numerical results from each of these methods to each other and to the SSRN-based measures.

Our recitation of the problems with each approach is not intended to suggest that the SSRN measures solve these problems. Instead, our view is that a single best method does not yet exist. This creates the potential for different methods, including those offered by SSRN, to provide useful information despite their own weaknesses.[6]

A. Reputation Surveys

1. *U.S. News* Peer Assessment

The 800-pound gorilla of law school rankings is the annual *U.S. News* effort, which includes overall law school scores and ranks. An important component of the overall score and rank is a peer assessment rating, in which the dean, associate dean of academic affairs, chair of the faculty appointments committee, and the most recently tenured faculty member at each school are asked to rate schools on a scale from "marginal" (1) to "outstanding" (5).[7] Although the details of the peer assessment

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6. In listing the limitations of various rankings approaches, we make no claim to be the first to notice these limitations. Many are discussed by the authors who present the rankings. A selected list of criticisms of the *U.S. News* and other rankings approaches includes the purveyors of alternative rankings (*see* sources cited *supra* notes 1, 3–5) as well as several of the other contributors to this Symposium, especially Richard A. Posner, *Law School Rankings*, 81 IND. L.J. 13 (2006); and Jeffrey E. Stake, *The Interplay between Law School Rankings, Reputations, and Resource Allocation: Ways Rankings Mislead*, 81 IND. L.J. 229 (2006).

7. *Law Methodology*, in AMERICA'S BEST GRADUATE SCHOOLS 2006 (2005), http://www.usnews.com/usnews/edu/grad/rankings/about/06law_meth_brief.php (this link changes annually; so do the details of the survey methodology). The response rate for the most recent peer assessment survey was 70 percent. *Id.* Unless specified otherwise, all references to the *U.S. News* rankings are to the "2006" rankings, which were published around April 1, 2005.

measure have changed over time, it has remained relatively constant for a number of years. The peer assessment score is the only component of the overall *U.S. News* score that measures faculty scholarship, but it correlates highly with the overall score and rank.[8]

The *U.S. News* peer assessment measure has been criticized over the years on many grounds. These criticisms include:

- *Halo effect.* A school's name likely carries weight, independent of the quality of its scholars.
- *School size and location.* School reputation scores may be biased toward larger schools, which the reviewer is more likely to have heard of, toward schools on the coasts (which have more other geographically proximate schools), or both.
- *Opaqueness. U.S. News* is coy about the details of its methodology. It does not release data from which an outsider could replicate its results, nor estimates of standard errors.[9]
- *Gaming.* Stories are legion of efforts by schools to influence their *U.S. News* ranking.[10] The peer assessment survey has fueled efforts by schools to send glossy promotional material (known as "law porn"[11]) to law faculty elsewhere, in the hope of improving their ranking.
- *Respondent quality.* Many recipients of the peer assessment survey are not currently active scholars.[12] Even those who are likely have limited knowledge of scholarship in fields remote from their own.
- *Sluggish Response.* A school can dramatically upgrade the quality of its faculty and yet cause nary a blip in its *U.S. News* reputation rank for many years to come. We offer examples of this tendency below.

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8. The correlation between the overall and peer assessment scores (ranks) is 0.933 (0.975). This is partly due to the weight that *U.S. News* gives to the peer assessment score. *U.S. News* reports that peer assessment counts for 25% of the overall score but does not specify how the 25% figure was derived. *Id.*

9. Tom Bell claims that he has successfully deconstructed the *U.S. News* rankings. *See* Posting of Tom Bell to Agoraphilia, http://agoraphilia.blogspot.com/2005/05/gory-details-by-demand.html (May 24, 2005, 12:52 p.m.) *See also* Posting of Tom Bell to Agoraphilia, http://agoraphilia.blogspot.com/2005/05/puzzle-of-penn-law-schools-ranking.html (May 1, 2005, 4:20 a.m.); Posting of Tom Bell to Agoraphilia, http://agoraphilia.blogspot.com/2005/05/rank-this-job.html (May 1, 2005, 6:18 a.m.). He does not, however, publicly disclose his procedure and declined to provide details to us. Thus, we cannot verify his claim.

10. For a recent, rather gruesome catalog of law school gaming efforts, see Alex Wellen, *The $8.78 Million Maneuver*, N.Y. TIMES, July 31, 2005, § 4A, at 18.

11. The phrase was uttered by an anonymous Stanford professor (rumored to be Pam Karlan) and memorialized by Brian Leiter in *The Law School Observer*, 3 GREEN BAG 2D 327, 327 (2000). For a defense of law porn, see Posting of Victor Fleischer, *Law Porn and the Branding of Legal Education*, THE CONGLOMERATE, http://www.theconglomerate.org/2005/08/branding_legal_.html (Aug. 12, 2005).

12. For example, the associate dean of academic affairs post at many law schools is a non-tenured position requiring no scholarly credentials.

Indeed, the correlation between the 2005 and 2006 reputation scores is an astonishing 0.996. Although law school scholarly reputations do not change quickly, our anecdotal impression is that they change more, and more quickly, than is reflected in the *U.S. News* reputation measure.

- *Self-referential reputation.* A school that does better (or worse) in *U.S. News'* overall rankings than in peer reputation tends, in the future, to do better (or worse) in peer reputation as well.[13]

2. Leiter

In a series of articles and on-line reports, Brian Leiter has used all three scholarly measures—reputation, publications, and citations—to rank law faculties. In 2003, Leiter sought to address some of the deficiencies in the *U.S. News* survey. He surveyed "150 leading legal scholars," seeking their opinions about *a list of scholars* (at a particular school, but leaving the school unnamed) rather than directly about the school.[14] He used the responses to rank fifty major law schools. Leiter's approach addresses some but not all of the *U.S. News* biases, and may introduce new biases. Potential concerns with his approach include:

- *Halo effect.* Leiter's approach suffers from a major school bias, similar to *U.S. News*. Many respondents will quickly identify most schools, based on the list of scholars that Leiter provides. His respondents are more likely to have heard of people at major schools, simply because they are there. Moreover, his leading scholars come heavily from major schools, which could influence their assessments.

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13. Brian Leiter calls this the "echo chamber" effect, in which respondents to the reputation survey echo back to *U.S. News* what *U.S. News* has told them in prior years about overall law school quality. Brian Leiter, *More on the U.S. News Rankings Echo Chamber*, http://leiterreports.typepad.com/blog/2005/04/more_on_the_us_.html (Apr. 1, 2005). For statistical evidence consistent with this effect, see Stake, *supra* note 6, at 250–52; *cf.* William D. Henderson & Andrew P. Morriss, *Student Quality as Measured by LSAT Scores: Migration Patterns in the U.S. News Rankings Era*, 81 IND. L.J. 163, 191–92 (2006) (finding that changes in *U.S. News* reputation rank are associated with higher median LSAT scores for top quartile of schools, but not for other three quartiles).

14. *See* Leiter's Law School Rankings, Faculty Quality Rankings: Scholarly Reputation, 2003–04 (Mar. 25, 2003), http://www.leiterrankings.com/faculty/2003faculty_reputation.shtml [hereinafter Leiter's Law School Rankings: Scholarly Reputation]. Criteria for inclusion included (1) "active and distinguished scholars" who thus are "likely to have *informed* opinions about faculty quality"; (2) multiple faculty from every school evaluated; (3) diversity in terms of seniority; and (4) diversity in terms of fields and approaches. *Id.* For a list of the evaluators, see Leiter's Law School Rankings, Appendix A: Evaluators, 2003–04, http://www.leiterrankings.com/faculty/2003appenda.shtml [hereinafter Leiter's Law School Rankings: Evaluators]. Respondents were asked to evaluate the "intellectual quality of faculty work in the fields in which you work" of a list of scholars at 69 schools on a seale of 1 (weak), 2 (adequate), 3 (good), 4 (strong), and 5 (excellent).

- *School size and location.* Leiter's approach, like *U.S. News*, may be biased toward larger schools and schools on the coasts in geographic proximity.
- *Limited range of schools.* Leiter focuses on major schools. He studies sixty-nine schools, and reports results for the top fifty. His choice of the sixty-nine schools could miss some schools that would outrank his top fifty.[15]
- *Respondent choice.* Leiter hand-picked the scholars whom he asked to respond to the survey on the basis of imprecise criteria.[16] Any such effort can introduce bias.
- *Timing.* Leiter's survey is reasonably current, but may not remain so. There is value in seeing how a school's rank changes over time, but one cannot expect a lone scholar (especially one as active as Leiter in other areas) to conduct regular updates given the large effort involved.
- *Statistical reliability.* Leiter, like *U.S. News*, does not report standard errors or how the results would change if he tweaked his methodology.

B. Publication Counts

An alternative to subjective surveys is a quantitative count of measures relating to scholarly quality. The challenge, of course, lies in what to count. There are two broad approaches—counting publications in leading journals or citations by other scholars. We consider publication counts first.

1. Lindgren and Seltzer

In 1996, James Lindgren and Daniel Seltzer ("L&S") ranked the top seventy-five law faculties measured by publications in the twenty most-cited law reviews from 1988–92.[17] (All but one are student-edited.) A publication count measure can be used either on an aggregate basis (all faculty at a school) or on a per capita basis. Lindgren and Seltzer emphasize the per capita measure, but as we show below, their results are similar under both approaches.

Lindgren and Seltzer provide four publication measures: articles in the top ten reviews (both including and excluding articles in one's home school review), and articles in the top twenty reviews (again both including and excluding one's home

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15. Of the top 50 U.S. schools based on total SSRN downloads, five were not surveyed by Leiter; six more were in his survey but are not in his top 50. *See infra* table 2.

16. *See supra* note 14.

17. *See* Lindgren & Seltzer, *supra* note 4. This work builds on earlier work at Chicago-Kent College of Law. *See* Colleen M. Cullen & S. Randall Kalberg, *Chicago-Kent Law Review Faculty Scholarship Survey*, 70 CHI.-KENT L. REV. 1445 (1995); The Executive Board of the Chicago-Kent Law Review, *Chicago-Kent Law Review Faculty Scholarship Survey*, 65 CHI.-KENT L. REV. 195 (1989); Janet M. Gumm, *Chicago-Kent Law Review Faculty Scholarship Survey*, 66 CHI.-KENT L. REV. 509 (1990).

school review). They give proportional credit for co-authored articles. Our analysis below relies on their combined measure, which is the sum of these four measures; their results are not sensitive to choice of measure.

Publication counts have a somewhat different set of flaws than reputation surveys. The principal limitations of the Lindgren and Seltzer method include:

- *Halo effect.* The choices by student law reviews of which authors to publish suffers from a major school bias. Law reviews are more likely to publish works by home-school authors (hence Lindgren and Seltzer's effort to provide data with and without counting these placements). They also are more likely to publish articles by well-known authors (who tend to be from well-known schools), and by authors from major schools. This tendency is so well established that many authors submit a résumé along with their article. When an author fails to do so, student editors often do web searches to locate one.[18]

- *Selection biases.* Law students have selection biases of various sorts. Positive biases include politically fashionable topics,[19] politically correct results, and "big think" pieces that re-conceive a major field (preferably one that students know from their first year in law school).[20] Negative biases include international work (which is often relegated to second-tier "international" journals), tax and other technical work, and empirical work (which the students cannot properly evaluate and is rarely "big think").

- *Interdisciplinary work.* Interdisciplinary work often is not published in student law reviews, and thus is underweighted in the Lindgren and Seltzer measures. Some of this bias will average out across a faculty, but schools vary substantially in their faculty's inclination and ability to do interdisciplinary work.[21]

- *Limited range of schools.* The Lindgren and Seltzer results are limited to seventy-five schools.

- *Timing.* The Lindgren and Seltzer study is based on 1988–92 data and has not been updated.

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18. The Berkeley Electronic Press electronic law review submission system, "ExpressO," provides authors with the option to attach a résumé, and recommends that authors do so. *See* The Berkeley Electronic Press, ExpressO: How to Get Started, http://law.bepress.com/expresso/~how_to_get_started.html (last visited Nov. 5, 2005).

19. For example, constitutional law, critical theory, etc. *See* William J. Turnier, *Tax (and Lots of Other) Scholars Need Not Apply: The Changing Venue for Scholarship*, 50 J. LEGAL EDUC. 189 (2000).

20. The re-conceptualization often is not new or not correct, but students typically are not experienced enough to recognize this.

21. A crude measure of the tendency toward interdisciplinary work is the number (proportion) of faculty with joint degrees, which varies substantially across schools. *See* Tracey George, *An Empirical Study of Empirical Legal Scholarship: The Top Law Schools*, 81 IND. L.J. 141, 149–50 (2006).

- *Reliability.* Lindgren and Seltzer provide four alternate measures, but do not report how their results would change if they included a broader range of reviews or otherwise tweaked their methodology. For example, how would their results change if they counted all publications? If they gave full credit for coauthored articles?
- *Odd results.* The Lindgren and Seltzer study offers some odd placings. For example, on a per faculty basis, they rank Cornell 3rd, Colorado 5th and Texas 6th. On a school-wide basis, Cornell and Colorado drop to 12th and 14th, respectively, while Texas climbs to 3rd. As much as one of us might want Texas to have the third-best law faculty in the country, no one would claim this is the correct placement, either today or in 1990, nor that Lindgren and Seltzer got Colorado right then or now.

2. Leiter

Brian Leiter has sought, most recently in 2002,[22] to update and improve on the Lindgren and Seltzer publication measure. He counted articles published in the top 10 student-edited law reviews and the top 10 peer-edited law journals, plus books published by the three leading legal education publishers and the eight leading academic presses (one book equals three articles).[23] Leiter gave half credit to articles in a home journal and proportional credit for coauthored articles and books. He studied only fifty-one schools, compared to the seventy-five schools studied by Lindgren and Seltzer.

Leiter's inclusion of peer-reviewed journals and books should reduce, though not eliminate, the halo effect and student bias concerns. However, other problems remain, including:

- *Limited range of schools.* Leiter's results are limited to fifty schools. Also, unlike Lindgren and Seltzer, who report the seventy-five schools with the most publications, Leiter started from a list of schools and then counted publications, so some omitted schools likely rank higher than some included schools.
- *Timing.* Leiter's study covers 1995–2000. This is still tolerably recent, but he has announced that he plans to focus in the future on the reputation measure.[24]
- *Reliability.* Leiter provides a single measure and does not discuss how his results would change if he included different journals or otherwise

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22. *See* Leiter's Law School Rankings, The Criteria, 2000–02, http://www.leiterrankings.com/archives/2000archives_criteria.shtml.

23. *See* Leiter's Law School Rankings, Top 50 Faculties: Per Capita Productivity of Books and Articles, 2000–02, http://www.leiterrankings.com/faculty/2000faculty_product_all.shtml [hereinafter Leiter's Law School Rankings: Top 50 Faculties].

24. *See* Leiter's Law School Rankings: Scholarly Reputation, *supra* note 14 ("Since high-quality survey data may ultimately be more informative than 'objective' measures, it is my intent, for now, to rely on this data.").

tweaked his methodology. For Leiter, as for Lindgren and Seltzer, one wonders how much his results would change if he simply counted all publications.

- *Odd results*. Leiter, like Lindgren and Seltzer, gets some odd results from his publication count measurement. For example, on a per faculty basis, he places several schools substantially lower than they rank in other measures (e.g., USC 25th and George Washington 35th), and several substantially higher (e.g., Minnesota 9th, Wake Forest 11th, Emory 17th, and Notre Dame 20th).[25]

C. Citation Counts

The other obvious metric to count is citations to faculty work in the scholarly literature. Citations potentially allow a finer assessment of quality than a yes/no measure of placement, but they raise issues of their own. For many disciplines, one can rely on the Social Science Citation Index. But many law journals are not included in this index, so law citation measures have taken a different approach—use an online database of articles (Westlaw), search for faculty names in footnotes, and try (imperfectly) to control for variants of the same name, for different people with similar names, and for nonsubstantive citations (e.g., thanking someone for reading a draft).[26]

The Westlaw counting procedure counts citations of *authors*, not articles. Each citing article counts as a single "citation" of an author. It typically counts self-citations, but only one per article. A single mention in a long "string cite" in an obscure article counts the same (one cite) as cites to a number of articles by the same author, or extended discussion of an author's work, in a major article. The Bluebook citation rule calling for use of "[first author], et al." instead of individual authors' names for an article with three or more authors can affect counts of authors who write with multiple coauthors and have last names beginning with disadvantaged letters.[27] However, each coauthor of a multiauthored work, if named at all, gets full credit (unlike the proportional credit given to coauthors in the publication studies), and books that are

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25. Leiter's Law School Rankings: Top 50 Faculties, *supra* note 23.

26. As this article was approaching publication, Thomson ISI (the principal compiler of citation data) announced rankings of universities based on citations per paper published in a law journal. Their press release lists the top six universities as Yale (5.72); Texas (5.42); Harvard (5.01); NYU (4.61); Michigan (4.61); and Columbia (4.54). Thomson ISI has not, as best we can tell, made public either a fuller list or data from which such a list could be compiled.

27. This was the proper citation under Rule 15.1.1 of the seventeenth edition of the Bluebook. *See* THE BLUEBOOK: A UNIFORM SYSTEM OF CITATION 108 (Columbia Law Review Ass'n et al. eds., 17th ed. 2000). Note, however, that the most recent update of the Bluebook, which was released in the summer of 2005, allows for all authors to be listed, but still leaves the decision to do so up to the discretion of the editor. Rule 15.1 now states "use the first author's name followed by 'ET AL.' or list all of the authors' names," and that all authors' names should be included "when doing so is particularly relevant." THE BLUEBOOK: A UNIFORM SYSTEM OF CITATION 130 (Columbia Law Review Ass'n et al. eds., 18th ed. 2005). *Cf.* Raymond P.H. Fishe, *What Are the Research Standards for Full Professor of Finance?*, 53 J. FIN. 1053, 1075 n.13 (1998) (noting "citation count bias" against coauthors with names at end of alphabet).

cited by articles are counted. The European system of using initials instead of first names can create ambiguity, especially for authors with common last names.

1. Eisenberg and Wells

The principal effort to count citations is by Theodore Eisenberg and Martin Wells (sometimes abbreviated below as "E&W"). They ranked thirty-two law school faculties (based on faculty members in 1993–1994) as of 1996, based on the number of works by other scholars in the Westlaw "texts and periodicals" database that referred to them by name.[28] Citation counts, like publication counts, can be conducted on an aggregate or per faculty basis. Eisenberg and Wells report per faculty measures. In Part IV, we extract aggregate measures from their data and show that aggregate and per-faculty-member results are similar.

Eisenberg and Wells do a careful job of deciding how to count citations, given the naming complexities noted above. They report mean, median, and sum of mean and median results, both for entire faculties and individual faculty who have taught more than seven years. Our comparative analysis below relies on their results for "mean" values.

In measuring citations, Eisenberg and Wells built on a long history of analysis of citation patterns in scientific communities, including both the hard and the social sciences. This literature suggests that citation counts are a respectable proxy for article quality, and correlate reasonably well with other measures.[29] As with the other measures, however, citation counts have limitations. Some of these will average out at the school level, but not all or not fully. These include:

- *Limited range of schools*. Eisenberg and Wells rank only the top thirty-two law schools; Leiter ranks forty-eight schools, but based on a fraction of the faculty at each school.
- *Timing*. The Eisenberg and Wells results are based on citations measured almost ten years ago and have not been replicated since.
- *Dynamism*. Cumulative citation counts favor more senior faculty and emphasize older work that accumulates citations over time.

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28. Eisenberg & Wells, *supra* note 5.

29. *See, e.g.*, Stephen J. Bensman, *Journal Collection Management as a Cumulative Advantage Process*, 46 C. & RES. LIBR. 13, 23 (1985) ("citations and peer ratings appear to be virtually the same measurement"); Kenneth A. Borokhovich, Robert J. Bricker & Betty J. Simkins, *An Analysis of Finance Journal Impact Factors*, 55 J. FIN. 1457 (2000); John B. Davis, *Problems in Using the Social Sciences Citation Index to Rank Economics Journals*, 42 AMER. ECON. 59 (1998); James E. Krier & Stewart J. Schwab, *The Cathedral at Twenty-Five: Citations and Impressions*, 106 YALE L.J. 2121, 2123 (1997) ("Empirical studies demonstrate a high correlation between citation counts and peer judgments."); Sherrill L. Sellers, Sally G. Mathiesen, Robin Perry & Thomas Smith, *Evaluation of Social Work Journal Quality: Citation Versus Reputation Approaches*, 40 J. SOC. WORK EDUC. 143 (2004); *cf.* Tracey E. George & Chris Guthrie, *Joining Forces: The Role of Collaboration in the Development of Legal Thought*, 52 J. LEGAL EDUC. 559, 568 (2002) ("[C]itation-count studies are far from perfect, but they are widely accepted, are commonly employed, and provide one meaningful indication, however incomplete, of the influence articles have had on the development of legal thought.").

- *Survey article and treatise bias.* Citation counts favor survey articles and treatises, which may be "convenient as opposed to important."[30]
- *Field bias.* Citation studies are field-sensitive. As Leiter notes: "Law reviews publish lots on constitutional law, and very little on tax. Scholars in the public law fields or who work in critical theory get lots of cites; scholars who work on trusts, comparative law, and legal philosophy do not."[31]
- *Interdisciplinary and international work.* Interdisciplinary and international work is often cited in journals not included in the Westlaw JLR database, and thus is underrepresented in a Westlaw based citation count.
- *The "industrious drudge" bias.* Leiter has argued that citation studies favor the "industrious drudge"—the "competent but uninspired scholar who churns out huge amounts of writing in his or her field."[32]
- *"Academic surfers."* Leiter has noted that citation studies can favor the scholar "who surfs the wave of the latest fad to sweep the legal academy."[33]
- *The "classic mistake."* Work that is negatively cited as a "classic mistake" would fare well under this measure.[34]
- *Gender patterns.* There do not appear to be strong gender patterns in which authors are cited.[35]
- *Odd results.* Citation studies, like other approaches, can produce anomalous results. For example, using their preferred per-faculty

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30. *See, e.g.*, Krier & Schwab, *supra* note 29, at 2122 (commenting on survey articles); Richard Markovits, *The Professional Assessment of Legal Academics*, 48 J. LEGAL EDUC. 417, 423 (1998) ("many frequently cited articles are cited because they contain succinct statements of boilerplate propositions of law"). For treatises, Leiter notes that "with the devaluation of doctrinal work over the past twenty years, an outstanding treatise writer—with a few exceptions—is not necessarily highly regarded as a legal scholar." Leiter's Law School Rankings, The Top 40 Faculties Based on Per Capita Scholarly Impact (Citations), 2003–04 (July 16, 2003), http:/www.leiterrankings.com/faculty/2003faculty_impact_cites.shtml [hereinafter Leiter's Law School Rankings: Top 40 Law Faculties].

31. Leiter's Law School Rankings: Top 40 Law Faculties, *supra* note 30.

32. Leiter, *Measuring Academic Distinction*, *supra* note 3, at 469.

33. *Id.*

34. *But see* RICHARD A. POSNER, CARDOZO: A STUDY IN REPUTATION 70 (1990) ("Negligible work is more likely to be ignored than to be criticized in print; and work that is heavily criticized, even work decisively shown to be erroneous, plays a vital role in the growth of knowledge.").

35. *Compare* Deborah Jones Merritt, *Scholarly Influence in a Diverse Legal Academy: Race, Sex, and Citation Counts*, 29 J. LEGAL STUD. 345 (2000) (women's scholarship cited as often as white males' scholarship), *with* Ian Ayres & Fredrick E. Vars, *Determinants of Citations to Articles in Elite Law Reviews*, 29 J. LEGAL STUD. 427, 444 (2000) (women's scholarship cited more than men's).

measure, Eisenberg and Wells rank several schools higher (e.g., Cornell 6th, Illinois 14th, Colorado 20th, and Emory 21st) than might be expected. Yet, under the whole-school approach, which we emphasize here, these anomalies diminish (the principal outlier is Colorado with a whole-school rank of 21st).

2. Leiter

Brian Leiter has sought several times to offer his own Westlaw-based citation measure for a limited number of major schools (49 schools in 2003, 39 schools in 2005).[36] However, the labor intensity of the task caused him to limit his study to the top quarter of each school's faculty, and to study a narrower Westlaw database of law reviews (thus excluding some treatises and practitioner journals that Eisenberg and Wells included).[37] Leiter reports both mean and median per capita impact for the top quarter of each school's faculty, which he then combines into an overall measure.

Leiter's study suffers from the same infirmities as citation count studies generally. Like Eisenberg and Wells, he finds seemingly odd rankings. Using his preferred per-faculty measure, these include, on the high side, Colorado and Miami (tied for 15th) and Arizona, Arizona State, and Brooklyn (tied for 25th). On the low side, these include USC (21st) and Wisconsin (38th). Some of these anomalous results go away if one looks at whole-faculty ranks (see table 3 below).

III. THE ROLE OF SSRN

A. History of SSRN

The Social Science Research Network was formed in 1994 to enable scholars to share and distribute their research worldwide at an early stage of production "at the lowest cost possible for authors and readers."[38] As of September 14, 2005, it included 100,000 documents—73,000 full-text papers plus 27,000 abstracts without accompanying full papers. Of these documents, roughly 25% have been announced in one or more of the fifty or so "subject matter journals" within SSRN's Legal Scholarship Network (LSN). Some of these papers, however, are written by scholars in other fields, principally economics and finance.[39] Total downloads of all papers from

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36. For Leiter's 2003 citation-based rankings, see Leiter's Law School Rankings: Top 40 Law Faculties, *supra* note 30. For his 2005 rankings, see Leiter's Law School Rankings, Faculty Quality Based on Scholarly Impact (July 2005), http://www.leiterrankings.com/faculty/2005faculty_impact_cites.shtm. We rely in this article on his 2003 rankings. His 2005 rankings became available in July 2005, after our work was substantially complete.

37. How Leiter identified the top quarter is not clear. He says he culled them from a search of one-third to one-half of each faculty, but how he culled or how he chose this broader list, he does not say.

38. Letter from SSRN Chairman Michael C. Jensen (Dec. 2004), http://www.ssrn.com/update/general/mjensen.html.

39. The aggregate statistics are reported on the SSRN "search page." SSRN (Social Science Research Network), http://www.ssrn.com (last visited Nov. 5, 2005). The other SSRN networks are in accounting, economics, finance, information systems, management, marketing,

SSRN since inception are around 10.7 million, including over 3 million downloads of papers announced through LSN.

SSRN downloads are "clean," in the sense that SSRN does its best to count only downloads from people (rather than, say, web robots), and to exclude repeat downloads of the same paper by the same person. To download a paper, a reader must first visit the associated abstract page, where the reader can review the abstract and decide whether the paper is worth downloading. SSRN's email abstracting journals also include an abstract for each paper. Users cannot click on an external link (say from a blog, a web search, an author's bome page, or an SSRN journal) and directly download a paper. Thus, each download represents a reader's affirmative decision to download, having already seen the abstract. The requirement that users view the abstract before downloading a paper is important. Abstract page "views" on the SSRN web site typically run about three times the number of downloads. There are also a substantial number of abstract views by readers of SSRN e-mail journals that do not lead to downloads.

Both SSRN's overall paper submission rates and download rates have increased substantially over time; new full-text papers and downloads in the last year are roughly 25,000 and 3 million, respectively. Table 1 below shows the increase in downloads from SSRN over the past six years.

Table 1. Downloads on SSRN, 2000–2005

Year	Number of downloads
2000	500,000
2001	1,200,000
2002	1,600,000
2003	2,000,000
2004	2,400,000
2005	3,000,000 (estimated)

Source: Information supplied by Social Science Research Network, *supra* note 2.

SSRN imposes minimal screening to ensure that a paper is "part of the worldwide scholarly discourse," but otherwise allows any author to post any scholarly work, and will announce in its subject matter journals any work within the scope of one of its networks. Each paper has a separate "abstract" page, and each author has a separate "author" page on SSRN. SSRN posts the number of downloads of each paper on the abstract page for that paper and on the author's author page.

In March 2005, SSRN launched a "top institutions" service, which lists institutions within each major scholarly discipline. This list includes nine measures (and accompanying ranks) for all law schools whose faculty have full-text papers available from SSRN.[40] We describe each measure below.

SSRN also lists the 1500 most downloaded "top law authors" (authors whose primary affiliation is with a law school), and provides six measures (and accompanying ranks) for each author: (new and all-time) downloads, papers, and downloads per

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negotiations, and social insurance.

40. SSRN, Top Law Schools, http://www.ssrn.com (follow "Top Institutions" hyperlink, then follow "Top Law Schools" hyperlink; free registration required) (last visited Nov. 5, 2005).

paper.[41] We do not discuss the author measures in detail here, but plan to do so in future work.

B. Why Another Source of Rankings?

Rankings are labor-intensive. Other academics may read and gossip about the rankings, but tend not to value them highly as scholarship. The combination of labor intensity and limited academic credit has meant that scholars' interest in generating rankings has been episodic, covering a limited number of schools for a limited time period. Table 2 below shows this pattern:

Table 2. Overview of law school ranking methods

Methodology		Years covered	Published	Schools covered	Scope
Reputation survey	*U.S. News*	1987; 1990	Annually	179	U.S. Only
	Leiter	2003	2003	50	U.S. Only
Publication count	Lindgren and Seltzer	1998–1992	1996	76	U.S. Only
	Leiter	1995–2000	2000	50	U.S. Only
Citation count	Eisenberg and Wells	citations in 1996 (faculty in 1993–94)	1998	32	U.S. Only
	Leiter	1997–2000, 2003, 2005	2000, 2003, 2005	49 in 2003, 39 in 2005	U.S. Only
SSRN measures		2005–	Monthly	201	Worldwide

Sources: USNEWS.COM, *supra* note 1; Social Science Research Network, *supra* note 2; Leiter's Law School Rankings, *supra* note 3; Lindgren and Seltzer, *supra* note 4; Eisenberg and Wells, *supra* note 5.

NOTE: The November 2005 SSRN rankings include 310 schools. The April 2005 rankings reported here include 201 schools.

This pattern seems likely to continue. Thus, a serious alternative to *U.S. News* needs an institutional sponsor. Thomson ISI is a possible sponsor of citation measures, but has thus far focused on ranking journals rather than schools, and has spotty coverage of law.

SSRN could become an institutional sponsor of alternatives to the *U.S. News* peer-reputation survey. At present, SSRN offers measures based on downloads and papers, but it will soon provide links (initially limited to other papers within the SSRN eLibrary) to other papers that a paper references and to other papers that cite the paper. From this, it would be a short step to providing citation counts as well.

Table 3 below presents comparative data for each of the sources discussed in Part II, plus SSRN measures based on total downloads and total papers posted to SSRN. The ranks are based on totals for each school rather than per-faculty measures, but

41. SSRN, Top 1500 Law Authors, http://www.ssrn.com (2005) (follow "Top Authors" hyperlink, then follow "Top Law Authors" hyperlink; free registration required) (last visited Nov. 5, 2005).

otherwise rely on the authors' preferred measures. The SSRN measures are based on data as of April 1, 2005 (the most recent data available at the time of the conference at which this paper was presented).

The reputation, publication, and citation measures discussed in Part II are all limited to U.S. schools. In contrast, the SSRN measures include non-U.S. schools. These schools do quite well, occupying seven of the top fifty and sixteen of the top one hundred places for total downloads. Even within the U.S., table 3 shows the spotty coverage of measures other than SSRN and *U.S. News*, once one gets beyond a limited number of major schools.

Table 3. Comparison of SSRN ranks with other law faculty ranks

Law schools are listed in order of SSRN total download rank. Schools with no SSRN downloads are listed in order of *U.S. News* rank. For non-U.S. schools, country is shown in parentheses (e.g., ISR for Israel). The Lindgren and Seltzer publication, Leiter publication, Eisenberg and Wells citation, and Leiter publication and citation ranks are based on the authors' preferred measure, but are converted to "whole school" ranks, and thus differ from the "per faculty" ranks reported by these authors. When several schools have the same rank for a particular measure, we show the "average" rank. For example, Michigan and Texas are tied for 17th for SSRN total papers; we report this as a rank of 17.5. SSRN data reflects reporting as of April 1, 2005. Schools with SSRN downloads as of November 2005, but no downloads as of April 2005, are indicated as "Nov.2005" U.S. News are their 2006 ranks (available Apr. 1, 2005). "Not Rep." means that the institution is included in the Leiter reputation survey, but its rank is not reported.

	SSRN		Reputation		Publications		Citations	
School (country)	Total downloads	Total papers	U.S. News	Leiter	Lindgren & Seltzer	Leiter	Eisenberg & Wells	Leiter
Chicago	1	2	5	2.5	1	3	4	2
Harvard	2	1	2	2.5	2	2	1	1
Stanford	3	4	2	4	9	13	3	8
Columbia	4	8	4	5.5	8	6	7	6
UCLA	5	3	15.5	14.5	17	9	12	12
Texas	6	17.5	15.5	8.5	3	5	10	9
Georgetown	7	10	12	12.5	5	8	6	5
USC	8	13	18	12.5	15	25	18	19
Berkeley	9	9	7	7	7	7	9	7
Virginia	10	11	9.5	10	6	12	11	11
George Mason	11	7	56.5	26.5		27	30	22
Yale	12	15	2	1	4	1	2	3
Geo. Washington	13	22	26	21	29	22	19	14
Vanderbilt	14	16	17	18	26	24	28	27
NYU	15	12	7	5.5	11	4	5	4
Penn	16	5	9.5	11	13	15	17	15
San Diego	17	21	66	24	58.5	16		25
Boston University	18	23	26	19.5	20	20.5	26	20
Michigan	19	17.5	7	8.5	16	11	8	10
Minnesota	20	29	20	22	21	10	15	23
Illinois	21	14	23	24	47	39	22	29
Bonn (GER)	22	6	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
Duke	23	25	12	17	23	18	16	18
Florida State	24	20	56.5	Not Rep.				
Boston College	25	28	30	35		44		46
Melbourne (AUS)	26	27	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
Cornell	27	24	12	16	14	20.5	14	17
Cardozo	28	26	56.5	28	19	35	25	39
Fordham	29	32	38.5	26.5	44.5	31		24
Emory	30	30	30	33	35	17	24	21
Northwestern	31	31	14	14.5	10	14	13	13
Michigan State	32	51	117					
Cambridge (UK)	33	56	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
Loyola–LA	34	33	74.5	Not Rep.	58.5			

	SSRN		Reputation		Publications		Citations	
School (country)	Total downloads	Total papers	U.S. News	Leiter	Lindgren & Seltzer	Leiter	Eisenberg & Wells	Leiter
North Carolina	35	40	20	35	44.5	23	32	36
Toronto (CAN)	36	41.5	Non-US	Non-US	58.5	Non-US	Non-US	Non-US
Herzliyah (ISR)	37	59.5	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
Davis	38	36.5	26	31.5	63	46		43
Wash Univ (St.L.)	39	49	23	29.5	44.5	36		31
Max Planck–Foreign Priv. & Int'l Law (GER)	40	141.5	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
Arizona State	41	63.5	44.5	42.5	65	43		40
Brooklyn	42	41.5	66	48		37		30
Rutgers–Camden	43	73	66	38	49	30		41
Ohio State	44	34	34	35		42		33
Tilburg (NETH)	45	93	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
Chicago-Kent	46	52.5	66	38	27	29	29	35
NY Law School	47	46.5	117		33			
Southampton(UK)	48	19	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
Washington & Lee	49	35	30	31.5	38	45		48
Amsterdam (NETH)	50	106	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
Villanova	51	44	66					
Iowa	52	36.5	23	19.5	18	40	20	28
Wake Forest	53	39	38.5	Not. Rep	48			
Frankfurt (GER)	54	141.5	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
Case Western	55	43	49.5	Not Rep.	52.5			
Wayne State	56	63.5	82	Not Rep.	68			
Tel Aviv (ISR)	57	56	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
Maryland	58	38	44.5	Not Rep.	28			
Indiana–Indianapolis	59	54	66					
Wisconsin	60	67.5	20	24	22	41	23	34
St. John's	61	61	93.5					
American Univ	62	59.5	44.5	48	25			
Pittsburgh	63	71	49.5	Not Rep.	50			
William & Mary	64	67.5	30	38	39	28		47
Florida	65	46.5	38.5	48	41			26
Cincinnati	66	74.5	74.5	Not Rep.	64			
Temple	67	79	66					
Connecticut	68	69	49.5	Not Rep.	31			
Seton Hall	69	49	74.5					
Penn St.–Dickinson	70	45	105.5					
Thomas Jefferson	71	49	171.5					
Bar Ilan (ISR)	72	71	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
Buffalo	73	65.5	82	Not Rep.	30			
Hastings	74	79	30	29.5	58.5	26		32
Hofstra	75	56	82	Not Rep.				
Sydney (AUSTR	76	89.5	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
Griffith (AUSTR)	77	98.5	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
Syracuse	78	74.5	82					
Indiana–Bloomington	79	52.5	34	42.5	36	42	27	42
Alabama	80	62	49.5	Not Rep.				
Miami	81	120	49.5	42.5	24	32		16
Humboldt (GER)	82	112.5	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
Haifa (ISR)	83	71	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
South Carolina	84	85.5	105.5					
Houston	85	79	66	Not Rep.	42			
Washington	86	166	38.5	Not Rep.			31	
Georgia	87	82.5	42	Not Rep.	51			

	SSRN		Reputation		Publications		Citations	
School (country)	Total downloads	Total papers	U.S. News	Leiter	Lindgren & Seltzer	Leiter	Eisenberg & Wells	Leiter
Tulane	88	76.5	38.5	42.5	34	38		
Lewis & Clark	89	98.5	93.5					
St Louis	90	106	82					
Loyola–Chicago	91	133	82					
Hebrew U. (ISR)	92	98.5	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
Kansas	93	98.5	56.5		54.5			
Utah	94	106	56.5		72			
Missouri–Columbia	95	98.5	56.5	Not Rep.				
Eur. Univ. Inst. (ITA)	96	65.5	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
Oxford (UK)	97	89.5	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
Widener	98	112.5	151.5					
LSU	99	98.5	93.5					
Mainz (GER)	100	112.5	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
DePaul	101	85.5	93.5		58.5			
Colorado	102	126.5	44.5	42.5	12	34	21	38
Suffolk	103	89.5	127					
Cleveland State	104	103.5	117					
Ottawa (CAN)	105	112.5	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
Marquette	106.5	126.5	93.5					
Phoenix Center	106.5	58						
Albany	108	85.5	117					
Notre Dame	109	93	34	48	66	19		44
Tennessee	110	126.5	56.5		58.5			
Singapore (SIN)	111	82.5	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
Nevada–Las Vegas	112	126.5	105.5					
CUNY Queens	113	141.5	139					
Florida Int'l	114	98.5						
Oklahoma	115	120	82					
St. Thomas–Minn.	116	112.5						
Arizona	117.5	85.5	38.5	42.5	54.5	33		37
Queensland (AUSTR)	117.5	76.5	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
Queen's (CAN)	119	103.5	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
Southern Illinois	120.5	112.5	139					
Saarland (GER)	120.5	126.5	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
Idaho	122	112.5	127					
Baltimore	123	141.5	127					
McGill (CAN)	124	133	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
Akron	125	89.5	151.5					
Chapman	126	141.5	171.5					
Northeastern	127	141.5	93.5		70			
Santa Clara	128	126.5	82					
La Verne	129	166						
SMU	130	126.5	66	Not Rep.	40			
U. San Francisco	131	178.5	105.5		52.5			
William Mitchell	132	81	139					
Oregon	133	158	49.5	Not Rep.				
Pace	134	120	127					
Alberta (CAN)	135	158	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
West Virginia	136	151	117		68			
New S. Wales (AUSTR)	137	98.5	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
Brigham Young	138	112.5	56.5	Not Rep.	37			
Rutgers–Newark	139	120	66	48	32	43		45
Calif.–Western	140	133	158					
British Col. (CAN)	141	158	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
Vermont	142	151	93.5		74.5			

	SSRN		Reputation		Publications		Citations	
School (country)	Total downloads	Total papers	U.S. News	Leiter	Lindgren & Seltzer	Leiter	Eisenberg & Wells	Leiter
Stetson	143	112.5	117					
Roger Williams	144	151	158					
Ark–Little Rock	145	178.5	117					
Hamline	146.5	178.5	139					
Toledo	146.5	141.5	139					
Ark–Fayetteville	148	178.5	93.5					
Seattle (Puget Sound)	149	178.5	105.5		62			
Denver	150	126.5	93.5					
Australia Nat'l (AUSTR)	151	133	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
Lond. Sch. Econ (UK)	152	93	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
Willamette	153	151	117					
Neuchatel (SWIT)	154	141.5	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
Wyoming	155	194	105.5					
Kentucky	156	133	66					
Quinnipiac	157	141.5	139					
Western New Eng.	158	166	164.5		44.5			
Univ of Pacific	159	178.5	117					
Manchester (UK)	160	112.5	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
Texas Wesleyan	161	141.5	164.5					
Texas Southern	162	158	164.5					
N. Kentucky	163	151	164.5					
Okla. City Univ	164	166	164.5					
Missouri–KC	165.5	141.5	93.5					
Windsor (UK)	165.5	166	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
King's Coll. (UK)	167	158	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
St. Thomas–Florida	168	158	171.5					
Nebraska	169	166	74.5					
North Dakota	170	120	139					
Northern Illinois	171	166	151.5					
Samford	172.5	151	139					
York (UK)	172.5	151	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
Dublin (IRE)	174	178.5	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
Tulsa	175	178.5	127					
Richmond	176	166	93.5					
Victoria (CAN)	177	178.5	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
Creighton	178	178.5	127					
Texas Tech	179	178.5	139					
Pepperdine	180	178.5	105.5					
Mercer	181	194	117					
Golden Gate	182	194	158					
Regent	183	194	176					
Franklin Pierce	184	178.5	139					
Valparaiso	185	194	139					
Mississippi	186	141.5	105.5					
Catholic Univ.	187	178.5	74.5		68			
Tokyo (JAPAN)	188	194	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
Nova Southeastern	189	194	151.5					
Capital Univ.	190	194	158					
Duquesne	191	194	139					
South Texas	192	178.5	158					
Appalachian	193.5	194	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
New England	193.5	194	151.5					
West. Ont. (CAN)	195	194	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
Hong Kong (HK)	196	178.5	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
Florida Coastal	197	194	178.5					

	SSRN		Reputation		Publications		Citations	
School (country)	Total downloads	Total papers	U.S. News	Leiter	Lindgren & Seltzer	Leiter	Eisenberg & Wells	Leiter
Bristol (UK)	198	158	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
Warwick (UK)	199	166	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
Queen Mary (UK)	200.5	194	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
Nottingham (UK)	200.5	194	Non-US	Non-US	Non-US	Non-US	Non-US	Non-US
New Mexico			74.5					
Baylor	Nov.2005		82					
Georgia State	Nov.2005		93.5					
Maine	Nov.2005		93.5					
Hawaii	Nov.2005		93.5		71			
Howard			105.5					
Louisville			105.5					
Gonzaga			117					
Loyola-N. Orleans	Nov.2005		117					
Montana			117					
Drake			127					
Dayton	Nov.2005		139					
Southwestern	Nov.2005		139					
South Dakota			139					
Washburn	Nov.2005		139					
John Marshall	Nov.2005		139					
Memphis			151.5					
St. Mary's			151.5					
Touro			151.5					
Ohio Northern			164.5					
N. Carol. Central	Nov.2005		164.5					
Whittier	Nov.2005		164.5					
Mississippi Coll.			171.5		73			
Southern Univ.			171.5					
Detroit Mercy	Nov.2005		171.5					
Campbell			176					
Thomas Cooley			176					
Western State	Nov.2005		178.5		74.5			

Sources: USNEWS.COM, *supra* note 1; Social Science Research Network, *supra* note 2; Leiter's Law School Rankings, *supra* note 3; Lindgren and Seltzer, *supra* note 4; Eisenberg and Wells, *supra* note 5.

Like other approaches, the SSRN measures produce some anomalous results. Some schools rank substantially higher based on SSRN total downloads than in the other studies: for example, UCLA 5th, USC 8th, George Mason 11th, George Washington 13th, and San Diego 17th. Other schools fare poorly under SSRN total downloads compared with other measures: for example, Yale 12th, Michigan 19th, Cornell 27th, Northwestern 31st, and Wisconsin 60th. One may hope, however, that some of these anomalies will diminish over time, if only because they may prompt authors and schools to pay more attention to ensuring that authors' affiliations are correct and that their recent work is posted. Yale may already be doing so—it ranks 9 for downloads in the last twelve months in the most recent (November 2005) monthly rankings.

Table 3 includes 28 schools with a *U.S. News* rank but no SSRN rank, due to no papers posted to SSRN. The number of such schools is shrinking, however. In the most recent (November 2005) SSRN rankings, the number of schools listed has grown to 310 from 201 in April, including 12 of these 28 schools plus many foreign schools (some of which SSRN had not identified as law schools in April due to non-English names).

C. The SSRN Measures

SSRN provides three sets of law school measures and accompanying ranks:

- All-time measures: total downloads of all papers by a school's faculty, total papers posted to SSRN, and downloads per paper.
- "New" (last twelve months) measures: downloads of all papers by a school's faculty, new papers posted to SSRN, and new downloads per paper (based on all papers, not just new papers).
- Author measures: number of "authors" (faculty members with one or more papers on SSRN), total downloads per author, and new downloads per author.

All measures give full credit to each coauthor for coauthored papers, based on their current home institution. Thus, for example, a recent paper by Black (Texas), Silver (Texas), Hyman (Illinois), and Sage (Columbia) will count twice for Texas and once each for Illinois and Columbia.[42] When Black moved from Stanford to Texas in 2004, his downloads and papers went with him.[43] The SSRN measures count downloads of papers by faculty members with multiple appointments at each school. Thus, Ron Gilson's downloads count for both Columbia and Stanford, and Kevin Murphy and Timur Kuran, with primary appointments in another department, count fully for USC law school.

These rules can importantly affect the rankings. USC offers an extreme example. Without Murphy and Kuran (its two top downloaded authors), USC's downloads as of August 1, 2005 drop from 63,000 to 24,000, and its rank drops from 8th to 21st. Without Bentley MacLeod (its third-top-downloaded author, but leaving for Columbia), USC would have 20,000 downloads and a rank of 22. One can also argue that a single highly downloaded author or two (William Landes at Chicago; Black at Texas; Orin Kerr and Daniel Solove at George Washington) can unduly influence a school's downloads and thus its rank.

Author errors can matter too. SSRN relies on authors to report their affiliations. If John Donohue, who moved from Stanford to Yale in mid-2004, had changed his affiliation in SSRN's records, Yale would be ninth instead of twelfth for total downloads, and Stanford would drop from third to fourth.

Finally, just as small differences in *U.S. News* reputation scores can produce large differences in ranks, small differences in downloads can sometimes imply significant differences in download ranks. For example, UCLA, Texas, George Washington, and USC are clustered between 56,000 and 60,000 downloads (see Appendix 2). Thus, a small fractional difference in downloads (4,000/60,000 = 7%) implies what might seem to be a siguiflcant change in rank from eighth to flfth.

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42. *See* Bernard Black, Charles Silver, David Hyman & William Sage, *Stability, Not Crisis: Medical Malpractice Claim Outcomes In Texas, 1988–2002*, 2 J. EMPIRICAL LEGAL STUDIES 207 (2005), *available at* http://ssrn.com/abstract=770844.

43. For a fuller description of each measure, see SSRN, About SSRN Top Law Schools (2005), http://www.ssrn.com/institutes/about_top_ law_schools.html.

SSRN makes its underlying data available. It provides a list of authors affiliated with each school, together with all time and new measures for each author. Total downloads per paper are then available from an author's "author page," as well as information on co-authorship and dual affiliations. This lets others offer their own adjustments to the SSRN measures.

D. Correlations Between the SSRN Measures

This section discusses the correlations between the different SSRN measures and ranks. Table 4, panel A provides Pearson correlation coefficients (r_p) for selected SSRN measures, while panel B provides Spearman rank-order correlation coefficients (r_s) for ranks derived from these measures. For comparison, table 4 also provides correlation coefficients between the SSRN measures and a measure of faculty size, adapted from faculty counts by Lindgren and Seltzer and by Leiter.[44] The appendices provide data for each measure by school. Appendix 1 provides ranks for each school for the download and paper measures, Appendix 2 provides numerical values for each measure, and Appendix 3 provides ranks and numerical values for the author measures.

Table 4.

Panel A. Pearson correlation coefficients (r_p) between different SSRN measures

	Total downloads	New downloads	Total papers	New papers	Total downloads per paper	Authors w/ papers on SSRN	Total downloads per author	Faculty size
Total downloads	1							
New downloads	.977*	1						
Total papers	.892*	.931*	1					
New papers	.781*	.845*	.936*	1				
Total downloads per paper	.469*	.471*	.345*	.279*	1			
Authors with papers on SSRN	.736*	.794*	.903*	.900*	.293*	1		
Total downloads per author	.706*	.681*	.566*	.480*	.805*	.405*	1	
Faculty size	.473*	.549*	.577*	.515*	.383*	.647*	.340*	1

44. There is no single good source for faculty size. Where available (for 50 schools), we use Leiter'\s count from 2003–04. For schools with an older L&S count but no Leiter count, we adapt the L&S to produce as follows. For the 47 schools with faculty size measured by both sources, the Leiter measure averages 1.20 x (L&S measure), reflecting growth over time in faculty size. We therefore multiply the L&S measure by 1.20 to obtain an adapted "LLS" count. This gives faculty size for 28 additional schools, or 78 in all. The correlations reported in table 4 for measures other than faculty size cover all schools included in the SSRN rankings. The correlations for faculty size are limited to these 78 schools.

Panel B. Spearman rank-order correlation coefficients (r_s) between different SSRN ranks

	Total downloads	New downloads	Total papers	New papers	Total downloads per paper	Authors w/ papers on SSRN	Total downloads per author	Faculty size
Total downloads	1							
New downloads	.977*	1						
Total papers	.930*	.929*	1					
New papers	.804*	.859*	.910*	1				
Total downloads per paper	.806*	.747*	.558*	.411*	1			
Authors with papers on SSRN	.866*	.864*	.935*	.865*	.509*	1		
Total downloads per author	.857*	.818*	.683*	.535*	.897*	.510*	1	
Faculty size	.546*	.558	.566*	.530	.353	.616	.354	1

NOTE: * = significant at 1%.

For downloads, there is a high correlation between total downloads and new downloads (.977 for measures, .977 for ranks).[45] There also is a high correlation between total papers and new papers (.936 for measures, .910 for ranks). Thus, there is little additional information added by studying new downloads and new papers separately from total downloads and total papers.[46]

There is a surprisingly high correlation between total downloads and total papers (.892 for measures, .930 for ranks). The correlation between downloads rank and papers rank increases to a remarkable .971 if we consider only the seventy-eight major law schools studied by Leiter, Lindgren and Seltzer, or both. Below, we refer to these as "LLS schools." Eisenberg and Wells study a subset of the LLS schools. Figure 1 visually shows the correlation between downloads and papers.

The high correlation between number of papers and number of downloads has implications for the publication count studies. Both Lindgren and Seltzer and Leiter count only "quality" publications (top X law reviews, and so on), and devote great effort to identifying which journals (and, for Leiter, book publishers) to count. Neither source asks how different their results would be if they simply counted all of a faculty's scholarly publications, wherever published. The similar SSRN results for downloads and papers suggest that a simple count of publications, anywhere, would likely produce results similar to those of the actual studies.

45. All correlations reported in this paper are significant at the 1% confidence level, unless stated otherwise.

46. One would expect the correlation between "total" and "new" measures to decline as SSRN matures. There might then be significant additional information conveyed by measuring downloads or papers over a limited period (though one year still seems a short period).

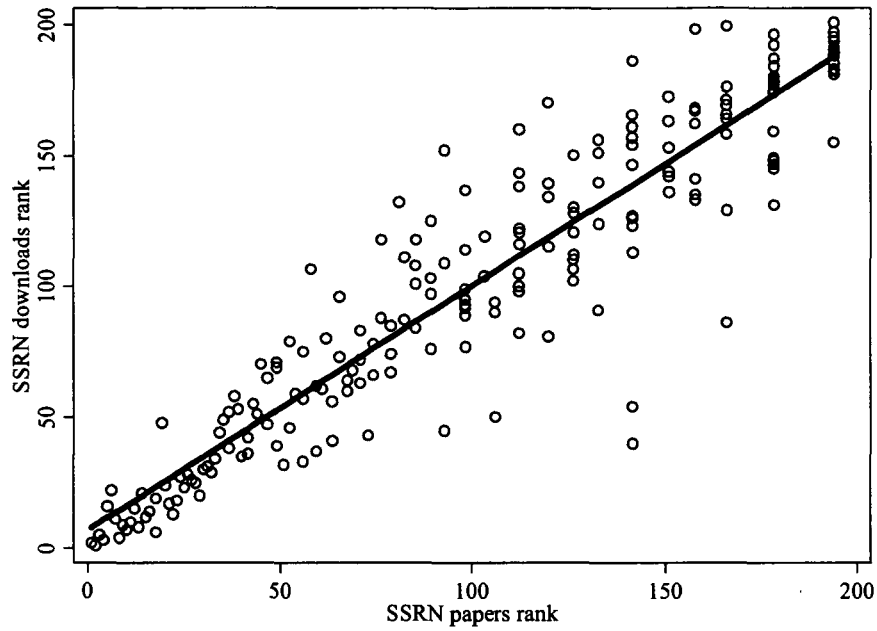

Figure 1. Correlation between SSRN total downloads rank and total papers rank

There is also a remarkably high correlation between total downloads and a simple count of the number of authors who have posted papers on SSRN (.736 for measures, .866 for ranks). The correlation between downloads rank and SSRN authors rank increases to .913 for the LLS schools. Finally, there is a high correlation between total papers and number of SSRN authors (.903 for measures, .935 for ranks).

The high correlations among downloads, papers, and authors, especially for ranks, suggest that some concerns with the downloads measure, including undue influence of one or a few highly downloaded papers or authors, or potential gaming, are not unduly serious, at least to date. Although highly downloaded papers or authors affect some schools' ranks (we offer examples above), they do not greatly affect schools' relative positions across the full range of schools.

Faculty size has a more moderate impact on the SSRN rankings than one might expect. The correlation is only .473 between faculty size and total downloads, .577 between faculty size and total papers, and .647 between faculty size and number of SSRN authors. We show below (table 6) that full faculty and per faculty measures and ranks are highly correlated.

In the analysis below, we focus on the information to be gained from the total downloads and, to a lesser extent, the total papers measure. For brevity, we drop the word "total" and refer to these as the "SSRN downloads" and "SSRN papers" measures.

IV. COMPARING SSRN TO OTHER MEASURES

A. Overall Correlations Between Different Measures

How much does it matter if one chooses one measure over another? Prior work, perhaps surprisingly, never compares different measures. Table 5, panel A provides correlations between the available measures plus faculty size; table 5, panel B provides correlations between the corresponding ranks.

Table 5.

Panel A. Pearson correlation coefficients between different measures

	SSRN		Reputation		Publications		Citations	
	Total downloads	Total papers	*U.S. News*	Leiter	Lindgren & Seltzer	Leiter	Eisenberg & Wells	Leiter
SSRN total downloads	1							
SSRN total papers	.8920*	1						
U.S. News reputation	.7177*	.7861*	1					
Leiter reputation	.8208*	.8275*	.9095*	1				
Lindgren & Seltzer publications	.8267*	.8050	.7850*	.8641*	1			
Leiter publications	.7549*	.7812*	.7790*	.8861*	.8436*	1		
Eisenberg & Wells citations	.7338*	.7475*	.8095*	.8585*	.8291*	.8711*	1	
Leiter citations	.8221*	.7649*	.7479*	.8456*	.8694*	.9101*	.9158*	1
Faculty size	.4275*	.5717*	.5756*	.5086*	.5922*	.6356*	.5667*	.6049*

Panel B. Spearman rank-order correlation coefficients between different ranks

	SSRN		Reputation		Publications		Citations	
	Total downloads	Total papers	*U.S. News*	Leiter	Lindgren & Seltzer	Leiter	Eisenberg & Wells	Leiter
SSRN total downloads	1							
SSRN total papers	.9297*	1						
U.S. News reputation	.7969*	.7610*	1					
Leiter reputation	.7949*	.7807*	.7920*	1				
Lindgren & Seltzer publications	.6237*	.6230*	.6766*	.7105*	1			
Leiter publications	.5813*	.5412*	.6007*	.7558*	.5928*	1		
Eisenberg & Wells citations	.5735*	.5117*	.7760*	.8537*	.8030*	.7795*	1	
Leiter citations	.6768*	.6303*	.6475*	.8400*	.7483*	.8410*	.8763*	1
Faculty size	.5643*	.5662*	.5619*	.4457*	.6204*	.5944*	.4253*	.6791*

NOTE: * = significant at 1%.

Figure 2 shows visually the correlation between the *U.S. News* and SSRN downloads ranks. The chart on the left includes all schools. The chart on the right includes only the 78 major LLS schools covered by Leiter or Lindgren and Seltzer.

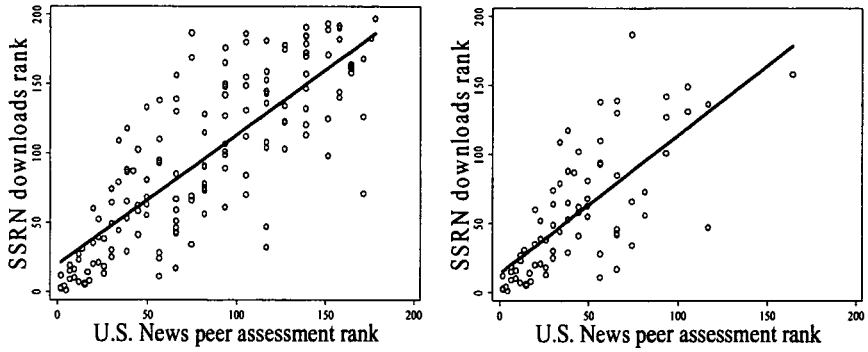

Figure 2. Correlation between *U.S. News* and SSRN download ranks

Overall, the correlation between these methods is high. The lowest pairwise correlation in Panel A is .7177 (for SSRN downloads versus *U.S. News* reputation). Moreover, across both measures and ranks, none stands out as radically disparate from the others. This suggests that all are measuring similar things. It is hard, however, to go from measuring correlations to measuring relative quality. For example, a lower correlation between measure X and other measures could be a strength, rather than a weakness, if it arises because measure X is picking up something that the other measures miss.

B. Effect of Faculty Size

It will surprise no one that law schools with larger faculties perform better in quantitative rankings (publications, citations, downloads) than law schools with smaller faculties. As the positive correlations with faculty size in table 5 show, the same is true for reputation measures.

The connection between rank and faculty size has led some authors to prefer per-faculty member measures over whole-school measures.[47] Yet prior research has not assessed how much difference it makes whether one ranks schools on an aggregate or per-faculty member basis.

Table 6 addresses this question. It shows the correlation between aggregate and per-faculty measures and ranks for the SSRN, publication, and citation methods. There is a strong correlation between aggregate and per-faculty ranks for all of these methods, particularly for the SSRN measures. The question of whether to measure ranks on an aggregate or per-faculty member basis matters somewhat for particular small or large schools such as Cornell or Georgetown. But this choice does not matter very much in the big picture.

47. *See, e.g.*, Eisenberg & Wells, *supra* note 5; Lindgren & Seltzer, *supra* note 4.

Table 6. Correlation between total and per-faculty values

Ranking method	Pearson correlation between total and per-faculty values (Measures)	Spearman correlation between total and per-faculty values (Ranks)
SSRN total downloads	.9455*	.9848*
SSRN total papers	.9316*	.9677*
Lindgren & Seltzer publications	.9107*	.9422*
Leiter publications	.8862*	.9512*
Eisenberg & Wells citations	.8771*	.9397*
Leiter citations	.8776*	.9127*

NOTE: * = significant at 1%

C. Correlations with U.S. News

Table 7 focuses on the correlation between *U.S. News* and other methods. It shows this correlation for both measures and ranks, on both an aggregate and per-faculty basis. There is a strong correlation between reputation surveys and faculty size (.489 for *U.S. News*; .509 for Leiter). Perhaps as a result, the SSRN, publication, and citation methods correlate more strongly with *U.S. News* reputation if one uses aggregate rather than per-faculty data.

For measures, Leiter reputation correlates highly with *U.S. News* reputation, more so than the other measures. Despite his efforts to measure reputation more carefully than *U.S. News*, or at least differently, Leiter has arrived at a similar measure, on the whole. For ranks, Eisenberg and Wells tracks *U.S. News* most closely, at least without a per-faculty adjustment.

Table 7. Correlation between U.S. News and other methods

	Pearson correlation with *U.S. News* (Measures)		Spearman correlation with . *U.S. News* (Ranks)	
Ranking Method	Total	Per faculty	Total	Per faculty
SSRN total downloads	.7177*	.6492*	.7969*	.7738*
SSRN papers	.7861*	.7450*	.7610*	.7133*
Leiter reputation	.9095*	.3737*	.7920*	.7262*
Lindgren &Seltzer publications	.7850*	.7001*	.6766*	.6181*
Leiter publications	.8204*	.7422*	.6446*	.6172*
Eisenberg &Wells citations	.8095*	.7748*	.7660*	.7644*
Leiter citations	.7479*	.6588*	.6475*	.6297*

NOTE: * = significant at 1%.

Another way to study the extent to which other methods produce similar or different results from *U.S. News* is to regress the *U.S. News* measure on other measures. Table 8 regresses the *U.S. News* score on faculty size (limited to several quantitative measures: SSRN downloads, Lindgren and Seltzer publications, and Eisenberg and Wells publications). Panel A uses aggregate measures as independent variables; panel B switches to per-faculty measures.

One can see from panel A, regressions (1–4) that faculty size and all measures significantly predict the *U.S. News* measure—which is not expected given the

correlations in table 5. More interesting are the results in regressions (5–7), with faculty size, one measure, and a constant term as independent variables. The *U.S. News* measure has a significant size effect, after controlling for either SSRN downloads or Lindgren and Seltzer publications. In effect, it is more size-sensitive than these other measures. In contrast, the Eisenberg and Wells citations measure fully captures the *U.S. News* size effect.

Finally, regression (8) combines all four independent variables. We see that Eisenberg and Wells citations strongly predict *U.S. News* reputation, while the other measures have no incremental ability to do so. If one's goal were to develop a single quantitative measure that predicts *U.S. News* as well as a quantitative measure can, Eisenberg and Wells citations do so quite well. It is less clear whether the Eisenberg and Wells measure captures aspects of scholarship that *U.S. News* misses.

Table 8. Regression results: *U.S. News* versus size and other measures

Panel A. Aggregate measures as independent variables

	Dependent variable: *U.S. News* peer reputation							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Faculty size (LLS schools)	**0.03377 (7.27)*** **				**0.01341 (2.81)*** **	**0.01032 (2.03)** **	−0.00033 (0.09)	0.00001 (0.00)
SSRN downloads		**0.00003 (7.37)*** **			**0.00002 (7.06)*** **			0.00000 (1.09)
Lindgren & Seltzer publications			**0.03692 (10.51)*** **			**0.03200 (8.59)*** **		−0.00043 (0.07)
Eisenberg & Wells citations				**0.00011 (5.44)*** **			**0.00011 (5.47)*** **	**0.00009 (3.03)*** **
Constant	1.703 (7.96)	2.3732 (46.55)	2.499 (29.19)	3.105 (20.47)	2.311 (11.71)	2.144 (9.88)	3.134 (11.92)	3.178 (12.61)
Observations	78	151	74	32	75	74	31	30
R^2	.331	.515	.616	.655	.564	.636	.643	.645

Panel B. Per-faculty measures as independent variables

	Dependent variable: *U.S. News* peer reputation			
	(1)	(2)	(3)	(4)
Faculty size (LLS schools)	**0.02299 (5.55)*** **	**0.02345 (5.28)*** **	**0.01493 (4.42)*** **	**0.01434 (4.13)*** **
SSRN downloads per faculty	**0.0072 (4.56)*** **			0.00014 (1.20)
Lindgren & Seltzer publications per faculty		**1.2081 (5.65)*** **		−0.16292 (0.80)
Eisenberg & Wells citations per faculty			**0.00316 (6.06)*** **	**0.00290 (4.39)*** **
Constant	1.943 (11.42)	1.600 (8.65)	2.325 (9.19)	2.465 (10.65)
Observations	75	74	31	30
R^2	.553	.636	.714	.7167

NOTE: Regressions of *U.S. News* peer reputation score on faculty size (limited to LLS schools) and aggregate measures (panel A) and per-faculty measures (panel B) as shown. *t*-statistics, based on robust standard errors, are shown in parentheses Significant results are shown in boldface and **, *** indicate significance at the 5% and 1% levels (omitted for constant term).

Turning to panel B, with per-faculty measures as independent variables, faculty size is significant in each regression. We see in a different way that the *U.S. News* measures are strongly affected by school size.

D. Qualitative Comparison of SSRN and Other Measures

Like the prior methods for ranking law faculty scholarship, SSRN-based measures offer a partial picture of performance. We discuss in this section, and summarize in table 9, the strengths and weaknesses of the available ranking methods. As table 9 indicates, each method has different strengths and weaknesses. SSRN, in particular, has both important strengths and important weaknesses compared to other methods.

Table 9. Strengths and weaknesses of different law school ranking methods

Characteristic		SSRN	Reputation	Publications	Citations
Dynamism					
	Regularly updated	Yes	*U.S. News*: Yes Leiter: No	No	No
	Nature of indicator	Leading	Lagging	Somewhat Lagging	Lagging
Coverage					
	Interdisciplinary authors, subjects & audience	Yes	Some	Some	Some
	Covers most U.S. law schoolss	Yes	*U.S. News*: Yes Leiter: No	No	No
	International schools, authors & audience	Yes	No	No	No
	International subjects	Yes	No	Partial	Some
	Covers U.S. law reviews	Some	Some	Some	Yes
	Covers U.S. books & book chapters	Limited	Some	L&S: No Leiter: Some	Some
Bias					
	Author's age	Younger	Older	Older	Older
	Author's school	Yes	Yes	Yes	Yes
	Paper's age	Newer	No	No	Older
	Paper's placement	Less	More	More	More
	Paper's field	Corporate, IP, Law & econ.	No	Con. law, Crit. studies	Con. law, Crit. studies
	Within field	Requires posting	N.A.	Some: Student topic choices	No
	"Industrious drudge"	Yes	Maybe	Yes	Yes
	Work automatically included	No	Yes	Yes	Yes
	Survey article	Yes	No	No	Yes
	Gaming risk	Some	Some	No	No
	Multiple versions of paper	Yes	No	No	No
	Influence by small no. of papers	Yes	No	No	Some
	Influence by small no. of "stars"	Yes	Yes	Yes	Yes
	Gender & race	Yes	Yes	Yes	Yes
Other					
	Access to underlying data	Yes	No	No	No
	Adjustment for faculty size	Partial	No	Available	Available

1. Dynamism

The available publication and citation studies are time-consuming, labor-intensive enterprises that are static, are typically not updated, and gradually become outdated. The SSRN rankings, in contrast, are updated regularly. Moreover, the SSRN data are publicly available and thus can be dissected in a variety of ways by interested researchers.

SSRN downloads can potentially offer a more timely measure of scholarly influence than citation counts. They can be seen as a leading indicator of a faculty's scholarly influence, while reputation surveys and citation counts can be viewed as lagging indicators. Publication counts also tend to be a lagging indicator, though less so than citations.[48]

For a single paper or author, downloads can offer a more current measure of influence than citations. They can be seen as a noisy "flow" measure of influence. This is especially true for new downloads. Because SSRN is so young, the correlation between new downloads and total downloads is currently very high. Over time, total downloads will begin to look more like a "stock" measure of influence—an accumulation of flow over time. Citations are an alternate "stock" measure, which may offer a better long term measure of influence than downloads. We discuss in the next section the likely correlation between downloads and citations.

At the same time, SSRN has its own important limitations. Most obviously, only some papers are uploaded to SSRN. Moreover, SSRN downloads will tend to be concentrated early in a paper's useful life. Once the paper is published, many readers will obtain the published version from another source, and the SSRN download count will be only a partial measure of readership.

2. Coverage

All methods other than SSRN are limited to U.S. law schools. In addition, even within the U.S., only SSRN and *U.S. News* cover most law schools. The other measures are limited to major schools. Moreover, citation count studies rely on citations within Westlaw, which in turn contains mostly U.S.-based law journals. Citation count studies also have been criticized for underweighting interdisciplinary and international legal scholarship. SSRN, in contrast, offers an interdisciplinary and global platform both for authors and readers. Many of the papers posted to SSRN rankings are written by non-U.S. authors, and will be published and primarily cited in non-legal and non-U.S. journals.

One measure of SSRN's international reach is which law schools achieve substantial numbers of downloads. Nine of the top fifty law schools ranked by total downloads, and twenty of the top one hundred, are non-U.S. law schools. These schools are located in seven different countries.[49] The audience for papers posted on SSRN also extends

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48. Brian Leiter has observed that citation counts favor more senior faculty ("once-productive dinosaurs") at the expense of more junior faculty ("bright young things"). Leiter's Law School Rankings: Top 40 Law Faculties, *supra* note 30.

49. The non-U.S. schools in the top one hundred are Bonn (22) (Germany); Melbourne (26) (Australia); Cambridge (33) (U.K.); Toronto (36) (Canada); Herzliyah (37) (Israel); Max Planck Institute for Foreign Private and Private International Law (40) (Germany); Tilburg (45)

well beyond the readership of American law reviews. For SSRN as a whole, a July 2005 spot check found that downloads from the United States are only about 38% of total downloads. This percentage is likely dropping over time. SSRN also permits the posting of articles in languages other than English, with an English title and abstract. These papers can receive significant numbers of downloads.[50]

3. Biases

We have seen that each of the ranking methods has its own set of biases. Some of these biases will tend to average out at the school level, but not all and not fully. Importantly, some significant SSRN biases are different than the biases of other methods. This suggests that SSRN-based methods can complement other methods in an overall assessment of scholarly performance. We discuss below the biases that seem most salient to us.

- *Recent article bias.* The SSRN rankings are heavily influenced by a faculty's recent work; as noted above, almost one-third of all SSRN downloads occurred in the past year. Citation counts have the opposite bias. Schools that hire older scholars whose best work is behind them will fare better in citation counts than in SSRN downloads—the "what have you done over a lifetime approach."[51] These schools will tend to do well in reputation surveys as well. In contrast, schools that hire younger, up-and-coming scholars—the "what have you done lately approach"—will do better on SSRN measures.[52] This suggests that downloads and citation counts, taken together, can offer a more accurate overall measure of a faculty's scholarly influence than either can achieve alone.
- *Established scholar bias.* Other things (including article quality) being equal, better-known authors at better-known schools surely get more downloads than less known authors at lesser known schools. But they also get more citations and better placements for their articles. Our intuition is that this bias is stronger for the placement decisions of law review editors than for download decisions by SSRN users. Citation counts are also influenced by the "halo effect" of an article's placement, which should not apply to most downloads.[53]

(Netherlands); Southampton (48) (U.K.); Amsterdam (50) (Netherlands); Frankfurt (54) (Germany); Tel Aviv (57) (Israel): Bar Ilan (72) (Israel); Sydney (76) (Australia); Griffith (77) (Australia); Humboldt (82) (Germany); Haifa (83) (Israel); Hebrew University (92) (Israel); European University Institute (96) (Italy); Oxford (97) (U.K.); and Mainz (100) (Germany).

50. For example, Bernie Black has roughly 1,100 downloads of Russian- or German-language versions of papers posted to SSRN.

51. Could this be part of the explanation for the relatively weak performance of Yale (12th), Michigan (19th), and Cornell (27th) in the SSRN rankings?

52. Could this be part of the explanation for the relatively strong performance of George Mason (11th), George Washington (13th), San Diego (17th), Florida State (24th), and Michigan State (32nd) in the SSRN rankings? The age effect may be exacerbated since younger (and more Internet-savvy) scholars are more likely to post their work on SSRN than older scholars.

53. The "halo effect" can apply, in somewhat weaker form, to downloads of published or

- *Field bias.* As with citation counts and publication counts,[54] SSRN downloads and paper counts are influenced by the paper's subject area. Papers in legal disciplines such as law and economics and corporate law tend to be posted more often, and when posted are downloaded more frequently, than papers in other areas such as law and philosophy and critical legal studies fields. These biases are more important for rankings of individual authors than for law faculties as a whole.

  Some of the SSRN field bias—authors in some fields are more likely to post than authors of papers in other fields—will likely decline over time as SSRN becomes more well established across legal disciplines. This appears to be happening. SSRN has recently added subject matter journals on *Law and Society* and *Women and Gender*, and is experiencing far higher percentage growth in submissions in areas such as law and society, law and humanities, and legal history than in more established areas such as corporate law and law and economics. If one allows some time for this trend in submitted papers to be reflected in downloads, we have no strong view on the relative strengths of the field biases for citation counts or publication counts versus SSRN downloads or SSRN papers.

- *Within-field bias.* Within specific fields, the top authors under SSRN measures tend to be many of the same people who would rank well on other measures. We present in Part V below case studies of our own fields of corporate law and tax. In both, the top twenty-five authors for SSRN downloads and papers includes many folks one would expect to see on such a list, though with some obvious exceptions in both fields, which partly reflects failure by some authors to post their work. At the same time, although the corporate and tax people at the top of the SSRN rankings are generally fine scholars, the detailed rankings correlate weakly with our subjective sense of quality within these groups.

  To be sure, the same can be said of citation measures. As Brian Leiter's work suggests, highly cited authors tend to be highly regarded, but the converse is not universally true. And publication counts, if limited to top journals, are affected even within field by law student notions of what topics are hot or interesting.

- *The "industrious drudge" bias.* Brian Leiter has noted that citation studies favor the "industrious drudge"—the "competent but

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accepted papers, where journal placement is known. However, this affects a fairly small fraction of SSRN downloads.

54. Brian Leiter has observed that "[l]aw reviews publish lots on constitutional law, and very little on tax." Leiter's Law School Rankings: Top 40 Law Faculties, *supra* note 30. As a result, "[s]cholars in the public law fields or who work in critical theory get lots of cites; scholars who work on trusts, comparative law, and legal philosophy do not." *Id.* This insight was confirmed in Turnier, *supra* note 19, at 211 (finding that "an author's subject area plays an inordinate role in determining whether her scholarship will appear in a major [law] review").

uninspired scholar who simply churns out huge amounts of writing in his or her field."[55] The SSRN rankings reflect a similar bias. So, quite likely, would any quantitative measure of scholarly impact. Like field and within-field biases, this will tend to average out across schools. In any event, the most-downloaded authors, like their most-cited counterparts, are mostly well-respected by others in their fields. Bad scholars rarely have high download counts; a more troubling issue is that some very good scholars get low download counts, often attributable to failure to post their work.

- *SSRN-usage bias.* Download statistics require that an author post his or her paper on the SSRN website. Posting articles is free so there are no financial barriers to participation. At the same time, schools that use SSRN to distribute a school-specific Research Paper Series (a service for which SSRN charges) undoubtedly have an administrative advantage in encouraging faculty participation in SSRN. We anticipate that the rankings themselves will encourage faculty to post papers on SSRN.

- *Survey article bias.* Anecdotal evidence suggests that survey articles get many downloads, perhaps out of proportion to their contribution. Yet survey articles get lots of citations too. In any event, the downloads and citations may be deserved, in that such work can be valuable for other scholars, sometimes highly so.

- *Manipulation.* Citation count studies are manipulable to a limited extent through self-citation, if the citation count includes these (as both Leiter and Eisenberg and Wells do). However, SSRN download counts are likely to be more manipulable by authors than citation counts. SSRN currently blocks crude techniques of inflating download counts, such as repeatedly downloading your own papers. However, the SSRN rankings are likely to increase the stakes and incentives for cheating. We return to the potential for gaming the SSRN downloads in Part VI below.

  Apart from outright cheating, anecdotal evidence suggests that blogging and other efforts to publicize one's work can affect downloads. Still, the close correspondence between the SSRN downloads rank and the papers rank suggests that gaming and publicity effects are modest, at least at the school level.

- *Multiple versions of the same paper.* Many authors (including us) sometimes write, post, and publish different versions of papers—shorter and longer versions, working paper/conference versions, and later journal versions. This practice undoubtedly results in more total downloads than if the author had posted only a single version of the paper. On the other hand, some of the extra downloads may translate into greater overall impact. A similar but less pervasive issue can arise

55. Leiter, *Measuring Academic Distinction*, *supra* note 3, at 469.

with citation counts to the extent authors publish different versions of the work (e.g., articles which become book chapters).

- *Gender and racial implications.* Prior studies of faculty quality have noted the gender and racial implications of the rankings. For example, Lindgren and Seltzer found an under-representation of women (but a proportionate representation of minorities) in their ranking of the top twenty-five individual faculty.[56] Eisenberg and Wells found a statistically significant difference in time-adjusted citations between nonminority males and minority females, but not between nonminority males and nonminority females.[57]

  Women and minorities are under-represented in the SSRN download rankings, though one may hope that this effect will lessen as field bias lessens. But at present, only four women and one minority are in the top fifty faculty,[58] and only two women and four minorities are in the next fifty (although there are more women and minorities in the 100–200 range).[59] In contrast, Brian Leiter's latest citation study placed seven women and six minorities in the top 50,[60] and eight women and three minorities in the next 50.[61]

  The gender and racial differences persist if the inquiry shifts from total downloads (which depends on decisions by SSRN users) to total papers (which is under authors' control). Indeed, the apparent driver of underrepresentation of women and minorities is posting of papers. Only two women and two minorities are in the top 50 rankings of total papers, and two women and two minorities in the next 50.[62] Of the

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56. *See* Lindgren & Seltzer, *supra* note 4, at 804. Only one woman appeared in the top twenty-five, but women were represented proportionally (22%) in the next one hundred. In contrast, minorities were proportionately represented in the top twenty-five (12%), but not in the next one hundred. *Id.*

57. Eisenberg & Wells, *supra* note 5, at 405. They found a marginally statistically significant difference in the time-adjusted citations of nonminority males and minority males. *Id.*

58. Women in top fifty for total downloads as of September 1, 2005: Lynn Stout, Margaret Blair, Roberta Romano, and Jane Ginsburg. Minorities: Stephen Choi. We used the AALS list of Minority Law Teachers in determining the minority status of faculty.

59. Women in next fifty for total downloads: Katharina Pistor and Pamela Karlan. Minorities: Mitu Gulati, Tim Wu, John Yoo, and Keith Hylton.

60. Leiter's Law School Rankings, Top 119 Cited Faculty, 2002–03, http://www.leiterrankings.com /faculty/2002faculty_impact_cites.shtml [hereinafter Leiter's Law School Rankings: Top 119 Cited Faculty 2002]. Women in Leiter's top 50: Martha Minow, Catherine MacKinnon, Kathleen Sullivan, Deborah Rhode, Mary Ann Glendon, Mari Matsuda, and Robin West. Minorities: Akhil Amar, Richard Delgado, Derrick Bell, Mari Matsuda, Charles Lawrence, and Stephen Carter.

61. Women in Leiter's next 50: Suzanna Sherry, Margaret Radin, Kimberle Crenshaw, Patricia Williams, Judith Resnik, Carol Gilligan, Martha Fineman, and Carol Rose. Minorities: Kimberle Crenshaw, Patricia Williams, and Randall Kennedy.

62. Women in the top 50 for total papers: Lynn Stout and Margaret Blair. Minorities: Stephen Choi and Keith Hylton. Women in the next 50 for total papers: Pamela Karlan and Ann Bartow. Minorities: Mitu Gulati and John Yoo.

eight women and minorities in the top 100 for total papers, all are in or very close to the top 100 for total downloads.[63]

4. Researcher Access to Underlying Data

All of the data on which the rankings are based is available from the SSRN web site, including which authors are affiliated with which schools and the number and identity of each author's new and total downloads and papers, as well as new and total downloads per paper. Researchers who want to slice the SSRN data other ways have the opportunity to do so. This is not possible with the other measures. *U.S. News*, Leiter, Lindgren and Seltzer, and Eisenberg and Wells all apply their data several ways, under different assumptions, but readers and researchers cannot go beyond the limited data that they have published.

5. Aggregate Versus Per-Faculty-Member Measures

SSRN provides "per-SSRN-author" measures, but not "per-faculty-member" measures. The reason is simple: no good source of faculty size is available, even in the U.S. Other researchers who have reported per-faculty data have hand-collected information on full-time faculty, often relying on personal judgment as to which persons to count. As table 6 shows, the "per-faculty-member" adjustment matters less than one might expect, but it would still be nice to have. A future step that SSRN could take would be to ask schools to self-report their full-time faculty, and then add "per faculty" measures.[64]

E. Correlation Between Citations and Downloads

At the paper level, one might expect downloads, especially new downloads, to predict future citations for several reasons. Good papers will tend to get both high downloads and high citations. Part of the connection between downloads and citations will come directly: scholars often search SSRN and download articles in order to cite them or decide whether to cite them. Scholars also frequently search the SSRN eLibrary for papers on a specific topic, some of which they will then cite. Beyond this, high-downloaded papers are better known, and will be more frequently cited for this reason alone. The more complete the SSRN eLibrary is, as a repository of both working papers and published papers, the stronger the connection should become between downloads and eventual citations.

Some caveats and details, however, need to be mentioned. The correlation between downloads and future citations should be higher for fields where SSRN does a better job of reaching the relevant audience, and thus should be related to field bias. Also, citation patterns vary greatly across disciplines. Legal scholarship encourages more complete citation of prior work than, say, economics and finance. So a law author's

63. Of the eight women and minorities in the top 100 for total papers, all but Ann Bartow are in the top 100 for total downloads; she is in the next 50 for total downloads.

64. One would have some concern about whether schools would accurately report their faculty size. However, severe bias seems unlikely given the ability of outsiders to verify the schools' reported totals, say by studying the school's website.

article of interest in these other disciplines may tend to get downloaded and read but not cited.

The paper-level correlation between downloads and citations should roll up to the author level. There may also be additional reasons to expect an author-level correlation between downloads and future citations at the author level. First, good authors, if they post to SSRN, will tend to get both high downloads and high citations, even if the papers which get high citations and the papers which get high downloads are rather different. That is, noise in downloads and citations as a measure of individual paper quality should partially average out at the author level.

The correlation between downloads and citations could vary with author age. Younger authors will tend to do relatively better at downloads, older scholars relatively better at citations. So the correlation between the two should be an inverted U-shaped function of years in law teaching: low for new scholars, who have not had time to build up citations; higher in mid-career, then lower again for older scholars who are less productive or less likely to post diligently to SSRN. This effect will be muted, but will likely still exist, if one measures citations per year in law teaching, since citations depend both on time since publication and on number of publications, both of which increase with time in law teaching.

1. Case Study of Leiter's Young Scholars and Comparison Group

In a prior article, one of us examined whether faculty who perform well in existing scholarly rankings are demonstrably "better" than their unranked counterparts.[65] We compared the background and performance, based on publication counts, of two groups of faculty: (1) fifty young scholars identified by Leiter as the most-cited young law faculty;[66] and (2) a control group of fifty other young scholars who entered law teaching at the same (or similarly ranked) school and at the same time as each of the most-cited young scholars.[67] Table 10 adds SSRN download data as of August 1, 2004 to the prior publication and citation data (compiled as of January 1, 2004).[68]

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65. Caron & Gely, *supra* note 1, at 1539–43.

66. Leiter's Law School Rankings: Top 119 Cited Faculty 2002, *supra* note 60.

67. By matching entering school and year, we attempted to control for at least some of the other factors that might affect scholarly performanee. The most-cited group was 12% female and 28% minority, and the control group was 50% female and 16% minority.

68. We followed Leiter's methodology for counting citations: We searched Westlaw's JLR database by "author first name w/2 author last name." To guard against false positives for authors with common names, we revised 10–20 hits for each author; the percentage of false positives was then multiplied against the total number of hits returned, and that amount was subtracted from the citation total.

Table 10. Comparison of performance of two groups of scholars, mean measures

	SSRN		Publications		
Group	Downloads	Papers	All articles	Articles in top 25 law reviews	Citations
Top 50 most-cited young faculty	2034	8.23	23.36	9.40	508
Sample 50 young faculty	412	3.59	10.04	4.29	152
t-statistic (difference in means)	2.53**	3.24***	7.47***	5.05***	9.49***

Source: Comparisons calculated based on data from Leiter's Law School Rankings: Top 119 Cited Faculty 2002, *supra* note 60; Social Science Research Network, *supra* note 2.

NOTE: Career number of SSRN downloads and SSRN papers (through August 1, 2004), publications and publications in top 25 law reviews (through Jan. 1, 2004), and citations (through Jan. 1, 2004) for Leiter's Top 50 Young Scholars and Caron & Gely's comparison group. ** (***) indicates significance at the 5% (1%) level.

There is a statistically significant difference between the mean values for all measures. The most-cited young faculty outperformed the professors in the comparison group by the greatest margin in SSRN downloads (almost 5:1), followed by citations (over 3:1), and publication counts (over 2:1 for total articles, articles in top 25 law reviews, and papers posted to SSRN). Table 10 is consistent with SSRN downloads providing a respectable measure of quality, broadly consistent with other measures, for a reasonably sized group.

On a per person basis, downloads again correlate with citations and productivity measures, but the correlations are noisier. Table 11 shows selected correlations among different measures for the Leiter top 50 group and the control fifty group combined, the Leiter top 50 group alone, and the control 50 group alone. For the full sample, downloads correlate with citations at .55 and with SSRN papers at .45. The correlation is quite strong for the Leiter top 50 group (.58 for downloads, .50 for papers). Yet, surprisingly, it disappears entirely for the comparison 50 group (−.26 for downloads, −.02 for papers). This unexpected result deserves further exploration.

Table 11. Pearson correlations between performance measures

	Citations vs.				SSRN downloads vs. SSRN papers	All articles vs. articles in top 25 law reviews
Group	SSRN downloads	SSRN papers	All articles	Articles in top 25 law reviews		
All 100 faculty	.55**	.45**	.80**	.76**	.85**	.73**
Top 50 most-cited young faculty	.54**	.34*	.63**	.67**	.86**	.60**
Sample 50 young faculty	−.26	−.02	.78**	.77**	.81**	.74**

NOTE: ** = significant at 1% level; * = significant at 5% level

2. Predictive Value of Downloads: Evidence from Other Disciplines

Research on other disciplines offers additional evidence of the connection between downloads and citations. This research, taken as a whole, suggests a significant positive correlation between downloads and future citations at the level of individual

papers, on the order of .50. It is thus in line with the limited evidence for law professors which we report in Tables 10 and 11 above.[69]

V. DOWNLOADS WITHIN A FIELD: CASE STUDIES OF CORPORATE AND TAX

To assess how well the SSRN downloads measure corresponds to more subjective measures, we present in this Part two case studies of our respective fields, corporate law and tax. We identify the top 25 SSRN authors in each field measured by total downloads and report the results below in table 12 (corporate) and table 13 (tax). We used our own judgment to identify scholars who regularly write in each field. However, we counted downloads of *all* of these authors' papers, including non-corporate and non-tax papers. We have not done the (considerable and sometimes subjective) handwork needed to develop a more refined count that would include only subject-specific papers.

Most of these high-downloaded authors are reasonably prominent in these fields, and our judgment is that they would fare well under reputation, publication, and citation measures as well. As for the school rankings, one can see the infiuence of non-U.S. scholars, at least for the corporate rankings. The detailed rankings map only loosely our subjective sense of quality within the listed scholars. Moreover, there are major scholars in both areas who are absent or low-ranked based on SSRN downloads, often due to non-posting.

Table 12. Top 25 SSRN corporate faculty rankings (September 2005)

		SSRN total downloads		SSRN downloads last 12 mos.	SSRN total papers		Rank in Leiter's most-cited business	Number of times in Thompson's top 10
Faculty (School)	Age	Corp.	Overall	Corp.	Corp.	Overall	faculty	articles lists
Bernard Black (Texas)	51	1	2	2	3	9	-	5
Lucian Bebchuk (Harvard)	50	2	3	1	1	1	-	5
Stephen Bainbridge (UCLA)	47	3	6	3	2	7	-	3
John Coffee, Jr. (Columbia)	61	4	8	4	16	69	1	6
Ronald Gilson (Stanford)	59	5	10	8	12	47	7	4
Reinier Kraakman (Harvard)	56	6	13	9	14	62	-	5
Lynn Stout (UCLA)	48	7	18	12	9	36	-	3

69. *See, e.g.*, Helmut A. Abt, *Do Important Papers Produce High Citation Counts?*, 48 SCIENTOMETRICS 65 (2000); Thomas V. Perneger, *Relation Between Online "Hit Counts" and Subsequent Citations: Prospective Study of Papers in the BMJ* (2004), http://bmj.bmjjournals.com/cgi/content/full/329/7465/546 (follow PDF hyperlink); Greg Schwarz & Robert Kennicutt, *Demographic and Citation Trends in Astrophysics Journal Papers and Reprints* (2004), http://arxiv.org/abs/astro-ph/0411275 (follow PDF hyperlink); Tim Brody & Stevan Harnad, *Earlier Web Usage Statistics as Predictors of Later Citation Impact* (2005), J. AMER. SOC. INFO. TECH. & SERVS., *available at* http://www.ecs.soton.ac.uk/~harnad/Temp/timcorr.doc; Tim Brody & Stevan Harnad, *Comparing the Impact of Open Access (OA) vs. Non-OA Articles in the Same Journals* (2004), www.dlib.org/dlib/june04/harnad/06harnad.html; Steve Hitchcock et al., *Evaluating Citebase, An Open Access Web-based Citation-ranked Search and Impact Discovery Service* (2002), http://opcit.eprints.org/evaluation/Citebase-evaluation/ evaluation-report.html.

Margaret Blair (Vanderbilt)	55	8	19	17	11	41	-	2
William Bratton (Georgetown)	54	9	22	13	16	69	-	2
Jesse Fried (Berkeley)	42	10	23	10	7	25	-	2
Mark Roe (Harvard)	54	11	24	15	-	149	-	3
Roberta Romano (Yale)	53	12	25	5	-	177	11	2
Brian Cheffins (Cambridge)	44	13	26	14	9	36	-	-
Larry Cunningham (BC)	43	14	27	22	18	73	-	-
Steven Schwarcz (Duke)	56	15	28	24	7	25	-	-
Larry Ribstein (Illinois)	59	16	29	11	4	16	-	5
Stephen Choi (NYU)	39	17	30	18	6	20	-	-
Jeffrey Gordon (Columbia)	56	18	31	25	-	149	-	2
Frank Partnoy (San Diego)	38	19	33	-	18	73	-	-
Alma Cohen (Harvard)		20	35	6	22	85	-	1
Klaus Hopt (Max Planck)		21	36	16	-	699	-	-
Amir Licht (Herzliyah)		22	37	-	13	56	-	-
Randall Thomas (Vanderbilt)	50	23	39	23	5	19	-	4
Henry Hansmann (Yale)	60	24	41	21	-	177	-	1
Allen Ferrell (Harvard)	35	25	42	7	18	73	-	1
Jonathan Macey (Yale)	50	-	265	-	-	425	2	1
Geoffrey Miller (NYU)	55	-	147	-	-	105	4	-
Melvin Eisenberg (Berkeley)	71	-	565	-	-	944	6	1

Sources: Social Science Research Network, *supra* note 2; Leiter's Law School Rankings, *supra* note 3; Robert B. Thompson, http://law.vanderbilt.edu/faculty/thompson (last visited Oct. 18, 2005).

NOTE: This table shows the top 25 corporate law scholars based on SSRN total downloads, as of September 2005. The table shows these scholars' within-group and overall ranks for total downloads and total papers, their within-group rank for downloads in last 12 months, their rank for total citations in Leiter's 2002 citation study, and the number of times they appeared in Robert Thompson's annual list of top-10 corporate law articles (available for 1994–2004). Citations and publications are counted through October 1, 2005. SSRN downloads and papers are measured at September 1, 2005. Leiter lists 11 most-cited business law faculty. Of these, Dan Fischel and Joel Seligman are no longer active scholars, and we judged that Robert Scott, James J. White and Douglas Baird were not corporate law scholars.

Table 13. Top 25 SSRN tax faculty rankings (August 2005)

	SSRN total downloads		SSRN downloads last 12 months	
Faculty (School)	Tax rank	Overall rank	Tax rank	Overall rank
Louis Kaplow (Harvard)	1	45	2	83
Edward McCaffery (USC)	2	102	1	53
David Schizer (Columbia)	3	116	7	175
David Walker (Boston University)	4	121	11	236
David Weisbach (Chicago)	5	149	13	247
Steven Bank (UCLA)	6	159	3	118
Victor Fleischer (UCLA)	7	171	6	174
Reuven Avi-Yonah (Michigan)	8	188	4	123
Paul Caron (Cincinnati)	9	190	10	226
Terrence Chorvat (George Mason)	10	212	5	138
Daniel Shaviro (NYU)	11	220	12	238
Sam Thompson (UCLA)	12	346	-	1277
Richard Kaplan (Illinois)	13	349	9	209

Elizabeth Garrett (USC)	14	341	15	291
Barbara Fried (Stanford)	15	368	24	540
Wm. Bradford (Princeton-NYU)	16	428	16	334
Jeff Strnad (Stanford)	17	431	14	278
Calvin Johnson (Texas)	18	458	-	660
Kyle Logue (Michigan)	19	517	-	802
Michael Asimow (UCLA)	20	529	22	501
Theodore Seto (Loyola–L.A.)	21	532	-	596
Leandra Lederman (Indiana)	22	540	19	398
Joseph Bankman (Stanford)	23	545	-	772
Tanina Rostain (NY Law School)	24	575	8	207
Kirk Stark (UCLA)	25	585	17	366

Source: Social Science Research Network, *supra* note 2.

VI. SSRN GAMING RISK AND RESPONSES

A. The SSRN Downloads Measure

The SSRN downloads measure is susceptible to "gaming risk"—the risk that an author or someone else will repetitively download a paper to influence the downloads measure. SSRN blocks the more obvious ways to game the download count, and has assured users that its blocking technology was substantially upgraded when the downloads measure was released, and will continue to improve over time. Yet, SSRN has been understandably vague in specifying which strategies it catches and which it might miss. Thus, there may be holes which a skilled and determined gamer could exploit.

Still, there is reason to be optimistic that gaming will not seriously undermine the reliability of the law school and law author download measures. First, the number of legal scholars (the most likely gamers) with the skills to beat a sophisticated anti-gaming system is limited. Most law professors are not known for their keen computer skills. Among the limited number with the skill, the number with the will is likely tiny. Moreover, even a skilled and determined gamer will be cautious for fear of reputational harm if his or her actions become known. It seems likely that the net effect of potential gaming on the downloads measure, while perhaps significant for an individual author, will be small at the level of an entire school.

To be sure, downloads are affected by publicity, through blogs and other means. Anecdotal evidence suggests that active bloggers tend to get high downloads. Some faculty will assign their papers in their own classes, and ask students to download the papers from SSRN; others will not. At the same time, SSRN takes some subtle yet important steps that help make paper downloads a fair measure of reader interest in an author's work.

Most centrally, the SSRN system makes it likely that only informed decisions to view the full text of a particular paper, rather than uninformed explorations triggered by a catchy or vague title, count as a download. Every download starts with a reader visiting the paper's "abstract page." Only readers who still want the paper, after seeing the abstract, will download it. In general, three abstract views on the SSRN website result in one actual paper download. The ratio of abstract views to downloads is higher still if one includes readers of SSRN's email announcement journals, which include

abstracts. Second, SSRN does not count apparent multiple downloads of the same paper by the same person nor apparent machine or "robot" downloads of a large number of papers. In contrast, if SSRN permitted a single click to download, using a link from another source, such as a search engine or a blog, and mechanically counted all downloads, this would likely inflate its downloads counts by a factor of five or more, degrade their value as a signal of paper quality, and substantially increase the ability of users to directly and indirectly game the counts.

B. The SSRN Papers Measure

The SSRN papers measure should be far less susceptible to gaming than the downloads measure. You cannot post what you do not write, and scholars can write only so much. The risk that people will write more quickly, simply to post more and gather a higher papers or downloads rank, seems remote. There are severe professional costs from developing a reputation for writing quickly and sloppily. Moreover, for an active scholar, there are costs to posting too many papers. The good papers, which you want people to read, can get buried in a long list on an author page.

At present, one can post to SSRN two versions of the same paper, that is, a "working paper" version and an "accepted paper" version (which includes published papers). SSRN's experience is that many active authors (including one of us) remove different versions of the same paper from their author pages, to avoid clutter.[70] Similar concerns will limit any tendency to post sloppily written papers just to get a higher papers or downloads count.

Given authors' limited ability to game the papers measure, the high correlation between papers and downloads offers comfort that, at least thus far, gaming has not been widespread.

C. Required Login

As part of its anti-gaming measures, SSRN already requires users to login before downloading a paper for IP addresses from which it has found a pattern of multiple downloads of the same paper. At some point in the not too distant future, SSRN is likely to require users to login before downloading papers. This should greatly reduce the gaming potential that now exists.

Required login can also permit development of more refined measures of a paper's scholarly value. For example, downloads could be weighted, based on the quality of the downloader. Faculty downloads could be given greater weight than student downloads. Or downloads by active (or highly downloaded) scholars could be given greater weight than other downloads. In contrast, existing citation studies do not adjust for the quality of the citations.

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70. When an author removes an earlier version of a paper in favor of a later version, SSRN will, on request, combine the download counts for the two versions so that the author does not lose downloads.

VII. CONCLUSION

We have explored the advantages and disadvantages of the SSRN measures of faculty scholarship, relative to the available alternatives. All measures have important weaknesses and biases. The new "beta" SSRN measures sometimes produce odd results, but so do the other measures. Anyone who complains that George Mason does not have the eleventh best faculty in the country, and is surely not ahead of Yale (12th), might also ask why *U.S. News* ranks Hastings (74th in SSRN) at 30 in its reputation measure, almost equal to George Washington (26th in *U.S. News*; 13th in SSRN), and far above George Mason (56th in *U.S. News*; 11th in SSRN) and San Diego (66th in *U.S. News*; 17th in SSRN). The SSRN measures likely get Yale wrong, but less grossly than *U.S. News* gets Hastings, George Washington, George Mason, and San Diego wrong—and this after *U.S. News* has invested eighteen years and millions of dollars in refining its measures. Table 15 shows the largest disparities in both directions in the *U.S. News* and SSRN measures.

Table 15. Biggest rankings disparities, *U.S. News* vs. SSRN

Schools undervalued by *U.S. News*				Schools overvalued by *U.S. News*			
School	*U.S. News*	SSRN	Spread	School	*U.S. News*	SSRN	Spread
Michigan State	117	32	−85	Kentucky	66	156	+90
NY Law School	117	47	−70	Oregon	49	133	+84
San Diego	66	17	−49	BYU	56	138	+82
George Mason	56	11	−45	Arizona	38	117	+79
Loyola–L.A.	74	34	−40	Notre Dame	34	109	+75
Florida State	56	24	−32	Colorado	44	102	+58
Cardozo	56	28	−28	Tulane	38	88	+50
Brooklyn	66	42	−24	U. Washington	38	86	+48
Rutgers–Camden	66	43	−23	Georgia	42	87	+45
Chicago-Kent	66	46	−20	Hastings	30	74	+44
Villanova	66	51	−15	Wisconsin	20	60	+40
George Washington	26	13	−13	Utah	56	94	+38

Sources: USNEWS.COM, *supra* note 1; Social Science Research Network, *supra* note 2.

The SSRN measures are new and still developing. They can be improved in many ways, some of which we have suggested here. The SSRN measures have important field and other biases. Still, they offer up-and-coming schools a way to "show their stuff," long before the *U.S. News* rankings respond to the school's improvement. That alone is an important contribution. So too is their international scope, and resulting ability to put U.S. and non-U.S. schools on the same playing field. A number of legal scholars have worried, both directly to us and on blogs and in discussion groups, that another source of rankings will increase their salience, encourage gamesmanship, and further divert law schools from their academic roots. This is possible. But happier outcomes are also possible. A source of scholarship-centric rankings could help to return law schools to a focus on scholarship. Another possibility is that a credible new

set of rankings, which will sometimes differ markedly from the *U.S. News* measure, will cause law students to pay less attention to the entire rankings enterprise. There is some evidence of this effect for business schools, which have seen a proliferation of disparate rankings.[71] Either of these outcomes, or some of both, strike us as likely preferable to the current near-monopoly over law rankings enjoyed by *U.S. News*.

We agree with Ted Eisenberg's comment that the SSRN measures are not well adapted to picking up fine differences among the top 10 or 20 schools.[72] We believe their principal value mostly lies elsewhere—in their broad, especially international, scope, frequent updating, transparency, and status as a leading rather than lagging indicator of scholarly quality. We observe in closing that the correlation between the SSRN downloads measure and the SSRN papers measure is a striking .89 for measures and .93 for ranks. Based on the evidence to date, the best way for a school to do well on both SSRN measures is to have a productive faculty who write a lot and post what they write. One could do worse in building a measure of faculty quality.

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71. *See* Michael Sauder & Wendy Espeland, *The Benefits of Multiple Evaluations: A Comparison of Law and Business School Rankings*, 81 IND. L.J. *1 (2006); *see also The Year of Listing Differently*, ECONOMIST, Sept. 24, 2005, at 81 (reporting research to this effect available from http://www.topmba.com).

72. *See* Theodore Eisenberg, Commentary, *Assessing the SSRN-Based Law School Rankings*, 81 IND. L.J. 285, 286–287, 287 tbl.1 (2006).

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Appendix 1. SSRN download and paper ranks for schools with one or more papers posted on SSRN

	All-time			Last 12 months		
School	Downloads	Papers	Downloads per paper	Downloads	Papers	Downloads per paper
Chicago	1	2	4	2	7	12.5
Harvard	2	1	18.5	1	1	31
Stanford	3	4	9	3	6	11
Columbia	4	8	8	4	8	10
UCLA	5	3	18.5	5	5	21.5
Texas	6	17.5	7	6	13.5	6
Georgetown	7	10	11	7	15	27
USC	8	13	10	8	19	17
Berkeley	9	9	26	10	11	36
Virginia	10	11	30.5	13	23	42.5
George Mason	11	7	36	9	3	36
Yale	12	15	16.5	12	23	24.5
George Washington	13	22	13	11	9.5	12.5
Vanderbilt	14	16	29	15	13.5	33
NYU	15	12	32	14	12	39
Penn	16	5	59	17	2	82.5
San Diego	17	21	27	16	19	26
Boston Univ	18	23	25	19	58	42.5
Michigan	19	17.5	33	20	28	63
Minnesota	20	29	14	27	26	44
Illinois	21	14	51	18	16.5	67.5
Bonn	22	6	94.5	22	4	125
Duke	23	25	34	25	42	52
Florida State	24	20	65	21	21	65
Boston College	25	28	37.5	26	16.5	40
Melbourne	26	27	45.5	29	19	60.5
Cornell	27	24	60	23	9.5	48
Cardozo	28	26	68	31	40	76.5
Fordham	29	32	42	24	25	29.5
Emory	30	30	53.5	32	40	56
Northwestern	31	31	61	30	30	48
Michigan State	32	51	16.5	28	61	7
Cambridge	33	56	15	33	64.5	15.5
Loyola LA	34	33	57.5	34	48.5	48
North Carolina	35	40	45.5	39	50.5	56
Toronto	36	41.5	40	40	36	48
Herzliyah	37	59.5	23	48	115.5	41
Davis	38	36.5	66.5	37	23	54
Wash Univ St Louis	39	49	41	35	52	21.5
Max Planck (For. Priv. Law)	40	141.5	1	38	191.5	1
Arizona State	41	63.5	22	42	85	19
Brooklyn	42	41.5	64	41	36	58.5
Rutgers–Camden	43	73	12	46	70.5	14
Ohio State	44	34	87	36	31	45
Tilburg	45	93	6	43	85	4
Chicago-Kent	46	52.5	56	53	70.5	71.5
New York Law school	47	46.5	66.5	51	58	79.5
Southampton	48	19	157.5	61	44.5	178
Washington and Lee	49	35	96.5	45	46.5	93.5
Amsterdam	50	106	5	44	104.5	3
Villanova	51	44	81	56	54	104
Iowa	52	36.5	107	49	44.5	100
Wake Forest	53	39	105	54	43	109.5
Frankfurt (Banking Law)	54	141.5	2	64	191.5	2
Case Western	55	43	102	47	32.5	79.5
Wayne State	56	63.5	55	70	70.5	85

	All-time			Last 12 months		
School	Downloads	Papers	Downloads per paper	Downloads	Papers	Downloads per paper
Tel Aviv	57	56	84.5	62	54	87.5
Maryland	58	38	120	52	32.5	100
Indiana–Indianapolis	59	54	92	57	54	85
Wisconsin	60	67.5	57.5	77	85	100
St John's	61	61	75	63	50.5	71.5
American Univ	62	59.5	82.5	58	58	67.5
Pittsburgh	63	71	43	66	92.5	56
William and Mary	64	67.5	62	94	191.5	153
Florida	65	46.5	114.5	68	64.5	125
Cincinnati	66	74.5	47	60	85	28
Temple	67	79	35	86	92.5	93.5
Connecticut	68	69	71	74	75.5	85
Seton Hall	69	49	124.5	50	28	71.5
Penn State (Dickinson)	70	45	131.5	67	40	125
Thomas Jefferson	71	49	131.5	55	36	90
Bar Ilan	72	71	77	81	70.5	93.5
Buffalo	73	65.5	104	69	58	79.5
Hastings	74	79	72	80	97	63
Hofstra	75	56	138.5	59	28	82.5
Sydney	76	89.5	50	91	85	96
Griffith	77	98.5	37.5	109	164.5	128.5
Syracuse	78	74.5	92	75	70.5	74.5
Indiana–Bloomington	79	52.5	146.5	79	36	135.5
Alabama	80	62	122	71	48.5	90
Miami	81	120	21	76	134.5	9
Humboldt	82	112.5	30.5	92	115.5	48
Haifa	83	71	111	84	67	111
South Carolina	84	85.5	73.5	72	85	29.5
Houston	85	79	94.5	65	62	34
Washington	86	166	3	96	164.5	5
Georgia	87	82.5	90	88	104.5	97
Tulane	88	76.5	113	78	64.5	76.5
Lewis and Clark	89	98.5	69.5	73	85	24.5
St Louis	90	106	52	99	134.5	87.5
Loyola–Chicago	91	133	28	83	134.5	8
Hebrew Univ	92	98.5	76	90	115.5	74.5
Kansas	93	98.5	84.5	102	134.5	120.5
Utah	94	106	73.5	100	104.5	93.5
Missouri–Columbia	95	98.5	99	118	115.5	147.5
European Univ Institute	96	65.5	162	82	46.5	113.5
Oxford	97	89.5	118	98	92.5	113.5
Widener	98	112.5	80	111	134.5	113.5
LSU	99	98.5	109.5	89	78.5	71.5
Mainz	100	112.5	82.5	103	115.5	100
DePaul	101	85.5	128.5	122	164.5	171
Colorado	102	126.5	69.5	125	164.5	125
Suffolk	103	89.5	128.5	120	104.5	163
Cleveland State	104	103.5	114.5	117	85	139.5
Ottawa	105	112.5	102	97	97	67.5
Marquette	106.5	126.5	78	85	104.5	18
Phoenix Center	106.5	58	185	87	36	153
Albany	108	85.5	142	93	64.5	107
Notre Dame	109	93	135.5	95	70.5	104
Tennessee	110	126.5	88.5	114	115.5	104
Singapore	111	82.5	151.5	143	78.5	188.5
Nevada Las Vegas	112	126.5	92	119	134.5	113.5
CUNY Queens	113	141.5	63	112	164.5	58.5
Florida International	114	98.5	135.5	123	104.5	163
Oklahoma	115	120	109.5	132	191.5	147.5

	All-time			Last 12 months		
School	Downloads	Papers	Downloads per paper	Downloads	Papers	Downloads per paper
St Thomas–Minn	116	112.5	118	107	115.5	107
Arizona	117.5	85.5	153.5	108	75.5	143.5
Queensland	117.5	76.5	170.5	141	164.5	190
Queen's	119	103.5	133.5	101	85	109.5
Southern Illinois	120.5	112.5	124.5	115	104.5	120.5
Saarland	120.5	126.5	107	135	164.5	139.5
Idaho	122	112.5	128.5	121	115.5	132.5
Baltimore	123	141.5	86	144	164.5	135.5
McGill	124	133	102	110	115.5	67.5
Akron	125	89.5	160	106	85	132.5
Chapman	126	141.5	96.5	148.5	164.5	153
Northeastern	127	141.5	107	113	134.5	63
Santa Clara	128	126.5	133.5	145.5	115.5	163
La Verne	129	166	44	128	191.5	36
SMU	130	126.5	137	127	164.5	130.5
Univ of San Francisco	131	178.5	24	186	191.5	182.5
William Mitchell	132	81	183	124	58	178
Oregon	133	158	79	104	134.5	20
Pace	134	120	150	147	164.5	171
Alberta	135	158	88.5	148.5	164.5	120.5
West Virginia	136	151	112	105	104.5	32
New South Wales	137	98.5	177	116	75.5	143.5
Brigham Young	138	112.5	164	129.5	97	147.5
Rutgers–Newark	139	120	159	138	97	163
California Western	140	133	141	139	134.5	139.5
British Columbia	141	158	98	134	134.5	79.5
Vermont	142	151	116	129.5	134.5	90
Stetson	143	112.5	168.5	126	85	147.5
Roger Williams	144	151	121	155	164.5	143.5
Arkansas–Little Rock	145	178.5	39	174.5	191.5	139.5
Hamline	146.5	178.5	48	131	191.5	15.5
Toledo	146.5	141.5	146.5	137	115.5	125
Arkansas–Fayetteville	148	178.5	49	151	191.5	52
Seattle (Puget Sound)	149	178.5	53.5	184	164.5	171
Denver	150	126.5	170.5	158	134.5	182.5
Australian National	151	133	162	172	191.5	192.5
LSE	152	93	190	142	134.5	186
Willamette	153	151	149	133	134.5	100
Neuchatel	154	141.5	162	160	115.5	178
Wyoming	155	194	20	190	191.5	163
Kentucky	156	133	172.5	154	104.5	167.5
Quinnipiac	157	141.5	172.5	164	134.5	182.5
Western New England	158	166	128.5	167	164.5	158
Univ of Pacific	159	178.5	100	136	164.5	23
Manchester	160	112.5	192	153	134.5	186
Texas Wesleyan	161	141.5	177	159	134.5	171
Texas Southern	162	158	156	161	164.5	158
Northern Kentucky	163	151	174.5	140	104.5	116.5
Oklahoma City Univ	164	166	144	156	134.5	107
Missouri–Kansas City	165.5	141.5	181.5	163	134.5	182.5
Windsor	165.5	166	148	169.5	164.5	163
King's College London	167	158	166.5	174.5	191.5	186
St Thomas–Florida	168	158	166.5	162	134.5	158
Nebraska	169	166	151.5	178	191.5	178
North Dakota	170	120	193	145.5	75.5	167.5
Northern Illinois	171	166	153.5	187.5	191.5	192.5
Samford	172.5	151	185	150	97	135.5
York	172.5	151	185	165.5	134.5	174.5
Dublin	174	178.5	138.5	152	134.5	52

	All-time			Last 12 months		
School	Downloads	Papers	Downloads per paper	Downloads	Papers	Downloads per paper
Tulsa	175	178.5	140	169.5	164.5	128.5
Richmond	176	166	168.5	168	164.5	163
Victoria	177	178.5	144	157	134.5	60.5
Creighton	178	178.5	155	173	164.5	135.5
Texas Tech	179	178.5	157.5	180	164.5	153
Pepperdine	180	178.5	165	171	164.5	130.5
Mercer	181	194	118	193	191.5	174.5
Golden Gate	182	194	123	165.5	164.5	38
Regent	183	194	126	194	191.5	192.5
Franklin Pierce	184	178.5	180	178	164.5	153
Valparaiso	185	194	144	192	191.5	171
Mississippi	186	141.5	197	176	92.5	192.5
Catholic Univ	187	178.5	190	178	134.5	153
Tokyo	188	194	174.5	181	164.5	116.5
Nova Southeastern	189	194	177	182	164.5	118
Capital Univ	190	194	179	183	164.5	120.5
Duquesne	191	194	181.5	195.5	191.5	195.5
South Texas	192	178.5	194	185	134.5	178
Appalachian	193.5	194	187.5	187.5	164.5	143.5
New England	193.5	194	187.5	195.5	191.5	195.5
Western Ontario	195	194	190	189	164.5	153
Hong Kong	196	178.5	195	191	134.5	188.5
Florida Coastal	197	194	196	197.5	164.5	197
Bristol	198	158	198	197.5	164.5	198.5
Warwick	199	166	200	199.5	164.5	200.5
London	200.5	194	200	199.5	164.5	198.5
Nottingham	200.5	194	200	201	191.5	200.5

Source: Social Science Research Network, http://ssrn/com (last visited Oct. 15, 2005).

Appendix 2. SSRN download and paper measures for schools with one or more papers posted on SSRN

	All-time			Last 12 months		
School	Downloads	Papers	Downloads Per paper	Downloads	Papers	Downloads Per paper
Chicago	135815	254	535	27844	53	110
Harvard	107886	446	242	33762	101	76
Stanford	90610	237	382	26678	58	113
Columbia	81354	211	386	24504	48	116
UCLA	60363	249	242	22129	59	89
Texas	59574	136	438	19262	43	142
Georgetown	57367	198	290	15795	42	80
USC	56250	155	363	15548	38	100
Berkeley	46465	207	224	14535	46	70
Virginia	39283	194	202	12160	35	63
George Mason	38716	216	179	15053	64	70
Yale	38463	152	253	12751	35	84
George Washington	34716	122	285	13464	47	110
Vanderbilt	32089	151	213	10970	43	73
NYU	31622	171	185	11674	44	68
Penn	31010	226	137	10066	84	45
San Diego	27947	126	222	10224	38	81
Boston Univ	26542	118	225	7375	15	63
Michigan	25029	136	184	7068	30	52
Minnesota	23735	90	264	5567	31	62
Illinois	23059	153	151	7658	41	50
Bonn	21574	217	99	6138	60	28
Duke	18736	103	182	5970	23	58
Florida State	16851	130	130	6605	37	51
Boston College	16059	92	175	5969	41	65
Melbourne	14726	94	157	4946	38	53
Cornell	14087	104	135	6097	47	59
Cardozo	12882	101	128	4746	24	47
Fordham	12665	79	160	6045	34	77
Emory	12627	85	149	4727	24	56
Northwestern	11083	83	134	4865	29	59
Michigan State	10889	43	253	5425	14	126
Cambridge	10255	39	263	3983	12	102
Loyola LA	9894	68	146	3978	19	59
North Carolina	8295	53	157	2990	18	56
Toronto	8262	51	162	2989	25	59
Herzliyah	8010	35	229	2228	3	64
Davis	7329	57	129	3261	35	57
Wash Univ St Louis	7065	44	161	3917	17	89
Max Planck (For. Priv. Law)	6976	6	1163	3250	0	542
Arizona State	6741	29	232	2750	7	95
Brooklyn	6683	51	131	2756	25	54
Rutgers–Camden	6581	23	286	2408	10	105
Ohio State	6567	62	106	3810	28	61
Tilburg	6263	14	447	2722	7	194
Chicago-Kent	6020	41	147	2014	10	49
New York Law school	5936	46	129	2133	15	46
Southampton	5847	133	44	1707	21	13
Washington and Lee	5810	59	98	2428	20	41
Amsterdam	5564	11	506	2432	4	221
Villanova	5271	48	110	1789	16	37
Iowa	4862	57	85	2168	21	38
Wake Forest	4724	55	86	1938	22	35
Frankfurt (Banking Law)	4677	6	780	1471	0	245
Case Western	4533	50	91	2314	27	46
Wayne State	4302	29	148	1268	10	44

	All-time			Last 12 months		
School	Downloads	Papers	Downloads Per paper	Downloads	Papers	Downloads Per paper
Tel Aviv	4216	39	108	1691	16	43
Maryland	4109	56	73	2108	27	38
Indiana–Indianapolis	4051	40	101	1773	16	44
Wisconsin	3935	27	146	1034	7	38
St John's	3874	33	117	1603	18	49
American Univ	3828	35	109	1747	15	50
Pittsburgh	3812	24	159	1348	6	56
William and Mary	3587	27	133	542	0	20
Florida	3543	46	77	1292	12	28
Cincinnati	3434	22	156	1723	7	78
Temple	3424	19	180	778	6	41
Connecticut	3105	25	124	1095	9	44
Seton Hall	3012	44	68	2134	30	49
Penn State (Dickinson)	3006	47	64	1300	24	28
Thomas Jefferson	2811	44	64	1855	25	42
Bar Ilan	2733	24	114	987	10	41
Buffalo	2477	28	88	1283	15	46
Hastings	2318	19	122	991	5	52
Hofstra	2281	39	58	1740	30	45
Sydney	2280	15	152	597	7	40
Griffith	2278	13	175	356	1	27
Syracuse	2226	22	101	1062	10	48
Indiana–Bloomington	2131	41	52	994	25	24
Alabama	2109	30	70	1248	19	42
Miami	2103	9	234	1060	2	118
Humboldt	2022	10	202	590	3	59
Haifa	1989	24	83	811	11	34
South Carolina	1903	16	119	1225	7	77
Houston	1888	19	99	1364	13	72
Washington	1817	3	606	512	1	171
Georgia	1726	17	102	662	4	39
Tulane	1662	21	79	997	12	47
Lewis and Clark	1648	13	127	1098	7	84
St Louis	1646	11	150	475	2	43
Loyola–Chicago	1511	7	216	851	2	122
Hebrew Univ	1508	13	116	630	3	48
Kansas	1407	13	108	396	2	30
Utah	1313	11	119	455	4	41
Missouri–Columbia	1233	13	95	274	3	21
European Univ Institute	1140	28	41	936	20	33
Oxford	1127	15	75	496	6	33
Widener	1106	10	111	327	2	33
LSU	1089	13	84	633	8	49
Mainz	1088	10	109	380	3	38
DePaul	1047	16	65	245	1	15
Colorado	1012	8	127	225	1	28
Suffolk	980	15	65	263	4	18
Cleveland State	918	12	77	279	7	23
Ottawa	913	10	91	504	5	50
Marquette	905	8	113	795	4	99
Phoenix Center	905	38	24	756	25	20
Albany	865	16	54	574	12	36
Notre Dame	850	14	61	514	10	37
Tennessee	830	8	104	297	3	37
Singapore	810	17	48	148	8	9
Nevada Las Vegas	807	8	101	266	2	33
CUNY Queens	792	6	132	325	1	54
Florida International	790	13	61	236	4	18
Oklahoma	757	9	84	193	0	21

	All-time			Last 12 months		
School	Downloads	Papers	Downloads Per paper	Downloads	Papers	Downloads Per paper
St Thomas–Minn	754	10	75	362	3	36
Arizona	747	16	47	357	9	22
Queensland	747	21	36	158	1	8
Queen's	738	12	62	424	7	35
Southern Illinois	677	10	68	295	4	30
Saarland	677	8	85	181	1	23
Idaho	647	10	65	252	3	25
Baltimore	639	6	107	146	1	24
McGill	634	7	91	350	3	50
Akron	633	15	42	371	7	25
Chapman	590	6	98	121	1	20
Northeastern	508	6	85	312	2	52
Santa Clara	493	8	62	141	3	18
La Verne	475	3	158	209	0	70
SMU	468	8	59	211	1	26
Univ of San Francisco	453	2	227	24	0	12
William Mitchell	452	18	25	233	15	13
Oregon	446	4	112	375	2	94
Pace	437	9	49	138	1	15
Alberta	414	4	104	121	1	30
West Virginia	409	5	82	374	4	75
New South Wales	403	13	31	285	9	22
Brigham Young	397	10	40	208	5	21
Rutgers–Newark	391	9	43	166	5	18
California Western	390	7	56	164	2	23
British Columbia	389	4	97	185	2	46
Vermont	381	5	76	208	2	42
Stetson	372	10	37	213	7	21
Roger Williams	357	5	71	110	1	22
Arkansas–Little Rock	336	2	168	45	0	23
Hamline	310	2	155	203	0	102
Toledo	310	6	52	167	3	28
Arkansas–Fayetteville	306	2	153	116	0	58
Seattle (Puget Sound)	298	2	149	29	1	15
Denver	289	8	36	96	2	12
Australian National	288	7	41	50	0	7
LSE	280	14	20	150	2	11
Willamette	248	5	50	190	2	38
Neuchatel	246	6	41	80	3	13
Wyoming	236	1	236	18	0	18
Kentucky	228	7	33	111	4	16
Quinnipiac	195	6	33	70	2	12
Western New England	194	3	65	57	1	19
Univ of Pacific	188	2	94	170	1	85
Manchester	186	10	19	112	2	11
Texas Wesleyan	184	6	31	88	2	15
Texas Southern	178	4	45	76	1	19
Northern Kentucky	162	5	32	161	4	32
Oklahoma City Univ	158	3	53	109	2	36
Missouri–Kansas City	153	6	26	74	2	12
Windsor	153	3	51	54	1	18
King's College London	151	4	38	45	0	11
St Thomas–Florida	150	4	38	75	2	19
Nebraska	145	3	48	40	0	13
North Dakota	141	9	16	141	9	16
Northern Illinois	140	3	47	22	0	7
Samford	120	5	24	120	5	24
York	120	5	24	69	2	14
Dublin	115	2	58	115	2	58

	All-time			Last 12 months		
School	Downloads	Papers	Downloads Per paper	Downloads	Papers	Downloads Per paper
Tulsa	113	2	57	54	1	27
Richmond	111	3	37	55	1	18
Victoria	106	2	53	106	2	53
Creighton	91	2	46	48	1	24
Texas Tech	88	2	44	39	1	20
Pepperdine	78	2	39	52	1	26
Mercer	75	1	75	14	0	14
Golden Gate	69	1	69	69	1	69
Regent	66	1	66	7	0	7
Franklin Pierce	55	2	28	40	1	20
Valparaiso	53	1	53	15	0	15
Mississippi	44	6	7	44	6	7
Catholic Univ	40	2	20	40	2	20
Tokyo	32	1	32	32	1	32
Nova Southeastern	31	1	31	31	1	31
Capital Univ	30	1	30	30	1	30
Duquesne	26	1	26	5	0	5
South Texas	25	2	13	25	2	13
Appalachian	22	1	22	22	1	22
New England	22	1	22	5	0	5
Western Ontario	20	1	20	20	1	20
Hong Kong	17	2	9	17	2	9
Florida Coastal	8	1	8	4	1	4
Bristol	6	4	2	4	1	1
Warwick	3	3	1	1	1	0
London	1	1	1	1	1	1
Nottingham	1	1	1	0	0	0

Sources: Social Science Research Network, http://www.ssrn.com (last visited Oct. 15, 2005).

Appendix 3. SSRN author-based ranks and measures

	Ranks			Measures		
School	Authors	Total downloads per author	New downloads per author	Authors	Total downloads per author	New downloads per author
Bonn	1	73	99	64	337	96
Harvard	2	7.5	8	61	1769	553
UCLA	3.5	16	14	50	1207	443
Virginia	3.5	27	36	50	786	243
Melbourne	5	80	94.5	49	301	101
NYU	6	33	32.5	47	673	248
Berkeley	8	20	25	46	1010	316
Columbia	8	7.5	9	46	1769	533
Michigan	8	39	59	46	544	154
Stanford	10	4	7	41	2210	651
Boston College	11	56	63	40	401	149
Chicago	13	2	5	38	3574	733
Georgetown	13	13	15	38	1510	416
Yale	13	19	24	38	1012	336
Penn	15	26	29	37	838	272
George Washington	16	21	21	35	992	385
Illinois	17	30	37	33	699	232
Maryland	18	133	122	31	133	68
Duke	20	35	45	29	646	206
Fordham	20	46.5	44	29	437	208
George Mason	20	14	11	29	1335	519
Cardozo	23.5	44	54	28	460	170
Cornell	23.5	41.5	40	28	503	218
Texas	23.5	5	6	28	2128	688
Southampton	23.5	106.5	128	28	209	61
Florida State	26.5	36	34.5	27	624	245
Northwestern	26.5	53	50	27	410	180
Boston Univ	28.5	18	27	26	1021	284
Ohio State	28.5	92.5	65	26	253	147
San Diego	30	17	16	25	1118	409
Loyola LA	31	51.5	55	24	412	166
Toronto	32	66	73	23	359	130
North Carolina	33	62	69.5	22	377	136
USC	35	3	4	21	2679	740
Vanderbilt	35	11	10	21	1528	522
Villanova	35	94	109	21	251	85
Iowa	39	98	88	20	243	108
New York Law school	39	82	89.5	20	297	107
Seton Hall	39	122.5	89.5	20	151	107
Thomas Jefferson	39	128.5	101	20	141	93
Wash Univ St Louis	39	67	48	20	353	196
Davis	42.5	60	53	19	386	172
Wake Forest	42.5	95.5	93	19	249	102
Brooklyn	44.5	63.5	60	18	371	153
Hofstra	44.5	137.5	98	18	127	97
Case Western	46.5	87	69.5	17	267	136
Emory	46.5	29	28	17	743	278
Alabama	49	134	114.5	16	132	78
Michigan State	49	31	23	16	681	339
Washington and Lee	49	65	61	16	363	152
American Univ	52	90	81.5	15	255	116
Houston	52	139	104	15	126	91
Indiana–Bloomington	52	127	124	15	142	66
Florida	55	92.5	102	14	253	92
Minnesota	55	10	18	14	1695	398

	Ranks			Measures		
School	Authors	Total downloads per author	New downloads per author	Authors	Total downloads per author	New downloads per author
St John's	55	84	84.5	14	277	115
Cincinnati	58	88	72	13	264	133
Tulane	58	136	116	13	128	77
LSE	58	192	189	13	22	12
William Mitchell	61	184.5	178	12	38	19
Singapore	61	162	189	12	68	12
Tel Aviv	61	69	66.5	12	351	141
Penn State (Dickinson)	63.5	85	80	11	273	118
Rutgers–Camden	63.5	37	39	11	598	219
Hastings	68	101	96.5	10	232	99
Indiana–Indianapolis	68	55	51.5	10	405	177
Temple	68	70.5	114.5	10	342	78
Wayne State	68	48	74	10	430	127
Haifa	68	109	111	10	199	81
New South Wales	68	182	165.5	10	40	29
Oxford	68	141.5	138.5	10	113	50
Chicago-Kent	73.5	34	38	9	669	224
William and Mary	73.5	57	129	9	399	60
Wisconsin	73.5	46.5	84.5	9	437	115
Herzliyah	73.5	25	32.5	9	890	248
Connecticut	78	59	68	8	388	137
Notre Dame	78	145.5	125	8	106	64
Widener	78	131.5	145	8	138	41
Bar Ilan	78	70.5	76	8	342	123
Cambridge	78	15	13	8	1282	498
Akron	86	150	133	7	90	53
Arizona	86	144	137	7	107	51
Arizona State	86	22	19	7	963	393
Lewis and Clark	86	100	57	7	235	157
LSU	86	120	106	7	156	90
Miami	86	81	62	7	300	151
Missouri–Columbia	86	116	151.5	7	176	39
Rutgers–Newark	86	168.5	170.5	7	56	24
Australian National	86	179.5	193.5	7	41	7
European Univ Institute	86	119	71	7	163	134
Tilburg	86	24	20	7	895	389
Buffalo	96.5	50	41	6	413	214
Cleveland State	96.5	121	141	6	153	47
Colorado	96.5	118	153.5	6	169	38
Denver	96.5	175	183	6	48	16
Georgia	96.5	83	87	6	288	110
SMU	96.5	154	158.5	6	78	35
Syracuse	96.5	63.5	51.5	6	371	177
Tennessee	96.5	131.5	138.5	6	138	50
Utah	96.5	105	117	6	219	76
Amsterdam	96.5	23	17	6	927	405
Albany	109	117	84.5	5	173	115
California Western	109	154	160.5	5	78	33
DePaul	109	106.5	140	5	209	49
Oklahoma	109	122.5	151.5	5	151	39
Pittsburgh	109	28	30	5	762	270
Roger Williams	109	160	173	5	71	22
Santa Clara	109	147.5	168	5	99	28
South Carolina	109	61	34.5	5	381	245
Stetson	109	158	144	5	74	43
Suffolk	109	111	133	5	196	53

	Ranks			Measures		
School	Authors	Total downloads per author	New downloads per author	Authors	Total downloads per author	New downloads per author
Toledo	109	164.5	160.5	5	62	33
McGill	109	137.5	120	5	127	70
Ottawa	109	115	94.5	5	183	101
Queen's	109	126	109	5	148	85
Sydney	109	45	78.5	5	456	119
Brigham Young	125	147.5	135.5	4	99	52
Kansas	125	68	96.5	4	352	99
Kentucky	125	167	168	4	57	28
Marquette	125	103	47	4	226	199
Nevada Las Vegas	125	108	123	4	202	67
Northern Kentucky	125	179.5	148	4	41	40
Pace	125	143	158.5	4	109	35
Quinnipiac	125	174	180	4	49	18
St Louis	125	51.5	78.5	4	412	119
St Thomas–Minn	125	114	104	4	189	91
Griffith	125	38	107	4	570	89
Humboldt	125	40	64	4	506	148
King's College London	125	184.5	191	4	38	11
Mainz	125	86	100	4	272	95
Max Planck (For Pr L)	125	9	3	4	1744	813
Warwick	125	200	200.5	4	1	0
York	125	188.5	182	4	30	17
Chapman	140	110	148	3	197	40
Florida International	140	89	113	3	263	79
Oklahoma City Univ	140	171.5	157	3	53	36
Phoenix Center	140	79	31	3	302	252
Samford	140	182	148	3	40	40
Texas Wesleyan	140	166	165.5	3	61	29
Willamette	140	152	126	3	83	63
Bristol	140	198	198.5	3	2	1
British Columbia	140	135	127	3	130	62
Hebrew Univ	140	41.5	42	3	503	210
Manchester	140	164.5	155.5	3	62	37
Queensland	140	95.5	133	3	249	53
Windsor	140	173	180	3	51	18
Baltimore	155.5	76	119	2	320	73
Creighton	155.5	176	170.5	2	46	24
CUNY Queens	155.5	58	56	2	396	163
Idaho	155.5	75	75	2	324	126
Missouri–Kansas City	155.5	156	155.5	2	77	37
Nebraska	155.5	159	176	2	73	20
Northeastern	155.5	91	58	2	254	156
Oregon	155.5	104	49	2	223	188
Richmond	155.5	168.5	168	2	56	28
Seattle (Puget Sound)	155.5	125	184.5	2	149	15
South Texas	155.5	195	187	2	13	13
Texas Southern	155.5	151	153.5	2	89	38
Texas Tech	155.5	177.5	176	2	44	20
Univ of Pacific	155.5	149	109	2	94	85
Univ of San Francisco	155.5	102	189	2	227	12
Vermont	155.5	113	92	2	191	104
Hong Kong	155.5	196	192	2	9	9
Saarland	155.5	72	104	2	339	91

	Ranks			Measures		
School	Authors	Total downloads per author	New downloads per author	Authors	Total downloads per author	New downloads per author
Appalachian	183	192	173	1	22	22
Arkansas–Fayetteville	183	78	81.5	1	306	116
Arkansas–Little Rock	183	74	142	1	336	45
Capital Univ	183	188.5	164	1	30	30
Catholic Univ	183	182	148	1	40	40
Duquesne	183	190	195.5	1	26	5
Florida Coastal	183	197	197	1	8	4
Franklin Pierce	183	170	148	1	55	40
Golden Gate	183	161	121	1	69	69
Hamline	183	77	46	1	310	203
La Verne	183	43	43	1	475	209
Loyola–Chicago	183	12	2	1	1511	851
Mercer	183	157	186	1	75	14
Mississippi	183	177.5	143	1	44	44
New England	183	192	195.5	1	22	5
North Dakota	183	128.5	66.5	1	141	141
Northern Illinois	183	130	173	1	140	22
Nova Southeastern	183	187	163	1	31	31
Pepperdine	183	154	135.5	1	78	52
Regent	183	163	193.5	1	66	7
Southern Illinois	183	32	26	1	677	295
St Thomas–Florida	183	124	118	1	150	75
Tulsa	183	141.5	131	1	113	54
Valparaiso	183	171.5	184.5	1	53	15
Washington	183	6	12	1	1817	512
West Virginia	183	54	22	1	409	374
Western New England	183	112	130	1	194	57
Wyoming	183	99	180	1	236	18
Alberta	183	49	77	1	414	121
Dublin	183	140	84.5	1	115	115
Frankfurt (Bank. Law)	183	1	1	1	4677	1471
London	183	200	198.5	1	1	1
Neuchatel	183	97	112	1	246	80
Nottingham	183	200	200.5	1	1	0
Tokyo	183	186	162	1	32	32
Victoria	183	145.5	91	1	106	106
Western Ontario	183	194	176	1	20	20

Source: Social Science Research Network, http://www.ssrn.com (last visited Oct. 15, 2005).