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Zhichuan Li

Chongyu Dang
Ivey School of Business

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Chongyu Dang
Richard Ivey School of Business
University of Western Ontario
cdang@ivey.ca
Tel: (226) 980-5612

Zhichuan (Frank) Li*
Richard Ivey School of Business
University of Western Ontario
fli@ivey.ca
Tel: (519) 661-4112

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Drivers of Research Impact:
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Abstract

We study the characteristics of all published papers in the top three finance journals (JF, JFE, and RFS) and how these paper characteristics affect the number of citations in *Google Scholar* and the *Web of Science* database. First, we find the characteristics in the universalist perspective remain constant while the characteristics in the constructivist and presentation perspectives increase over time. Second, some characteristics are significantly different between the high impact and the low impact papers. Third, paper quality, research method, journal placement, and paper age are the most important drivers. Last, different drivers play different roles in different journals.

1. Introduction and Overview

Publishing papers in refereed journals plays a vital role for academics, as the "publish or perish" rule gives the true portrayal for tenure promotion in this profession. For finance faculty, publications in the top finance journals are justified to boost annual salary and promotion, and even full professors continue to receive implicit or explicit returns in thousands of dollars for publications in the top finance journals (Swidler and Goldreyer, 1998). In addition to the importance of publication records, the number of citations has garnered more attention. It is often used, particularly in research universities, to assess scholars' research impact, and thus, their career. The increasing focus on research impact inspired the development of *Google Scholar Citations*, an online tool which tracks paper citations. However, the top 1% (10%) most cited articles in the leading finance journals have received 1/3 (3/4) of the total number of citations (Chung, Cox, and Mitchell, 2001). To our knowledge, current research has not fully explored how paper characteristics change over time, how paper characteristics differ between more influential papers and less influential papers, and what factors drive the research impact of the published papers in top finance journals. We aim to fill these holes in the literature and provide evidence for finance scholars, university administrators, and journal editors who want to maximize research impact.

The existing finance literature studies some relevant research topics. Ederington (1979) analyzes how paper length, co-authorship, and institutional affiliation affect the number of citations received by 345 papers published in *Journal of Finance* and *Journal of Financial Quantitative Analysis* for the period 1968-1971. Schwert (1993) sheds light on the determinants of citations such as paper age, paper length, and paper order in the journal issue for the papers published in *Journal of Financial Economics* during 1974-1991. Borokhovich, Bricker, and Simkins (2000) document evidence that the research impact of *Journal of Finance*, *Journal of*

Financial Economics and *Review of Financial Studies* [1] does not depend on "hot" topics or fads. Pinkowitz (2002) studies the number of downloads of online papers from the *Journal of Finance* website. Kim, Morse, and Zingales (2009) examine how affiliation with a top 25 university positively affects the citations of studies by finance faculty; however, they find that this positive effect weakens with time (from the 1970s to the 1990s) because of the reduced importance of physical access to coauthors. Brogaard, Engelberg, and Parsons (2014) explore the role of editor rotations and show evidence that "connected" papers in the top three finance journals receive higher *Web of Science* citations, but this effect is not robust without school fixed effects or author fixed effects. They also find that editorial networks in one of the top three finance journals do not affect the number of publications in the other two competing journals. Michayluk and Zurbruegg (2014) highlight how placement as a lead paper signals higher quality in the top four finance journals.

However, these previous studies on citations in finance literature only cover a few independent variables, and lack a comprehensive construction of impact drivers of financial research. Following the framework of Stremersch, Verniers, and Verhoef (2007), who study research impact in marketing literature, we use the most extensive set of paper characteristics as citation determinants to explore the roles of three theoretical perspectives: the universalist perspective (what is said), the social constructivist perspective (who says it), and the presentation perspective (how it is said). For each theoretical perspective, we consider several dimensions - the universalist perspective includes quality and domain, the social construction perspective includes

[1] We denote *Journal of Finance*, *Journal of Financial Economics*, and *Review of Financial Studies* as the top three finance journals hereinafter. Similarly, we denote *Journal of Finance*, *Journal of Financial Economics*, *Review of Financial Studies*, and *Journal of Financial and Quantitative Analysis* as the top four finance journals hereinafter. Such journal rankings are consistent with Oltheten, Theoharakis, and Travlos (2005), Chen and Huang (2007), Currie and Pandher (2011), and Chan, Chang, and Chang (2013).

visibility and personal promotion, the presentation perspective includes first-page attention and expositional clarity.[2]

We study the characteristics of all the published papers in the top three finance journals during 2000-2013 and how these characteristics affect the number of citations in *Google Scholar* and *Web of Science*. First, we find that most paper characteristics in the social constructivist perspective (visibility and personal promotion) and the presentation perspective (first-page attention and expositional clarity) increase over time, while most of the paper characteristics in the universalist perspective (quality and domain) remain constant. Second, most of the paper characteristics are significantly different between the top 10% and the bottom 10% groups based on the number of citations per year. Third, the regression results from our negative binomial models show that the universalist perspective, the social constructivist perspective, and the presentation perspective all provide some important impact drivers of published papers in the top three finance journals. Specifically, in economic significance, paper quality, research methods, journal placement, and paper age are the most important drivers for the number of citations. These results are robust when using redefined citation measures, alternative econometric specifications, heteroskedasticity adjustments, and winsorized samples. The results of average marginal results document exact evidence which shows how many additional citations are increased with one more unit of a certain paper characteristic.

Last, different drivers have different effects on papers, depending on which journal they are published in. For example, theoretical papers in *Journal of Financial Economics* and *Review of Financial Studies* receive significantly fewer citations than empirical papers but this relation is

[2] We modify the dimensions of the three theoretical perspectives in Stremersch, Verniers, and Verhoef (2007) considering the distinctiveness of the financial research. The measures in these dimensions are defined in Appendix 1.

insignificant for papers in *Journal of Finance*. Paper length and number of citations received are positively correlated for works in *Journal of Finance*, but not in *Journal of Financial Economics* or *Review of Financial Studies* (in Table 7 and 8).

While this study provides empirical evidence for finance scholars, university administrators, and finance journal editors who aim to maximize research impact, we acknowledge that omitted variables could spuriously affect the results, as it is impossible to capture all the relevant dimensions of paper and author quality. Readers should be cautious about drawing causal inferences.

The paper is organized as follows: Section 2 presents the theory and hypothesis, Section 3 describes the data, Section 4 discusses the model and the main results, Section 5 provides robustness checks, Sections 6 shows the average marginal effects of the negative binomial models, and Section 7 concludes.

2. Theory and Hypothesis

We follow the theoretical framework in Stremersch, Verniers, and Verhoef (2007). They highlight three theoretical perspectives for analyzing citations in marketing studies: the universalist perspective –quality and domain (what is said), the social constructivist perspective – visibility and personal promotion (who says it), and the presentation perspective – title length, attention grabbers, and expositional clarity (how it is said).

Stremersch, Verniers, and Verhoef (2007) provide explanations for the three perspectives: The universalist perspective posits that "what" authors say affects the number of citations their papers receive. Baldi (1998) argues that the reward structure of research is determined by cognitive content, and, therefore, the cognitive dimension of a paper should be strongly related to its research

impact (Van Dalen and Henkens, 2001). The social constructivist perspective argues that "who" the authors are affect the citations of papers. For example, the Matthew effect, or the accumulated advantage of an individual (Merton, 1968), can promote the visibility of a scholar's work, or, alternatively, an author who references many works may be frequently cited as a form of reciprocation (Ciadini, 1988). The presentation perspective claims that "how" authors present their research determines its impact. For instance, while the title of a paper has important informational value, an overly complex title can reduce the attractiveness of a paper (Yitzhaki, 2002).

We use similar theoretical structures, but modify the measures to fit the uniqueness of the finance field. We divide the universalist perspective, "what" the authors say, into two dimensions: quality and domain. Papers of high quality make more contributions, in terms of number and importance, and thus are more likely to receive a larger number of citations. We use five measures to quantify quality: the number of authors from the top 20 finance departments[3], the number of pages, order of placement in a journal issue, whether a paper is the lead paper, and working-paper age. Authors from the top 20 finance departments on average have better publication records, better resources, and better training, which can be reflected in paper quality to an extent. The number of pages are managed to be consistent with the magnitude of research contribution, and large number of pages can indicate thorough and detailed analysis. Order placement and the lead article can be indicators of contribution judged by an editor, and a signal of quality, even though electronic journal access may make paper order less relevant (Michayluk and Zurbruegg, 2014). We expect paper order has negative effect and lead paper has positive effect on the number of citations. Laband and Piette (1994) provide evidence that paper length and lead paper status positively affect

[3] We provide the top 20 world ranking of finance department in Appendix 2. Stremersch, Verniers, and Verhoef (2007) use the business school ranking as a measure of visibility (due to the Matthew effect) in the social constructivist perspective, while we think the research rankings of finance departments is more relevant to quality in the universalist perspective.

the number of citations to papers in 28 top economics journals. The working paper age is our novel measure, defined as the year difference between the first appearance on the web and publication. First, working paper age measures the quality improvement from R&R (Revise and Re-submit), which implies a positive effect on the number of citations. Second, large working paper age might be just the result of the pecking order of journal submission. For example, it may capture the waiting time for the decisions by top economics journals such as *American Economics Review*. Third, lower-quality papers with large working paper age and several rejections from other journals may find lucky placement in one of the top three finance journals, and thus affect research impact negatively. Altogether, the net effect of working paper age is an empirical question. We are aware that many papers were uploaded to Social Science Research Network (SSRN) or linked to conference/seminar websites until the authors think the papers are ready to be public, so the working paper age might not be exactly accurate. However, we can consider that working papers with very limited access are not finished papers to some degree.

As for domain, we use only one measure: methods[4]. If the paper is purely theoretical, then the methods dummy equals 1; if the paper is purely empirical, then the methods dummy equals 0; if mixed methods are used, then the methods dummy is 0.5. Empirical papers may present better readability and may be more realistic and practical. Theoretical papers are more likely to be milestones as benchmarks and inspirations, and thus might receive broader citations. Therefore, the net effect of research methods is also an empirical question.

[4] We do not use the subject area in finance as a measure of domain because existing papers show that subfield topics in finance have no significant impact on the number of citations to the papers in the top three finance journals. For example, Table 8 in Schwert (1993) documents evidence that the papers in the capital markets area and the corporate finance and governance area are not significantly different in average citations per year. Borokhovich, Bricker, and Simkins (2000) find that the impact factors of the top three finance journals are not affected by the distribution of papers across subfields in finance.

Hypothesis 1A (The Universalist Perspective)*: As indicators of quality, the number of authors from the top 20 finance departments, the number of pages, and whether the paper is the lead paper positively affect the number of citations; paper order in a journal issue negatively affects the number of citations.*

Hypothesis 1B (The Universalist Perspective)*: Working paper age positively affects the number of citations due to improvement in quality during the R&R process.*

Hypothesis 1C (The Universalist Perspective)*: Working paper age negatively affects the number of citations due to lucky placement after rejections from other similar journals.*

Hypothesis 1D (The Universalist Perspective)*: Research methods positively affect the number of citations because theoretical papers are more likely to be milestones as benchmarks and inspiration.*

Hypothesis 1E (The Universalist Perspective)*: Research methods negatively affect the number of citations because empirical papers may present better readability and may be more realistic and practical.*

The second theoretical perspective, the social constructivist perspective, refers to the argument that "who" the authors of the papers are influences research impact. Following Stremersch, Verniers, and Verhoef (2007), we explore two dimensions in this perspective: visibility and personal promotion. For visibility, we use seven measures: the number of authors; whether the authors are from the same school (internal collaboration); whether the paper has received financial support; the number of acknowledgements; the number of conferences; the number of seminars; and the number of research assistants (RAs). More authors may suggest more opportunities for paper presentations. Authors from different schools can promote the

dissemination of the idea across more schools. Financial support indicates not only better resources, but also the visibility for expert reviewers during the evaluation process. The number of acknowledgements presents the constructive feedback for the paper. The number of conferences and the number of seminars also imply the visibility of a working paper. The RAs can also increase visibility, as many RAs are doctorate students who are or will be research active in academia. The number of RAs reflects the author's resources and networks. All measures should have positive effects on the number of citations except for internal collaboration (a variable that equals 1 if all of the authors are from the same school, 0 if none of the authors are from the same school, and 0.5 if some of the authors are from the same school. Thus, internal collaboration is a reverse-scored measure for which lower value is assigned to external collaboration. We postulate that external collaboration can expand external visibility in different schools and accelerate the marketing of the paper, and thus may increase the number of citations.

We use the number of references[5] to proxy for "personal promotion". If one paper is unnoticed, a follow-up paper that cites the original paper can bring renewed interest in the original topic. In addition, researchers may feel indebted to others who cite their papers, and perhaps return the citation (Stremersch, Verniers, and Verhoef, 2007). This reciprocity implies "Others cite me, I cite others." Thus, the number of references may have a positive effect on the number of citations.

Hypothesis 2A (The Social Constructivist Perspective)*: As indicators of visibility, the number of authors, whether the paper has received financial support, the number of*

[5] We do not use any measure for editorial networks as the dark side. Laband and Piette (1994) find that editorial networks serve to enhance efficiency (say identify a good paper as a lead paper) through professional connections rather than choose low-quality papers. This means the role of editorial networks in the number of citations can be substituted in the quality dimension. Also, the authors from top finance departments are more likely to be selected as editors because of their good publication records: this effect can also be captured in the quality dimension. In a more recent paper, Brogaard, Engelberg, and Parsons (2014) show evidence that "connected" papers in the top three finance journals receive higher *Web of Science* citations, but this effect is not robust without school fixed effects or author fixed effects. They also find that editorial networks in one of the top three finance journals do not affect the number of publications in the other two competing journals.

acknowledgements, the number of conferences, the number of seminars, and the number of RAs positively affect the number of citations; whether the authors are from the same school (internal collaboration) negatively affects the number of citations.

Hypothesis 2B (The Social Constructivist Perspective)*: As an indicator of personal promotion, the number of references positively affects the number of citations.*

The last theoretical perspective - the presentation perspective is that published papers receive citations based on "how" the authors write the paper. Stremersch, Verniers, and Verhoef (2007) explore three dimensions for this perspective: title length, attention grabbers, and expositional clarity. However, we believe some attention grabbers (for example, the word "new" in the title) might affect the readers' interest and the number of downloads, but cannot affect the number of citations. Moreover, the hypothesis of attention grabbers is not confirmed by the empirical results in Stremersch, Verniers, and Verhoef (2007). Thus we extend the title-length dimension to construct the "first-page attention" dimension and omit the attention-grabbers dimension by incorporating the number of key words and the number of codes into the "first-page attention" dimension. We employ five measures to capture the "first-page attention": the title length, whether the paper uses a subtitle, the length of abstract, the number of key words, and the number of codes (JEL classifications), where the number of key words and the number of codes are only available for papers in *Journal of Financial Economics*. The title length has both positive effect (more informative) and negative effect (more complex) on the number of citations (Yitzhaki, 2002). For current requirements of all of the top three finance journals, an abstract should be 100 words or less. Similarly, whether the paper uses a subtitle and abstract length also exhibit such pros and cons, and therefore it is an empirical question. The number of key words and the number

of codes are attention grabbers because they can increase the probability that the paper can be searched out in the databases through key words and JEL code classifications and can be cited by papers in different subject areas. Thus, the number of key words and the number of codes should have positive effects on the number of citations.

In the expositional clarity dimension, we use four measures: the number of tables, the number of pictures, the number of footnotes, and whether the paper has the appendix part. On the one hand, we think tables, pictures, footnotes, and appendix can improve the clarity of the paper, and thus we argue that these measures may have positive influences on the number of citations. On the other hand, too many of these components may negatively affect the clarity, which is similar to the issue of title length mentioned previously (Yitzhaki, 2002). For example, we believe too many footnotes may cause distraction. In addition, Stremersch, Verniers, and Verhoef (2007) argue that the number of equations or footnotes may be context dependent. For example, more equations may add more value for mathematicians' research. So, the net effects of these four measures are theoretically ambiguous.

Hypothesis 3A (The Presentation Perspective)*: The title length, whether the paper uses a subtitle, abstract length, the number of tables, the number of pictures, the number of footnotes, and whether the paper has the appendix part positively affect the number of citations because these characteristics cause papers to be more informative with clarity.*

Hypothesis 3B (The Presentation Perspective)*: The title length, whether the paper uses a subtitle, abstract length, the number of tables, the number of pictures, the number of footnotes, and whether the paper has the appendix part negatively affect the number of citations because these characteristics cause papers to be more complex and scatted details may cause distraction.*

Hypothesis 3C (The Presentation Perspective)*: The number of key words and the number of codes positively affects the number of citations because they indicate the number of research areas and can increase the probability that the paper can be searched out*.

Note that these three perspectives are by no means mutually exclusive. For example, paper content is approximated by the number of authors from top 20 finance departments, while this dimension could also be attributed to the social constructivist perspective (i.e., paper visibility and personal promotion).

3. The Data

In previous studies, Keloharju (2008) uses citation data from *Google Scholar*; Kim, Morse, and Zingales (2009), and Brogaard, Engelberg, and Parsons (2014) employ Thomson Reutors' ISI *Web of Science* as the data source. While the citations in *Web of Science* are more concentrated in peer-reviewed journals and thus are more professional[6], *Google Scholar* expanded the citation sources to working papers and forthcoming papers. Since both *Google Scholar* and *Web of Science* have pros and cons, we use both data sources. The citation data were collected in the last quarter of 2014 for all the published papers in the top three finance journals during 2000-2013. We have 3,365 papers in our sample, of which 1,108 papers are *in Journal of Finance*, 1,284 papers in *Journal of Financial Economics*, and 973 papers in *Review of Financial Studies*. We manually collected all the characteristics of these papers. All variables are defined in Appendix 1 with detailed descriptions.

[Insert Appendix 1 here.]

To identify the most influential papers in our sample, we generate the ranking for top 50 most-cited papers in *Google Scholar* in Table 1. In Panel A, we provide the ranking based on the

[6] The ISI Web of Science database covers more than 12,000 journals. The number of citations is based on all these journals.

total number of citations. This ranking is not corrected for time as we want to find out the influential papers based on accumulative impact. Among these 50 papers, 28 papers (56%) are in *Journal of Finance*, 17 (34%) papers are *Journal of Financial Economics*, and 5 papers (10%) are in *Review of Financial Studies*. It is interesting that only 3 papers (6%) in this ranking were published after 2008 in our 2000-2013 sample period[7], and all of these three papers are in *Review of Financial Studies*. 42 papers (84%) in this ranking are also in the ranking of the top 50 most-cited papers in *Web of Science* (also shown in Table 1 Panel A), and this comparison justifies the objectiveness and accuracy of the cumulative research impact of "star" papers.

Table 1 Panel B provides the ranking based on the annualized number of citations (total number of citations divided by paper age). This can partially remove the accumulative effects. 22 (44% of 50) papers are in *Journal of Finance*, 20 papers (40%) are in *Journal of Financial Economics*, and 8 papers (16%) are in *Review of Financial Studies*. 36 papers (72%) in this ranking also appear in the comparable ranking for *Web of Science*. This proportion is smaller than that in Panel A because *Google Scholar* has broader citation sources; therefore, the total number of citations in *Web of Science* to newer papers is much smaller than in *Google Scholar*. The calculation for annualized number of citations is more sensitive for *Web of Science*.

[Insert Table 1 here.]

We present the paper characteristics for the total sample in Table 2 and Figure 1. The summary statistics in Table 2 Panel A show that, on average, lead paper accounts for 10% of our sample, the paper order is 5.87, the number of authors is 2.27, internal collaboration is 0.32 (1 if

[7] We recollected the citation data in January 2018 for the top 500 most cited articles ranked in 2014 (when we first collected the data). In top 50, the number of papers published after 2008 now increases from 3 to 6. In top 100, the number increases from 8 to 15. This result suggests that the "bias" against the papers published after 2008 arises from the fact that it just takes time to accumulate research impact. This also justifies that, in our multivariate analysis, we always control for the time effect by including "paper age" (# years after publication) and "working paper age" (# years of being a working paper before publication).

no external collaboration), 0.77 authors are from the top 20 finance departments, the abstract includes 107.52 words, title length is 8.67 words, 29% of the papers have subtitles, the number of pages is 31.75, the number of footnotes is 18.63, 42% of the papers have received financial support, the authors acknowledge 11.90 peer scholars, presentations occur at 2.99 conferences and 4.80 seminars, 0.67 RAs provide research assistance, research methods is 0.49 (1 if purely theoretical), the number of references is 42.08, the number of tables is 6.73, the number of pictures is 2.52, 59% of the papers have at least one appendix, and the working paper age is 1.65 years. We also notice that the standard deviations of all measures of the number of citations are larger than their means, and this implies the over-dispersion of the citation data and thus non-normal properties.

In Table 2 Panel B, we investigate the trends of paper characteristics over the recent 14 years during 2000-2013. We find that in the universalist perspective, most of the measures remain constant except that the working paper age is increasing from 0.79 to 2.06. It takes much longer to publish a paper now than before.

In the social constructivist perspective, all measures increase with time: the number of authors increases from 2.00 to 2.43, internal collaboration increases from 0.18 to 0.33, financial support increases from 0.37 to 0.48, the number of acknowledgements increases from 9.34 to 13.23, the number of conferences[8] increases from 1.51 to 4.09, the number of seminars increases from 2.98 to 5.63, the number of RAs increases from 0.58 to 0.80, the number of references increases from 35.25 to 47.92. These numbers suggest that finance researchers care more and more about the exposure of their papers to their peers in recent years. The finance academia seems more and more "liquid" in terms of opportunities of presentations, co-authorship, and resources.

[8] The number of conferences is a measure in the presentation perspective rather than in the universalist perspective, so we do not measure conference quality here.

In the presentation perspective, the abstract length increases from 101.26 to 107.68, the number of tables increases from 5.01 to 7.74, the number of pictures (graphs/figures) increases from 2.22 to 3.17, the number of footnotes increases from 13.40 to 21.40, the appendix dummy increases from 0.44 to 0.70. These trends may suggest that the recent papers contain more information or try to do more things in one project. However, the title length and subtitle dummy does not exhibit stable increase. We depict the time trends of normalized paper characteristics in Figure 1.

[Insert Table 2 and Figure 1 here.]

Considering the difference among the top three finance journals, we compare the means, the medians, and the standard deviations of the variables in Table 3. The papers in *Journal of Finance* receive more citations on average than the papers in *Journal of Financial Economics and Review of Financial Studies*.

[Insert Table 3 here.]

We investigate the distribution of the number of citations in Table 4. We find for 76.23% of the papers in the total sample, the number of citations in *Google Scholar* is in the range between 0 and 250, and for 75.72% of the papers in the total sample, the number of citations in *Web of Science* ranges between 0 and 50. In addition, in the citation groups for most-cited papers, *Journal of Finance* has more influential papers (and higher corresponding percentage of the total sample size) than *Journal of Financial Economics* and *Review of Financial Studies*.

[Insert Table 4 here.]

In order to identify how paper characteristics differ between more influential papers and less influential papers, we compare the means of the paper characteristics between the top 10% and the bottom 10% annual citations in Table 5. For annual citations in *Google Scholar*

(*Citation_GS_Annual1*), almost all measures in the three perspectives are significantly different, with the exceptions of subtitle dummy, abstract length, and the number of pictures. By large, more influential papers in our sample have larger number of authors from the top 20 finance departments, larger number of pages, smaller paper order and higher proportion of lead papers, larger paper age, *total* paper age and working paper age, higher empirical orientation, larger number of authors, higher level of external collaboration and financial support, larger numbers of acknowledgements, conferences, seminars, and RAs, more references, shorter title length, larger number of tables and footnotes, and less appendix setting. As for annual citations in *Web of Science* (*Citation_WOS_Annual1*), all the measures in the universalist perspective, paper age, and total paper age are still significant. Some paper characteristics in the social constructivist perspective (internal collaboration, financial support, the number of conferences, seminars, and RAs) and in the presentation perspective (title length, abstract length, and the number of pictures) become insignificant, but the signs of the differences are the same as those of *Citation_GS_Annual1* except the number of footnotes. It is not surprising that more measures become insignificant for *Citation_WOS_Annual1* because *Citation_WOS* is more sensitive for annualized quantile calculation given the number of citations in *Web of Science* is always much smaller than that in *Google Scholar*. Again, these results highlight the importance of paper quality, research methods, and paper age for citations in both *Google Scholar* and *Web of Science*. Overall, the results in Table 5 indicate that the "star papers" (most-cited papers) exhibit certain paper characteristics that are consistent with common sense and the hypotheses developed above.

[Insert Table 5 here.]

Last but not the least, we provide the correlation coefficients in Table 6. We find all the dependent variables (the four citation measures) are highly correlated-the correlation coefficients

are between 0.82 and 0.97. However, the independent variables (paper characteristics) are usually not highly correlated, which indicates we do not suffer from a multicollinearity problem in the regressions. For the significant correlation coefficients, the citation measures are positively correlated to *Lead, Authors, Top Schools, Subtitle, Pages, Financial Support, Acknowledgement, Conferences, Seminars, RAs, References, Tables, Paper Age and Total Paper Age*; the citation measures are negatively correlated with *Order, Internal Collaboration, Abstract Length, Title Length, Methods, Appendices*. One exception is that *Pictures* is not significantly correlated with any of the citation measures.

[Insert Table 6 here.]

4. Multivariate Analysis and Results

We use the following specification to explore the effects of paper characteristics on the number of citations:

$$Citation_{ij} = \alpha + \sum_{j=1}^{2} \beta_j Journal_j + \gamma Age_{ij} + \delta Age_{ij}^2 + \sum_{u=1}^{6} \theta_u Univerasalist_{uij} + \\ + \sum_{s=1}^{8} \mu_s Social_{sij} + \sum_{p=1}^{9} \varphi_p Presentation_{pij} + \varepsilon_{ij} \quad (1)$$

where $Citation_{ij}$ is the number of citations for paper i in journal j. $Journal_j$ is a dummy that equals 1 if paper i is in journal j, and 0 otherwise. Age denotes paper age, i.e. the number of years since publication. We include the quadratic terms of paper age in the regressions because Alexander and Mabry (1994) find that for published papers the curve of cumulative percent of total citations by paper age is concave. $Universalist_{uij}$, $Social_{sij}$, and $Presentation_{pij}$ are measures in the universalist perspective, the social constructivist perspective, and the presentation perspective respectively.

Following Stremersch, Verniers, and Verhoef (2007) and Brogaard, Engelberg, and Parsons (2014), we estimate the model using negative binomial regressions. The advantage of negative binomial regression is that it can deal with over-dispersed count data (the conditional variances of dependent variables are bigger than the conditional means). It is superior to Poisson regression since it has an extra parameter to capture the over-dispersion.

We provide the results in Table 7 for the regressions on the total number of citations per paper in *Google Scholar (Citation_GS)*. In Column 1, we find that all three perspectives have significant effects on the number of citations based on our total sample. The signs of the coefficients in the universalist perspective (quality and domain) are consistent with Hypothesis 1. In the quality dimension, the results show that the number of authors from top departments, the number of pages, and lead paper dummy (confirmation of Michayluk and Zurbruegg (2014)) positively affect the number of citations; the paper order negatively affects the number of citations. The net effect of working paper age is positive, which implies an indicator of quality improvement. In the domain dimension, we find empirical papers can attract more citations. Half of the measures in the social constructivist measure are significant, but all of the signs of the coefficients are consistent with Hypothesis 2. In the visibility dimension, the number of acknowledgements, the number of conferences, and the number of RAs all positively affect the number of citations. In the personal promotion dimension, the number of references has significant positive effect on the number of citations. As for the presentation perspective, all results support Hypothesis 3. In the first-page attention dimension, the negative coefficient of title length indicates the complexity of title can destroy citations, and the positive coefficient of abstract length means the informational value of the abstract can boost citations. In the expositional dimension, the number of tables has

positive influence on citations, while the numbers of footnotes and appendices have negative effects on citations, and the latter implies that the complexity in details may harm research impact.

For independent variables other than the measures for the three perspectives, we find papers in *Journal of Finance* receive more citations on average than the papers in the other two top finance journals. In addition, the number of citations is concave in paper age, consistent with Alexander and Mabry (1994). Papers are generally losing the momentum of impact over time.

It is worth noting that if we compare the magnitude of the coefficients, the measures of the universalist perspective, journal dummy, and paper age have bigger influences compared to the measures in the social constructivist perspective and the presentation perspective. Paper quality, research methods, journal placement, and paper age appear to be the most important drivers (based on economic significance) for research impact.

The evidence in Columns 2, 3, and 4 for the three journals respectively suggests that the impact drivers play different roles in different journals. For example, lead paper has no significant effect on citations for papers in *Journal of Finance*, paper order has no significant impact in *Review of Financial Studies*, and the number of authors loses its effect in *Journal of Financial Economics*.

When it comes to the goodness of fit[9], we use the Value/DF ratio, where Value is the doubled difference between the log likelihood of the maximum achievable model and the log likelihood of the fitted model, and DF is the number of observations minus the number of parameters. If the model fits the data well, then Value/DF should be around 1. In our results, this number is also about 1, implying good model fit. We also report the dispersion parameter. If the dispersion is 0, then the model reduces to a Poisson model which assumes that the expected value

[9] Refer to this website for more technical and programming details:
http://www.ats.ucla.edu/stat/sas/output/sas_negbin_output.htm

of the dependent variable is equal to its standard deviation; if the dispersion is bigger than zero the dependent variable is over-dispersed. It is not surprising that in our model the dispersion is significantly bigger than 0: the small variance of dispersion implies the lower bound of the Wald 95% confidence limits is above 0. Thus, our model is more appropriate to the Poisson model.

[Insert Table 7 here.]

We conduct similar regressions for the total number of citations per paper in *Web of Science* (*Citation_WOS*) in Table 8. We find *Web of Science* citations generate congruent results to *Google Scholar* citations for our total data sample. Some exceptions reside in the changes of statistical significance of the number of authors, the number of seminars, and the appendices dummy. Again, paper quality, research methods, journal placement, and paper age are the most important drivers (in economic significance) of the number of citations.

As for the regressions for the three different journals, the impact drivers also play different roles based on the results in Table 8. In both of Table 7 and Table 8, theoretical papers in *Journal of Financial Economics* and *Review of Financial Studies* receive significantly fewer citations than empirical papers but this relation is insignificant for papers in *Journal of Finance*; larger number of pages significantly relates to the number of citations of papers in *Journal of Finance*, but not in *Journal of Financial Economics* or *Review of Financial Studies* (in Table 7 and 8). However, the significance changes for several visibility measures (the number of authors, internal collaboration, the number of acknowledgements, and the number of conferences) and one first-page attention measure (title length) if we compare Columns 2-4 between Table 7 and Table 8.

[Insert Table 8 here.]

5. Robustness

We examine the robustness of our empirical results for the whole sample in five ways.

First, we use redefined dependent variables for citations. In previous studies, Keloharju (2009) uses the ratio of the number of *Google Scholar* citations to the number of years since publication; Kim, Morse, and Zingales (2009) study *Web of Science* citations adjusted for age. We employ both annualized Google Scholar citations (*Citation_GS_Annual1*) and annualized Web of Science citations (*Citation_WOS_Annual1*) in Table 9. Both *measures* are defined as the total number of citations scaled by paper age (the age since publication). The sign, significance, and magnitude (economic significance) of the coefficients are quite similar between Table 7 Column 1 (*Citation_GS_Annual1*) and Table 9 Column 1 (*Citation_GS*). The only difference is that the magnitude of paper age becomes smaller for annual citations since citations are partially (given the nonlinear relation) normalized for annual calculation. As for *Web of Science* citations, the results are also similar between Table 8 Column 1 and Table 9 Column 3, except for the significance of abstract length and the magnitude for paper age. Alternatively, we use *total* paper age to scale the number of citations in Table 9 (*Citation_GS_Annual2* in Column 2 and *Citation_WOS_Annual2* in Column 4). Both *Citation_GS_Annual2* and *Citation_WOS_Annual2* are defined as the total number of citations divided by total paper age (the age since appearance on the web as a working paper). Since we consider working paper age in the denominator of annual-citation calculation of *Citation_GS_Annual2* and *Citation_WOS_Annual2*, the coefficients change for working paper age and paper age, while all other coefficients remain almost the same.

[Insert Table 9 here.]

Second, we show the empirical results of log-transformed OLS models in Table 10 as the comparison with those of negative binomial models. Since neither total citations nor annual citations are normally distributed, log-transformed number of citations is widely used as the

dependent variables in the literature (e.g., Ederington, 1974; Laband and Piette, 1994; Brogaard, Engelberg, and Parsons, 2014). However, log-transformed OLS models have disadvantages such as the lack of capability of modeling the dispersion, as well as the loss of data of uncited articles[10]. Given the fact that we use the log form as the default link function for the negative binomial regressions and the fact that log-transformed OLS models are popular in previous studies, we still show the results of log OLS models in Table 10. We find that among the 25 independent variables, 4 variables change significance for *Google Scholar* citations (for both log (*Citation_GS*) and log (*Citation_GS_Annual1*)), 5 variables change significance for *Web of Science* citations (for both log (*Citation_WOS*) and log (*Citation_WOS_Annual1*)), and all other variables have similar results. We allow for such difference to distinguish between log-transformed OLS model and negative binomial models.

[Insert Table 10 here.]

Third, we conduct adjustment for heterogeneity by reporting robust standard errors in Table 11. The results for *Citation_GS* in Table 11 Column 1 are quite similar with those in Table 7 Column 1, except that the coefficient of the number of authors becomes significant at 10% level after adjustment of heteroskedasticity. The results for *Citation_WOS* in Table 11 Column 3 are very similar with those in Table 8 Column 1, with the exceptions of the number of seminars, the number of RAs, and the number of pictures. These three variables become insignificant after the heteroskedasticity adjustment. The annual numbers of citations (*Citation_GS_Annual1* and *Citation_WOS_Annual1*) do not exhibit more changes than total number of citations. Considering the complexity of the research question and the number of independent variables (25 independent

[10] To deal with papers without any citations, we also tried log (1+citations) and found similar results.

variables), we conclude that heteroskedasticity is not a serious problem for our empirical examinations.

[Insert Table 11 here.]

Fourth, we conduct regressions on winsorized citations by removing the top 1% highly cited papers. We follow Brogaard, Engelberg, and Parsons (2014) by using winsorized data to see whether our empirical results are driven by outliers (i.e., those super star papers). Specifically, we remove the 34 most-cited papers from the total sample. In Table 11 Column 1, the results are robust for *Citation_GS* as most of the independent variables exhibit consistent sign, significance, and magnitude compared with those of the total sample. Only the coefficients of number of pages and internal collaboration change statistical significance. In Table 11 Column 2 for *Citation_GS_Annual1*, the results are quite similar with those in Table 9 Column 1, except internal collaboration and abstract length change significance. As for *Citation_WOS* and *Citation_WOS_Annual1*, the common significance changes reside in internal collaboration, the number of seminars, pictures, and appendices. Overall, based on the winsorized sample with the most-cited papers ignored, the results in Table 12 are similar with previous results, especially for *Google Scholar* citations.

[Insert Table 12 here.]

Fifth, we examine the non-linear effects of non-dummy independent variables by adding the quadratic forms. By and large, we find these quadratic forms generate insignificant results and extremely small magnitude. We do not report the results of quadratic terms to make our paper concise.

6. The Marginal Effects of Negative Binomial Models

In previous sections, it is not straightforward to quantify the effects of different drivers of research impact as the models are non-linear, so we provide the average marginal effects in Table 13. The dependent variables are *Citation_GS*, *Citation_GS_Annual*, *Citation_WOS*, *Citation_WOS_Annual* respectively in the four columns. The sign and significance of the coefficients of paper characteristics are consistent with the results in previous sections. Among the three perspectives, the universalist perspective has the largest influences on citations. For example, one more author from the top 20 finance department in the world is associated with 24.9 additional total citations and 2.91 additional annual citations in *Google Scholar*, 4.85 additional total citations and 0.51 additional annual citations in *Web of Science*; if a paper is placed as the lead paper in a journal issue, it is associated with 39.54 additional total citations and 4.60 additional annual citations in *Google Scholar*, 6.76 additional total citations and 0.64 additional annual citations in *Web of Science.* Compared with the universalist perspective, the other two perspectives have smaller influences in economic significance. In the constructivist perspective, the number of conferences has the largest magnitude among the paper characteristics that are statistically significant for all four dependent variables; in the presentation perspective, the number of tables has the largest magnitude for statistically significant results. For the effects of other variables, journal placement in *Journal of Finance* and paper age (i.e. the numbers of years since publication) have stronger effects than any paper characteristics in all three perspectives. These results provide direct evidence for those who are concerned with the number of citations of their papers in the top three finance journals.

[Insert Table 13]

7. Conclusion

Little is known about how paper characteristics change over time, how paper characteristics differ between more influential papers and less influential papers, and what are the impact drivers of the published papers in finance literature. In this paper, we try to answer these questions based on the hand-collected data for the published papers in the top three finance journals over the period 2000-2013. We employ three different theoretical perspectives: the universalist perspective (what is said), the social constructivist perspective (who says it), and the presentation perspective (how it is said), and have four main findings:

First, most of the paper characteristics in the social constructivist perspective (visibility and personal promotion) and the presentation perspective (fist-page attention and expositional clarity) increase over time, while most of the paper characteristics in the universalist perspective (quality and domain) remain constant.

Second, most of the paper characteristics are significantly different between the top 10% and the bottom 10% papers based on the number of citations per year. Generally speaking, the more influential papers have larger number of authors from the top 20 finance departments, larger number of pages, smaller paper order and higher proportion of lead papers, longer paper age, working paper age, and total paper age, higher empirical orientation, larger number of authors, higher level of external collaboration and financial support, larger numbers of acknowledgements, conferences, seminars, and RAs, more references, shorter title length, larger number of tables and footnotes, and less appendix setting.

Third, the regression results by negative binomial models show that the universalist perspective, the social constructivist perspective, and the presentation perspective all provide

drivers of research impact. Specifically, paper quality, research methods, journal placement, and paper age are the most important (in economic significance) drivers for the number of citations. In our analysis, *Web of Science* citations generate congruent results to *Google Scholar* citations. Additionally, our results are robust to redefined citation measures, alternative econometric specifications, heteroskedasticity adjustment, and winsorized sample. The results of average marginal results document exact evidence in how many additional citations are increased with one more unit of a certain paper characteristics.

Last but not least, different drivers play different roles for the papers in *Journal of Finance*, *Journal of Financial Economics*, and *Review of Financial Studies*. For example, theoretical papers in *Journal of Financial Economics* and *Review of Financial Studies* receive significantly fewer citations than empirical papers but this relation is insignificant for papers in *Journal of Finance*; larger number of pages significantly relates to the number of citations of papers in *Journal of Finance*, but not in *Journal of Financial Economics* or *Review of Financial Studies* (in Table 7 and 8).

Our main contributions are five-fold. First, we track the characteristics dynamics for papers in the top three finance journals. Second, we characterize how star papers differ from less influential papers. Third, we find multiple drivers (and their effects and relative importance) of research impact in the finance area. Fourth, we justify that both *Web of Science* and *Google Scholar* are objective sources of citations and that they generate congruent empirical results. Fifth, our results contribute to the literature of scientometrics by documenting evidence in financial research for comparison with other knowledge areas. Our results can provide empirical evidence for finance scholars, university administrators, and finance journal management who aim to maximize research impact. Research impact is not only about career path for the scholars, the school rankings

for the deans, or the journal impact factors for the editors, but also, much more importantly, about the dissemination and advancement of knowledge.

Appendix 1: Descriptions of Variables

Variable	Definition and Measurement
Dependent Variables	
Citation_GS	The number of Google Scholar (GS) citations the paper has received until the last quarter of 2014.
Citation_WOS	The number of Web of Science (WOS) citations the paper has received until the last quarter of 2014.
Citation_GS_Annual	*Citation_GS* divided by *Paper Age.*
Citation_WOS_Annual	*Citation_WOS* divided by *Paper Age.*
Citation_GS_Annual2	*Citation_GS* divided by *Total Paper Age.*
Citation_WOS_Annual2	*Citation_WOS* divided by *Total Paper Age.*
Independent Variables	
Universalism	
Quality	
Top Schools	The number of authors who are in the top 20 finance departments of business schools. The top finance department list provided by UT Dallas includes top 20 world ranking of finance departments based on research contribution in *Journal of Finance*, *Journal of Financial Economics* and *Review of Financial Studies* during 2009-2013. Please refer to Appendix 2 for details.
Pages	The total number of pages of the paper.
Order	Paper order in a journal issue.
Lead Paper	A dummy that equals 1 if *Order*=1 for the paper; Otherwise 0.
Domain	
Methods	If the paper is purely theoretical, *then Methods*=1; If the paper is purely empirical, then *Methods*=0; If mixed methods are used, then *Methods*=0.5.
Social Constructivism	
Visibility	
Authors	The number of authors of the paper.
Internal Collaboration	If all of the authors are from the same school, then *Internal Collaboration*=1; If some (but not all) of the authors from the same school, then *Internal Collaboration*=0.5; if none of the authors are from the same school, then *Internal Collaboration*=0.
Financial Support	A dummy variable that equals 1 if the paper has received financial support; Otherwise *Financial Support*=0.
Acknowledgement	The number of persons being acknowledged in the acknowledgement part in the paper.
Conferences	The number of conferences where the paper has been presented.
Seminars	The number of department seminars where the paper has been presented.
RAs	The number of research assistants for the paper.
Personal Promotion	
References	The number of references in the reference part of the paper.
Presentation	
First-Page Attention	
Title Length	The number of words in the title of the paper.
Subtitle	If there is a subtitle (separated by: or --) in the paper, then *Subtitle*=1; otherwise *Subtitle*=0.

Abstract Length	The number of words in the abstract of the paper.
Key Words	The number of key words. This variable is only available for papers in *Journal of Financial Economics*.
Codes	The number of codes in JEL classification. This variable is only available for papers in *Journal of Financial Economics*.
Expositional Clarity	
Tables	The number of tables in the paper.
Pictures	The number of pictures in the paper.
Footnotes	The number of footnotes in the paper.
Appendices	If there is at least one appendix in the paper, then *Appendices* dummy=1; otherwise *Appendices*=0.
Other Variables	
Publication Year	The year when the paper was published.
Appearance Year	The year when the paper first appeared on the web (mostly likely a working paper).
Paper Age	*Paper Age*=2014-*Publication Year*+1.
Total Paper Age	*Total Paper Age=2014-AppearanceYear+1.*
Working Paper Age	*Working Paper Age=Total Paper Age-Paper Age =Publication Year-Appearance Year.*
JF	*A dummy equals 1 if the paper was published in JF and 0 otherwise.*
JFE	*A dummy equals 1 if the paper was published in JFE and 0 otherwise.*
RFS	*A dummy equals 1 if the paper was published in RFS and 0 otherwise.*

Appendix 2: Top 20 World Ranking of Finance Departments: from 2009 to 2013[11]

Appendix 2 is provided by UT Dallas: The UTD Research Rankings of the Top 100 Finance Departments (Web link: http://jindal.utdallas.edu/the-utd-top-100-business-school-research-rankings/). The database was still in the process of updating the 2014 articles in our writing period, so we chose the most recent five years (from 2009 to 2013) for investigation. We only keep the top 20 schools in the list which is based on research contribution in *Journal of Finance*, *Journal of Financial Economics*, and *Review of Financial Studies*.

Rank	University (Business School)	Articles	Score	Country
1	University of Pennsylvania (The Wharton School)	82	38.47	USA
2	University of Chicago (Booth School of Business)	88	38.25	USA
3	Harvard University (Harvard Business School)	78	34.23	USA
4	New York University (Leonard N. Stern School of Business)	90	33.54	USA
5	Columbia University (Graduate School of Business)	72	27.79	USA
6	University of North Carolina at Chapel Hill (Kenan-Flagler Business School)	47	26.30	USA
7	University of California at Los Angeles (Anderson School of Management)	47	21.39	USA
8	Duke University (The Fuqua School of Business)	51	21.08	USA
9	University of California at Berkeley (Walter A. Haas School of Business)	44	20.33	USA
10	Ohio State University (Fisher College of Business)	55	19.73	USA
11	Stanford University (Graduate School of Business)	43	18.95	USA
12	Northwestern University (Kellogg School of Management)	45	18.86	USA
13	University of Maryland at College Park (Robert H. Smith School of Business)	37	18.35	USA
14	University of Texas at Austin (McCombs School of Business)	44	18.26	USA
15	University of Michigan at Ann Arbor (Ross School of Business)	39	18.24	USA
16	University of Southern California (Marshall School of Business)	33	16.83	USA
17	Massachusetts Institute of Technology (Sloan School of Management)	47	16.78	USA
18	London Business School	49	16.58	UK
19	University of Notre Dame (Mendoza College of Business)	23	15.66	USA
20	Boston College (Carroll School of Management)	34	14.84	USA

[11] We also check other UTD rankings based on different year ranges and the finance rankings provided by ASU (http://legacy.wpcarey.asu.edu/fin-rankings/rankings/results.cfm). We find that 90% of the schools in the list in Appendix 2 never drop out of the top 20 in any rankings. Also, 80% of the schools in the list in Appendix 2 are consistent with the rankings based on financial research in Chan, Chen, and Steiner (2002) and Xu, Chan and Chang (2015).

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Table 1: The Top 50 Most-Cited Papers in the Top Three Finance Journals: 2000-2013

Panel A: Ranking Based on the Total Number of Citations

Table 1 Panel A provides the list of the top 50 most-cited published papers in the top 3 finance journals during 2000-2013 based on the total number of citations in Google Scholar. The *GS Rank* represents the Google Scholar rank; we also provide the Web of Science rank as *WOS Rank* for comparison. *Year* denotes the *Publication Year*.

GS Rank	*WOS Rank*	*Authors*	*Title*	*Year*	*Journal*
1	2	La Porta, R., Lopez-de-Silanes, F., Shleifer, A. and Vishny, R.	Investor protection and corporate governance	2000	JFE
2	1	Petersen, M.A.	Estimating standard errors in finance panel data sets: comparing approaches	2009	RFS
3	3	Claessens, S., Djankov, S. and Lang, L.H.	The separation of ownership and control in East Asian corporations	2000	JFE
4	7	Graham, J.R. and Harvey, C.R.	The theory and practice of corporate finance: evidence from the field	2001	JFE
5	4	La Porta, R., Lopez-de-Silanes, F., Shleifer, A. and Vishny, R.	Investor protection and corporate valuation	2002	JF
6	5	Claessens, S., Djankov, S., Fan, J.P. and Lang, L.H.	Disentangling the incentive and entrenchment effects of large shareholdings	2002	JF
7	8	Anderson, R.C. and Reeb, D.M.	Founding-family ownership and firm performance: evidence from the S&P 500	2003	JF
8	11	Beck, T., Levine, R. and Loayza, N.	Finance and the sources of growth	2000	JFE
9	9	Forbes, K.J. and Rigobon, R.	No contagion, only Interdependence: measuring stock market comovements	2002	JF
10	10	Faccio, M. and Lang, L.H.	The ultimate ownership of Western European corporations	2002	JFE
11	13	Dyck, A. and Zingales, L.	Private benefits of control: an international comparison	2004	JF
12	6	Longstaff, F.A. and Schwartz, E.S.	Valuing American options by simulation: a simple least-squares approach	2001	RFS
13	29	Baker, M. and Wurgler, J.	Market timing and capital structure	2002	JF
14	14	Leuz, C., Nanda, D. and Wysocki, P.D.	Earnings management and investor protection: an international comparison	2003	JFE
15	22	La Porta, R., Lopez‐de‐Silanes, F., Shleifer, A. and Vishny, R.W.	Agency problems and dividend policies around the world	2000	JF
16	33	Fama, E.F. and French, K.R.	Testing trade-off and pecking order predictions about dividends and debt	2002	RFS
17	12	Rajan, R.G. and Zingales, L.	The great reversals: the politics of financial development in the twentieth century	2003	JFE

18	40	Brunnermeier, M.K. and Pedersen, L.H.	Market liquidity and funding liquidity	2009	RFS
19	15	Barber, B.M. and Odean, T.	Trading is hazardous to your wealth: the common stock investment performance of individual investors	2000	JF
20	30	Ritter, J.R. and Welch, I.	A review of IPO activity, pricing, and allocations	2002	JF
21	38	Fama, E.F. and French, K.R.	Disappearing dividends: changing firm characteristics or lower propensity to pay?	2001	JFE
22	16	Campbell, J.Y., Lettau, M., Malkiel, B.G. and Xu, Y.	Have individual stocks become more volatile? An empirical exploration of idiosyncratic risk	2001	JF
23	73	Acharya, V.V. and Pedersen, L.H.	Asset pricing with liquidity risk	2005	JFE
24	24	Bansal, R. and Yaron, A.	Risks for the long run: a potential resolution of asset pricing puzzles	2004	JF
25	81	Bebchuk, L., Cohen, A. and Ferrell, A.	What matters in corporate governance?	2009	RFS
26	25	Longin, F. and Solnik, B.	Extreme correlation of international equity markets	2001	JF
27	21	Easley, D. and O'hara, M.	Information and the cost of capital	2004	JF
28	20	Dai, Q. and Singleton, K.J.	Specification analysis of affine term structure models	2000	JF
29	34	La Porta, R., Lopez ‐ de ‐ Silanes, F. and Shleifer, A.	Government ownership of banks	2002	JF
30	50	Allen, F., Qian, J. and Qian, M.	Law, finance, and economic growth in China	2005	JFE
31	37	Jegadeesh, N. and Titman, S.	Profitability of momentum strategies: an evaluation of alternative explanations	2001	JF
32	19	Villalonga, B. and Amit, R.	How do family ownership, control and management affect firm value?	2006	JFE
33	71	Booth, L., Aivazian, V., Demirguc-Kunt, A. and Maksimovic, V.	Capital structures in developing countries	2001	JF
34	41	Hirshleifer, D.	Investor psychology and asset pricing	2001	JF
35	26	Porta, R., Lopez-de-Silanes, F. and Shleifer, A.	What works in securities laws?	2006	JF
36	31	Hong, H., Lim, T. and Stein, J.C.	Bad news travels slowly: size, analyst coverage, and the profitability of momentum strategies	2000	JF
37	23	Andersen, T.G., Bollerslev, T., Diebold, F.X. and Ebens, H.	The distribution of realized stock return volatility	2001	JFE
38	52	Malmendier, U. and Tate, G.	CEO overconfidence and corporate investment	2005	JF
39	36	Bekaert, G. and Harvey, C.R.	Foreign speculators and emerging equity markets	2000	JF
40	42	Ang, A., Hodrick, R.J., Xing, Y. and Zhang, X.	The cross-section of volatility and expected returns	2006	JF
41	51	Baker, M. and Wurgler, J.	Investor sentiment and the cross-section of stock returns	2006	JF

42	48	Hellmann, T. and Puri, M.	Venture capital and the professionalization of start-up firms: empirical evidence	2002	JF
43	17	Morck, R., Yeung, B. and Yu, W.	The information content of stock markets: why do emerging markets have synchronous stock price movements?	2000	JFE
44	39	Djankov, S., La Porta, R., Lopez-de-Silanes, F. and Shleifer, A.	The law and economics of self-dealing	2008	JFE
45	18	Khanna, T. and Palepu, K.	Is group affiliation profitable in emerging markets? An analysis of diversified Indian business groups	2000	JF
46	43	Wurgler, J.	Financial markets and the allocation of capital	2000	JFE
47	62	Shleifer, A. and Vishny, R.W.	Stock market driven acquisitions	2003	JFE
48	57	Almeida, H., Campello, M. and Weisbach, M.S.	The cash flow sensitivity of cash	2004	JF
49	74	Bekaert, G., Harvey, C.R. and Lundblad, C.	Does financial liberalization spur growth?	2005	JFE
50	45	Harvey, C.R. and Siddique, A.	Conditional skewness in asset pricing tests	2000	JF

Panel B: Ranking Based on the Number of Citations per Year

Table 1 Panel B provides the list of the top 50 most-cited published papers in the top 3 finance journals during 2000-2013 based on the number of citations per year in Google Scholar. The number of citations per year is the total number of citations divided by *Paper Age*. The *GS p.a. Rank* represents the Google Scholar rank; we also provide the Web of Science rank as *WOS p.a. Rank* for comparison. *Year* denotes the *Publication Year*.

GS p.a. Rank	*WOS p.a. Rank*	*Authors*	*Title*	*Year*	*Journal*
1	1	Petersen, M.A.	Estimating standard errors in finance panel data sets: comparing approaches	2009	RFS
2	2	La Porta, R., Lopez-de-Silanes, F., Shleifer, A. and Vishny, R.	Investor protection and corporate governance	2000	JFE
3	3	Brunnermeier, M.K. and Pedersen, L.H.	Market liquidity and funding liquidity	2009	RFS
4	19	Bebchuk, L., Cohen, A. and Ferrell, A.	What matters in corporate governance?	2009	RFS
5	4	Claessens, S., Djankov, S. and Lang, L.H.	The separation of ownership and control in East Asian Corporations	2000	JFE
6	6	La Porta, R., Lopez-de-Silanes, F., Shleifer, A. and Vishny, R.	Investor protection and corporate valuation	2002	JF
7	14	Graham, J.R. and Harvey, C.R.	The theory and practice of corporate finance: evidence from the field	2001	JFE
8	109	Gorton, G. and Metrick, A.	Securitized banking and the run on repo	2012	JFE
9	8	Anderson, R.C. and Reeb, D.M.	Founding-family ownership and firm performance: evidence from the S&P 500	2003	JF
10	9	Djankov, S., La Porta, R., Lopez-de-Silanes, F. and Shleifer, A.	The law and economics of self-dealing	2008	JFE
11	11	Dyck, A. and Zingales, L.	Private benefits of control: an international comparison	2004	JF
12	7	Claessens, S., Djankov, S., Fan, J.P. and Lang, L.H.	Disentangling the incentive and entrenchment effects of large shareholdings	2002	JF
13	83	Asness, C.S., Moskowitz, T.J. and Pedersen, L.H.	Value and momentum everywhere	2013	JF
14	16	Forbes, K.J. and Rigobon, R.	No contagion, only Interdependence: measuring stock market comovements	2002	JF
15	124	Demyanyk, Y. and Van Hemert, O.	Understanding the subprime mortgage crisis	2011	RFS
16	18	Faccio, M. and Lang, L.H.	The ultimate ownership of Western European corporations	2002	JFE
17	17	Leuz, C., Nanda, D. and Wysocki, P.D.	Earnings management and investor protection: an international comparison	2003	JFE

18	36	Barber, B.M. and Odean, T.	All that glitters: the effect of attention and news on the buying behavior of individual and institutional investors	2008	RFS
19	10	Villalonga, B. and Amit, R.	How do family ownership, control and management affect firm value?	2006	JFE
20	12	Porta, R., Lopez-de-Silanes, F. and Shleifer, A.	What works in securities laws?	2006	JF
21	59	Acharya, V.V. and Pedersen, L.H.	Asset pricing with liquidity risk	2005	JFE
22	15	Rajan, R.G. and Zingales, L.	The great reversals: the politics of financial development in the twentieth century	2003	JFE
23	33	Baker, M. and Wurgler, J.	Market timing and capital structure	2002	JF
24	25	Beck, T., Levine, R. and Loayza, N.	Finance and the sources of growth	2000	JFE
25	20	Ang, A., Hodrick, R.J., Xing, Y. and Zhang, X.	The cross-section of volatility and expected returns	2006	JF
26	24	Baker, M. and Wurgler, J.	Investor sentiment and the cross-section of stock returns	2006	JF
27	27	Allen, F., Qian, J. and Qian, M.	Law, finance, and economic growth in China	2005	JFE
28	44	Fama, E.F. and French, K.R.	Testing trade-off and pecking order predictions about dividends and debt	2002	RFS
29	13	Longstaff, F.A. and Schwartz, E.S.	Valuing American options by simulation: a simple least-squares approach	2001	RFS
30	23	Djankov, S., McLiesh, C. and Shleifer, A.	Private credit in 129 countries	2007	JFE
31	30	Coles, J.L., Daniel, N.D. and Naveen, L.	Boards: Does one size fit all?	2008	JFE
32	22	Bansal, R. and Yaron, A.	Risks for the long run: a potential resolution of asset pricing puzzles	2004	JF
33	29	Malmendier, U. and Tate, G.	CEO overconfidence and corporate investment	2005	JF
34	68	Ivashina, V. and Scharfstein, D.	Bank lending during the financial crisis of 2008	2010	JFE
35	21	Easley, D. and O'hara, M.	Information and the cost of capital	2004	JF
36	568	Acharya, V.V., Schnabl, P. and Suarez, G.	Securitization without risk transfer	2013	JFE
37	46	La Porta, R., Lopez‐de‐Silanes, F., Shleifer, A. and Vishny, R.W.	Agency problems and dividend policies around the world	2000	JF
38	61	Bekaert, G., Harvey, C.R. and Lundblad, C.	Does financial liberalization spur growth?	2005	JFE
39	34	Ritter, J.R. and Welch, I.	A Review of IPO activity, pricing, and allocations	2002	JF
40	76	Bates, T.W., Kahle, K.M. and Stulz, R.M.	Why do U.S. firms hold so much more cash than they used to?	2009	JF
41	125	Hendershott, T., Jones, C.M. and Menkveld, A.J.	Does algorithmic trading improve liquidity?	2011	JF
42	85	Malmendier, U. and Tate, G.	Who makes acquisitions? CEO overconfidence and the market's reaction	2008	JFE

43	48	Almeida, H., Campello, M. and Weisbach, M.S.	The cash flow sensitivity of cash	2004	JF
44	66	Adams, R.B. and Ferreira, D.	A theory of friendly boards	2007	JF
45	58	Welch, I. and Goyal, A.	A comprehensive look at the empirical performance of equity premium prediction	2008	RFS
46	45	La Porta, R., Lopez - de - Silanes, F. and Shleifer, A.	Government ownership of banks	2002	JF
47	26	Barber, B.M. and Odean, T.	Trading is hazardous to your wealth: the common stock investment performance of individual investors	2000	JF
48	55	Campbell, J.Y.	Household finance	2006	JF
49	64	Fama, E.F. and French, K.R.	Disappearing dividends: changing firm characteristics or lower propensity to pay?	2001	JFE
50	50	Laeven, L. and Levine, R.	Bank governance, regulation and risk taking	2009	JFE

Table 2: Summary Statistics for the Whole Sample

Panel A presents the summary statistics for the whole sample which includes 3365 published papers in *Journal of Finance*, *Journal of Financial Economics*, and *Review of Financial Studies* from 2010 to 2013. All variables in Table 2 are defined in Appendix 1. Panel B shows the time-series trends for the means of key independent variables (paper characteristics) over 2010-2013.

Panel A: Summary Statistics

Variables	Mean	Median	Std Dev	N	Min	Max	Q1	Q3
Citation_GS	207.61	106	318.02	3365	0	4956	44	240
Citation_WOS	42.04	20	67.60	3365	0	987	7	49
Citation_GS_Annual	24.63	15.86	30.34	3365	0	657.83	7.80	30.33
Citation_WOS_Annual	4.59	2.79	6.27	3365	0	164.50	1.25	5.75
Citation_GS_Annual2	19.60	12.17	24.20	3365	0	358.82	6.00	23.83
Citation_WOS_Annual2	3.79	2.22	5.10	3365	0	89.73	1.00	4.75
Lead	0.10	0	0.31	3365	0	1	0	0
Order	5.87	5	3.61	3365	1	18	3	8
Authors	2.27	2	0.84	3365	1	5	2	3
Internal Collaboration	0.32	0	0.43	3365	0	2	0	1
Top Schools	0.77	1	0.89	3365	0	4	0	1
Abstract Length	107.52	100	25.33	3365	46	344	97	111
Title Length	8.67	8	3.34	3365	1	23	6	11
Subtitle	0.29	0	0.45	3365	0	1	0	1
Pages	31.75	32	9.61	3365	12	81	25	38
Footnotes	18.63	18	10.39	3365	0	90	11	25
Financial Support	0.42	0	0.49	3365	0	1	0	1
Acknowledgement	11.90	11	7.71	3365	0	101	7	16
Conferences	2.99	2	3.04	3365	0	36	1	4
Seminars	4.80	4	4.60	3365	0	32	1	7
RAs	0.67	0	1.52	3365	0	23	0	1
Methods	0.49	0.5	0.30	3365	0	1	0.5	0.5
References	42.08	40	20.61	3365	11	598	30	50
Tables	6.73	7	3.81	3365	0	26	5	9
Pictures	2.52	2	2.81	3365	0	21	0	4
Appendix	0.59	1	0.49	3365	0	1	0	1
Publication Year	2007.26	2008	3.96	3365	2000	2013	2004	2011
Appearance Year	2005.62	2006	3.92	3365	1996	2013	2002	2009
Paper Age	7.74	7	3.96	3365	2	15	4	11
Total Paper Age	9.38	9	3.92	3365	2	19	6	13
Working Paper Age	1.65	1	1.52	3365	0	11	0	3

Panel B: Trends for the Means of Paper Characteristics

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Top Schools	0.73	0.82	0.86	0.63	0.66	0.79	0.77	0.82	0.69	0.85	0.83	0.74	0.74	0.76
Pages	31.70	31.49	31.11	31.50	32.09	35.07	34.20	34.82	30.95	31.31	31.21	30.17	30.60	30.07
Order	6.07	5.56	6.05	6.10	5.88	5.84	5.91	5.95	6.37	6.11	5.56	5.67	5.30	5.94
Lead Paper	0.12	0.12	0.11	0.12	0.11	0.11	0.10	0.10	0.09	0.09	0.10	0.10	0.11	0.10
Methods	0.50	0.46	0.47	0.46	0.50	0.49	0.49	0.51	0.47	0.53	0.49	0.47	0.50	0.51
Authors	2.00	2.02	2.10	2.09	2.12	2.14	2.15	2.35	2.32	2.33	2.44	2.42	2.39	2.43
Internal Collaboration	0.18	0.28	0.29	0.30	0.32	0.30	0.42	0.36	0.35	0.37	0.32	0.32	0.30	0.33
Financial Support	0.37	0.37	0.36	0.37	0.43	0.39	0.40	0.36	0.48	0.46	0.47	0.43	0.44	0.48
Acknowledgement	9.34	10.36	10.31	10.54	10.33	11.86	11.57	11.37	11.38	13.65	13.37	13.25	12.52	13.23
Conferences	1.51	1.92	2.17	1.99	2.24	2.80	2.41	2.54	3.09	3.31	3.29	4.06	4.27	4.09
Seminars	2.98	3.66	4.28	3.47	4.12	4.74	4.73	4.33	4.48	5.60	5.83	5.17	5.99	5.63
RAs	0.58	0.64	0.66	0.56	0.53	0.59	0.65	0.56	0.65	0.77	0.82	0.58	0.79	0.80
References	35.25	35.69	35.80	38.83	36.76	39.95	40.10	40.92	43.85	42.56	45.39	48.23	46.49	47.92
Title Length	9.10	8.89	8.83	8.83	8.63	8.88	8.32	8.61	8.84	8.38	8.67	8.55	8.61	8.54
Subtitle	0.27	0.34	0.36	0.42	0.34	0.32	0.23	0.26	0.33	0.27	0.28	0.22	0.27	0.26
Abstract Length	101.26	105.60	102.59	103.11	103.61	108.39	105.87	104.70	106.24	114.26	113.03	114.07	105.77	107.68
Tables	5.01	5.62	5.84	5.89	5.87	6.76	6.63	6.69	7.17	7.11	7.14	7.42	7.35	7.74
Pictures	2.22	2.32	2.25	1.76	2.36	2.46	2.27	2.87	2.46	2.23	2.74	2.62	2.95	3.17
Footnotes	13.40	14.42	15.55	15.37	15.56	16.85	17.17	19.63	18.01	21.02	21.81	21.84	20.88	21.40
Appendices	0.44	0.54	0.58	0.52	0.56	0.62	0.60	0.67	0.54	0.57	0.58	0.63	0.63	0.70
Working Paper Age	0.79	1.01	1.14	1.19	1.29	1.57	1.91	1.83	1.78	2.06	1.89	1.78	1.81	2.06

Table 3: Comparison of Summary Statistics for JF, JFE, and RFS

Table 3 compares the summary statistics for the variables that are defined in Appendix 1 for published papers in *Journal of Finance*, *Journal of Financial Economics*, and *Review of Financial Studies* from 2010 to 2013. All variables in Table 3 are defined in Appendix 1.

	Mean			Median			Std Dev		
	JFE	**RFS**	**JF**	**JFE**	**RFS**	**JF**	**JFE**	**RFS**	**JF**
	N=1284	**N=973**	**N=1108**	**N=1284**	**N=973**	**N=1108**	**N=1284**	**N=973**	**N=1108**
Citation_GS	182.85	147.21	289.34	83.5	79	162	319.53	238.07	358.67
Citation_WOS	36.79	28.45	60.07	16	14	33	64.51	51.77	78.69
Citation_GS_Annual	22.12	20.67	31.02	13.5	13.22	21.82	28.37	31.64	30.40
Citation_WOS_Annual	4.08	3.66	5.98	2.43	2.33	4	5.47	6.68	6.52
Citation_GS_Annual2	17.89	14.82	25.78	10.67	9.75	17.47	23.87	19.67	26.81
Citation_WOS_Annual2	3.43	2.75	5.14	2	1.75	3.22	4.80	4.23	5.80
Lead	0.13	0.10	0.08	0	0	0	0.33	0.31	0.26
Order	4.85	5.57	7.32	4	5	7	2.96	3.20	4.15
Authors	2.30	2.26	2.23	2	2	2	0.84	0.84	0.85
Internal Collaboration	0.35	0.36	0.25	0	0	0	0.44	0.44	0.40
Top Schools	0.77	0.86	0.68	0	1	1	0.93	0.93	0.79
Abstract Length	114.31	110.39	97.13	104	101	98	30.68	25.76	10.37
Title Length	8.71	8.55	8.71	8	8	8	3.29	3.26	3.47
Subtitle	0.26	0.26	0.36	0	0	0	0.44	0.44	0.48
Pages	26.54	36.37	33.72	25	36	34	8.97	8.14	8.65
Footnotes	15.37	21.31	20.05	13	21	20	10.35	10.00	9.77
Financial Support	0.43	0.48	0.37	0	0	0	0.50	0.50	0.48
Acknowledgement	11.60	12.96	11.31	10	12	10	7.82	8.12	7.11
Conferences	2.65	3.31	3.11	2	3	2	2.73	2.98	3.39
Seminars	4.27	5.28	4.98	3	4	4	4.53	4.66	4.58
RAs	0.66	0.59	0.75	0	0	0	1.44	1.46	1.65
Methods	0.45	0.55	0.48	0.5	0.5	0.5	0.32	0.28	0.28
References	42.31	43.64	40.44	40	42	38	17.74	17.00	25.83
Tables	7.54	6.34	6.13	8	7	6	3.73	4.01	3.56
Pictures	2.45	2.92	2.26	2	2	1	2.80	2.89	2.71
Appendix	0.60	0.68	0.50	1	1	1	0.49	0.47	0.50
Publication Year	2007.72	2008.08	2006.02	2008	2009	2006	3.94	3.68	3.92
Appearance Year	2006.19	2006.04	2004.58	2007	2006	2004	3.95	3.85	3.73
Paper Age	7.28	6.92	8.98	7	6	9	3.94	3.68	3.92
Total Paper Age	8.81	8.96	10.42	8	9	11	3.95	3.85	3.73
Working Paper Age	1.52	2.05	1.45	1	2	1	1.43	1.67	1.41

Table 4: Frequency of Citations

Table 4 counts the frequency of the number of citations of the papers in the whole sample. The columns show the groups of frequency, the rows show the frequency for each of the top three finance journal. For each journal, the second line below the frequency is the corresponding percentage of the total sample size. Panel A refers to the Google Scholar citations; Panel B refers to the Web of Science citations. In both Panel A and Panel B, the p-values of Chi-Square, Likelihood Ratio Chi-Square, and Mantel-Haenszel Chi-Square are all smaller than 0.001 (not reported in Table 4), which means the distribution of citation groups are significantly different among the top 3 finance journals.

Panel A: The Frequency of Google Scholar Citations (*Citation_GS*)

	0-250	250-500	500-750	750-1000	1000-1250	1250-5000	Total
JF	**715**	**216**	**85**	**34**	**24**	**34**	**1108**
Percentage	21.25	6.42	2.53	1.01	0.71	1.01	32.93
JFE	**1026**	**159**	**51**	**20**	**8**	**20**	**1284**
Percentage	30.49	4.73	1.52	0.59	0.24	0.59	38.16
RFS	**824**	**104**	**24**	**10**	**5**	**6**	**973**
Percentage	24.49	3.09	0.71	0.3	0.15	0.18	28.92
Total	**2565**	**479**	**160**	**64**	**37**	**60**	**3365**
Percentage	76.23	14.23	4.75	1.9	1.1	1.78	100

Panel B: The Frequency of Web of Science Citations (*Citation_WOS*)

	0-50	50-100	100-150	150-200	200-250	250-1000	Total
JF	**699**	**219**	**83**	**43**	**24**	**40**	**1108**
Percentage	20.77	6.51	2.47	1.28	0.71	1.19	32.93
JFE	**1019**	**158**	**57**	**21**	**10**	**19**	**1284**
Percentage	30.28	4.7	1.69	0.62	0.3	0.56	38.16
RFS	**830**	**100**	**18**	**13**	**8**	**4**	**973**
Percentage	24.67	2.97	0.53	0.39	0.24	0.12	28.92
Total	**2548**	**477**	**158**	**77**	**42**	**63**	**3365**
Percentage	75.72	14.18	4.7	2.29	1.25	1.87	100

Table 5 Comparison of Averages between Top 10% and Bottom 10% Citations

Table 5 compares the means and corresponding differences of the variables between top 10% and bottom 10% citations in the total sample. The rankings are based on *Citation_GS_Annual* and *Citation_WOS_Annual* respectively. All variables are defined in Appendix 1. ***, **, * denote significance at 1%, 5%, and 10% level respectively.

	Ranking by Citation_GS_Annual1			Ranking by Citation_WOS_Annual1		
Variables	**Top 10%**	**Bottom 10%**	**Difference**	**Top 10%**	**Bottom 10%**	**Difference**
Annual Citation	91.191	2.355	88.836***	17.989	0.149	17.840***
Top Schools	1.030	0.496	0.534***	0.988	0.626	0.362***
Pages	34.858	28.463	6.395***	35.237	29.202	6.036***
Order	4.350	6.181	-1.831***	4.181	6.220	-2.039***
Lead Paper	0.199	0.062	0.136***	0.178	0.083	0.095***
Working Paper Age	2.024	1.119	0.905***	1.727	1.493	0.234*
Methods	0.418	0.597	-0.178***	0.407	0.566	-0.159***
Authors	2.335	2.065	0.270***	2.332	2.178	0.154**
Internal Collaboration	0.276	0.365	-0.089***	0.282	0.332	-0.050
Financial Support	0.469	0.401	0.068*	0.454	0.436	0.018
Acknowledgement	13.783	10.323	3.460***	13.068	10.908	2.160***
Conferences	3.365	2.015	1.350***	3.166	2.920	0.246
Seminars	5.154	3.534	1.620***	4.828	4.733	0.095
RAs	0.914	0.424	0.490***	0.819	0.644	0.175
References	47.131	36.810	10.320***	46.623	40.955	5.668**
Title Length	8.116	8.964	-0.849***	8.386	8.576	-0.190
Subtitle	0.279	0.252	0.027	0.318	0.249	0.068*
Abstract Length	104.217	106.282	-2.06	103.697	106.614	-2.917
Tables	7.098	5.570	1.528***	7.172	6.095	1.077***
Pictures	2.392	2.564	-0.172	2.522	2.792	-0.270
Footnotes	17.861	16.555	1.306*	17.021	18.955	-1.935**
Appendices	0.573	0.694	-0.122***	0.564	0.671	-0.107***
Paper Age	9.252	6.864	2.389***	10.282	4.970	5.312***
Total paper Age	11.276	7.982	3.294***	12.009	6.463	5.546***

Table 6: Pearson Correlation Coefficients for the Whole Sample

Table 6 presents the Pearson correlation coefficients for the whole sample, where V1= *Citation_GS*, V2=*Citation_WOS*, V3=*Citation_GS_Annual*, V4=*Citation_WOS_Annual*, V5=*Lead*, V6=*Order*, V7=*Authors*, V8=*Internal Collaboration*, V9=*Top Schools*, V10=*Abstract Length*, V11=*Title Length*, V12=*Subtitle*, V13=*Pages*, V14=*Footnotes*, V15=*Financial Support*, V16=*Acknowledgement*, V17=*Conferences*, V18=*Seminars*, V19=*RAs*, V20=*Methods*, V21=*References*, V22=*Tables*, V23=*Pictures*, V24=*Appendices*, V25=*Paper Age*, V26=*Total Paper Age*. All of these variables are defined in Appendix 1. Numbers in grey denotes statistically insignificant correlation coefficients at 10% or higher level.

	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15	V16	V17	V18	V19	V20	V21	V22	V23	V24	V25	V26
Citation_GS	1.00																									
Citation_WOS	0.97	1.00																								
Citation_GS_Annual	0.88	0.82	1.00																							
Citation_WOS_Annual	0.89	0.92	0.92	1.00																						
Lead	0.09	0.08	0.10	0.08	1.00																					
Order	-0.07	-0.06	-0.09	-0.06	-0.46	1.00																				
Authors	0.01	0.00	0.05	0.04	0.04	-0.02	1.00																			
Internal Collaboration	-0.06	-0.06	-0.05	-0.04	-0.01	-0.05	-0.30	1.00																		
Top Schools	0.11	0.10	0.14	0.12	0.13	-0.18	0.23	0.01	1.00																	
Abstract Length	-0.07	-0.08	-0.03	-0.05	0.01	-0.07	0.04	0.03	0.04	1.00																
Title Length	-0.05	-0.02	-0.07	-0.03	-0.05	0.06	0.04	0.00	-0.06	0.05	1.00															
Subtitle	0.02	0.04	0.00	0.03	-0.01	0.08	-0.01	0.01	0.00	-0.02	0.44	1.00														
Pages	0.13	0.13	0.14	0.15	0.03	-0.09	0.02	-0.02	0.08	0.03	0.00	-0.02	1.00													
Footnotes	-0.09	-0.10	-0.01	-0.04	-0.05	0.06	0.08	-0.02	0.06	0.09	0.00	0.03	0.30	1.00												
Financial Support	0.01	0.01	0.04	0.03	0.01	-0.04	0.12	-0.03	0.05	0.05	0.01	0.01	0.06	0.03	1.00											
Acknowledgement	0.03	0.02	0.10	0.07	0.02	-0.03	-0.02	0.03	0.09	0.02	-0.01	-0.03	0.11	0.18	0.09	1.00										
Conferences	0.03	0.04	0.09	0.04	-0.04	-0.01	0.16	-0.06	0.08	0.03	-0.02	-0.02	0.16	0.19	0.10	0.30	1.00									
Seminars	0.00	-0.01	0.08	0.05	0.02	-0.08	0.07	-0.02	0.13	0.00	-0.06	-0.02	0.14	0.16	0.09	0.29	0.37	1.00								
RAs	0.05	0.04	0.11	0.08	0.03	-0.04	0.08	-0.03	0.10	0.00	0.05	0.07	0.05	0.04	0.09	0.07	0.08	0.06	1.00							
Methods	-0.12	-0.12	-0.12	-0.12	-0.01	-0.01	-0.12	0.07	0.04	0.01	-0.12	-0.09	0.06	0.05	-0.03	-0.05	0.00	0.05	-0.18	1.00						
References	0.06	0.04	0.11	0.08	0.02	-0.05	0.02	0.00	0.05	0.06	-0.01	-0.02	0.25	0.31	0.08	0.25	0.14	0.10	0.06	-0.02	1.00					
Tables	0.02	0.01	0.08	0.06	-0.02	-0.01	0.15	-0.01	-0.03	0.10	0.13	0.10	0.12	0.07	0.05	0.10	0.06	0.00	0.12	-0.48	0.11	1.00				
Pictures	-0.02	-0.01	0.01	0.01	0.02	-0.04	-0.03	0.06	0.10	0.05	-0.03	-0.08	0.23	0.08	0.02	0.01	0.07	0.04	-0.05	0.17	0.06	-0.14	1.00			
Appendices	-0.05	-0.05	-0.03	-0.04	0.03	-0.03	-0.03	0.00	0.06	0.05	-0.08	-0.06	0.17	0.10	0.02	0.08	0.09	0.09	-0.06	0.26	0.08	-0.11	0.16	1.00		
Paper Age	0.42	0.45	0.14	0.26	0.02	0.02	-0.17	-0.05	-0.01	-0.10	0.04	0.07	0.07	-0.26	-0.07	-0.15	-0.27	-0.17	-0.04	-0.03	-0.21	-0.19	-0.09	-0.09	1.00	
Total Paper Age	0.43	0.45	0.20	0.29	0.02	0.00	-0.14	-0.06	0.04	-0.09	0.00	0.04	0.11	-0.22	-0.05	-0.11	-0.20	-0.11	-0.03	0.00	-0.18	-0.19	-0.06	-0.07	0.93	1.00

Table 7: The Impact Drivers of Google Scholar Citations

Table 7 shows empirical results for the impact drivers of Google Scholar citations. The dependent variable is *Citation_GS*. All variables are defined in Appendix 1. The results are estimated by negative binomial models. ***, **, * denote significance at 1%, 5%, and 10% level respectively. The standard errors are given in parenthesis.

Variable	All Journals	JF	JFE	RFS
Intercept	1.813***(0.138)	2.588***(0.315)	2.016***(0.235)	1.462***(0.252)
Universalism				
Quality				
Top Schools	0.118***(0.018)	0.082**(0.034)	0.128***(0.029)	0.145***(0.031)
Pages	0.005**(0.002)	0.008*(0.004)	-0.005(0.004)	0.006(0.004)
Order	-0.026***(0.005)	-0.035***(0.007)	-0.052***(0.010)	0.007(0.010)
Lead Paper	0.175***(0.053)	0.043(0.103)	0.189**(0.083)	0.263***(0.100)
Working Paper Age	0.129***(0.010)	0.096***(0.019)	0.080***(0.018)	0.172***(0.017)
Domain				
Methods	-0.317***(0.059)	-0.164(0.105)	-0.378***(0.088)	-0.271**(0.125)
Social Constructivism				
Visibility				
Authors	0.018(0.020)	0.081***(0.031)	0.018(0.033)	-0.083**(0.037)
Internal Collaboration	-0.059(0.036)	0.047(0.063)	-0.114*(0.061)	-0.131**(0.065)
Financial Support	0.016(0.030)	-0.035(0.051)	0.022(0.049)	-0.004(0.054)
Acknowledgement	0.008***(0.002)	0.007*(0.004)	0.011***(0.004)	0.004(0.004)
Conferences	0.028***(0.005)	0.005(0.008)	0.027***(0.010)	0.057***(0.009)
Seminars	0.005(0.003)	0.009(0.006)	0.001(0.006)	0.004(0.006)
RAs	0.040***(0.010)	0.017(0.015)	0.013(0.017)	0.067***(0.019)
Personal Promotion				
References	0.006***(0.001)	0.005***(0.001)	0.007***(0.002)	0.005***(0.002)
Presentation				
First-Page Attention				
Title Length	-0.023***(0.005)	-0.022***(0.008)	-0.028***(0.008)	-0.022**(0.009)
Subtitle	0.027(0.036)	-0.003(0.059)	-0.006(0.06)	0.094(0.070)
Abstract Length	0.001**(0.001)	-0.001(0.002)	0.002***(0.001)	0.000(0.001)
Key Words			-0.017(0.022)	
Codes			0.029*(0.018)	
Expositional Clarity				
Tables	0.026***(0.005)	0.025***(0.009)	0.030***(0.008)	0.038***(0.009)
Pictures	0.007(0.006)	-0.007(0.010)	0.009(0.009)	0.017*(0.010)
Footnotes	-0.006***(0.002)	-0.003(0.003)	-0.007***(0.003)	-0.005*(0.003)
Appendices	-0.065*(0.031)	0.049(0.051)	-0.044(0.054)	-0.199***(0.063)
Other Variables				
JF	0.426***(0.044)			
RFS[12]	-0.086**(0.043)			
Paper Age	0.454***(0.018)	0.363***(0.032)	0.471***(0.031)	0.511***(0.037)
$(Paper\ Age)^2$	-0.015***(0.001)	-0.010***(0.002)	-0.015***(0.002)	-0.019***(0.063)
Dispersion	0.684(0.016)	0.621(0.025)	0.695(0.026)	0.655(0.028)
Value/DF for Deviance	1.114	1.121	1.129	1.129
Value/DF for Pearson χ^2	1.617	1.321	1.611	1.302
Number of Observations	3365	1108	1284	973

[12] The effect of JFE is incorporated into the intercept. If we use JFE rather than RFS, the coefficient of JFE is 0.086** (0.043), and correspondingly, the coefficient of JF becomes 0.512*** (0.040), the intercept becomes 1.727*** (0.144). If we use JFE and RFS in the model, the coefficient of JFE is -0.426*** (0.044), the coefficient of RFS is -0.512*** (0.040), and the intercept is 2.239*** (0.139).

Table 8: The Impact Drivers of Web of Science Citations

Table 8 shows empirical results for the impact drivers of Web of Science citations. The dependent variable is *Citation_WOS*. All variables are defined in Appendix 1. The results are estimated by negative binomial models. ***, **, * denote significance at 1%, 5%, and 10% level respectively. The standard errors are given in parenthesis.

Variable	All Journals	JF	JFE	RFS
Intercept	-1.104***(0.153)	-0.534(0.357)	-1.017***(0.253)	-1.411***(0.279)
Universalism				
Quality				
Top Schools	0.112***(0.019)	0.070*(0.038)	0.118***(0.030)	0.153***(0.033)
Pages	0.005**(0.002)	0.011**(0.005)	-0.006(0.004)	0.007(0.005)
Order	-0.019***(0.005)	-0.031***(0.008)	-0.045***(0.011)	0.014(0.010)
Lead Paper	0.148**(0.057)	0.1049(0.116)	0.190**(0.086)	0.139(0.106)
Working Paper Age	0.083***(0.011)	0.072***(0.022)	0.036*(0.019)	0.107***(0.018)
Domain				
Methods	-0.333***(0.064)	-0.170(0.121)	-0.353***(0.091)	-0.319**(0.133)
Social Constructivism				
Visibility				
Authors	0.050**(0.021)	0.099***(0.035)	0.073**(0.035)	-0.047(0.040)
Internal Collaboration	-0.052(0.039)	0.012(0.071)	-0.100(0.065)	-0.097(0.069)
Financial Support	0.018(0.032)	-0.070(0.058)	0.030(0.052)	0.023(0.058)
Acknowledgement	0.008***(0.002)	0.006(0.004)	0.013***(0.004)	0.006(0.004)
Conferences	0.026***(0.006)	0.015(0.010)	0.017(0.011)	0.054***(0.010)
Seminars	0.007*(0.004)	0.011(0.007)	-0.002(0.006)	0.006(0.006)
RAs	0.040***(0.011)	0.009(0.018)	0.014(0.018)	0.070***(0.020)
Personal Promotion				
References	0.006***(0.001)	0.004***(0.002)	0.007***(0.002)	0.006***(0.002)
Presentation				
First-Page Attention				
Title Length	-0.015***(0.005)	-0.013(0.009)	-0.019**(0.009)	-0.014(0.010)
Subtitle	0.027(0.039)	-0.014(0.066)	-0.026(0.064)	0.104(0.074)
Abstract Length	0.001**(0.001)	0.000(0.003)	0.002**(0.001)	0.001(0.001)
Key Words			-0.006(0.023)	
Codes			0.024(0.019)	
Expositional Clarity				
Tables	0.026***(0.005)	0.029***(0.011)	0.033***(0.009)	0.031***(0.010)
Pictures	0.013**(0.006)	0.001(0.011)	0.015(0.010)	0.018*(0.011)
Footnotes	-0.006***(0.002)	-0.005(0.003)	-0.006**(0.003)	-0.008**90.003)
Appendices	-0.052(0.034)	0.039(0.058)	-0.028(0.057)	-0.181***(0.067)
Other Variables				
JF	0.376***(0.047)			
RFS	-0.051(0.047)			
Paper Age	0.696***(0.020)	0.608***(0.037)	0.741***(0.035)	0.754***(0.041)
$(Paper\ Age)^2$	-0.026***(0.001)	-0.021***(0.002)	-0.028***(0.002)	-0.030***(0.002)
Dispersion	0.743(0.019)	0.766(0.033)	0.696(0.029)	0.676(0.033)
Value/DF for Deviance	1.137	1.180	1.135	1.142
Value/DF for Pearson χ^2	1.542	1.356	1.468	1.343
Number of Observations	3365	1108	1284	973

Table 9: Robustness Check-Redefined Citations (per Year)

Table 9 shows empirical results for the impact drivers of citations per year based on the total sample. The dependent variables in the four columns are *Citation_GS_Annual1, Citation_GS_Annual2, Citation_WOS_Annual1, and Citation_WOS_Annual2* respectively. All variables are defined in Appendix 1. The results are estimated by negative binomial models. ***, **, * denote significance at 1%, 5%, and 10% level respectively. The standard errors are given in parenthesis.

Variable	***Citation_GS_ Annual1***	***Citation_GS_ Annual2***	***Citation_WOS_ Annual1***	***Citation_WOS_ Annual2***
Intercept	1.618***(0.136)	1.111***(0.137)	-1.282***(0.150)	-1.665***(0.155)
Universalism				
Quality				
Top Schools	0.117***(0.018)	0.115***(0.018)	0.109***(0.019)	0.108***(0.019)
Pages	0.005***(0.002)	0.005**(0.002)	0.006***(0.002)	0.006***(0.002)
Order	-0.026***(0.005)	-0.026***(0.005)	-0.019***(0.005)	-0.020***(0.005)
Lead Paper	0.173***(0.053)	0.173***(0.053)	0.132**(0.055)	0.129**(0.056)
Working Paper Age	0.131***(0.010)	0.002(0.010)	0.083***(0.011)	-0.028**(0.011)
Domain				
Methods	-0.311***(0.059)	-0.317***(0.059)	-0.331***(0.062)	-0.338***(0.063)
Social Constructivism				
Visibility				
Authors	0.017(0.019)	0.021(0.019)	0.050**(0.021)	0.054***(0.021)
Internal Collaboration	-0.057(0.036)	-0.055(0.036)	-0.047(0.038)	-0.046(0.039)
Financial Support	0.016(0.030)	0.017(0.030)	0.023(0.032)	0.021(0.032)
Acknowledgement	0.008***(0.002)	0.008***(0.002)	0.008***(0.002)	0.009***(0.002)
Conferences	0.028***(0.005)	0.026***(0.005)	0.026***(0.006)	0.024***(0.006)
Seminars	0.004(0.003)	0.004(0.003)	0.007**(0.004)	0.007**(0.004)
RAs	0.040***(0.010)	0.041***(0.010)	0.038***(0.010)	0.035***(0.010)
Personal Promotion				
References	0.006***(0.001)	0.006***(0.001)	0.006***(0.001)	0.006***(0.001)
Presentation				
First-Page Attention				
Title Length	-0.024***(0.005)	-0.023***(0.005)	-0.018***(0.005)	-0.018***(0.005)
Subtitle	0.037(0.036)	0.035(0.036)	0.046(0.038)	0.048(0.039)
Abstract Length	0.001**(0.001)	0.001**(0.001)	0.001(0.001)	0.001(0.001)
Expositional Clarity				
Tables	0.026***(0.005)	0.026***(0.005)	0.025***(0.005)	0.026***(0.005)
Pictures	0.007(0.006)	0.008(0.006)	0.015**(0.006)	0.015***(0.006)
Footnotes	-0.006***(0.002)	-0.006***(0.002)	-0.007***(0.002)	-0.007***(0.002)
Appendices	-0.059*(0.031)	-0.057*(0.031)	-0.046(0.033)	-0.040(0.034)
Other Variables				
JF	0.423***(0.043)	0.415***(0.044)	0.365***(0.046)	0.360***(0.046)
RFS	-0.107**(0.043)	-0.088**(0.043)	-0.072(0.046)	-0.067(0.047)
Paper Age	0.133***(0.018)	0.240***(0.018)	0.374***(0.020)	0.450***(0.021)
$(Paper\ Age)^2$	-0.004***(0.001)	-0.009***(0.001)	-0.015***(0.001)	-0.018***(0.001)
Dispersion	0.629(0.016)	0.617(0.016)	0.502(0.018)	0.467(0.018)
Value/DF for Deviance	1.086	1.076	1.004	0.954
Value/DF for Pearson χ^2	1.597	1.637	1.526	1.492
Number of Observations	3365	3365	3365	3365

Table 10: Robustness Check-The Log-Transformed OLS Results

Table 10 shows empirical results for the impact drivers of citations based on log-transformed OLS models for the total sample. The dependent variables in the four columns are log (*Citation_GS)*, log *(Citation_GS_Annual1)*, log (*Citation_WOS)*, and *log (Citation_WOS_Annual1)* respectively. All variables are defined in Appendix 1. ***, **, * denote significance at 1%, 5%, and 10% level respectively. The White's standard errors are given in parenthesis. The standard errors, t values, and p values are all heteroscedasticity consistent.

Variable	***Log (Citation_GS)***	***Log(Citation_ GS_Annual1)***	***Log (Citation_WOS)***	***Log(Citation_ WOS_Annual1)***
Intercept	1.211***(0.159)	1.023***(0.158)	-1.050***(0.153)	-1.280***(0.152)
Universalism				
Quality				
Top Schools	0.127***(0.019)	0.126***(0.019)	0.110***(0.019)	0.110***(0.019)
Pages	0.006***(0.002)	0.007***(0.002)	0.006***(0.002)	0.007***(0.002)
Order	-0.032***(0.005)	-0.031***(0.005)	-0.028***(0.005)	-0.027***(0.005)
Lead Paper	0.126**(0.058)	0.128**(0.057)	0.092(0.059)	0.094(0.059)
Working Paper Age	0.127***(0.011)	0.128***(0.011)	0.066***(0.011)	0.068***(0.011)
Domain				
Methods	-0.288***(0.068)	-0.288***(0.067)	-0.273***(0.067)	-0.276***(0.067)
Social Constructivism				
Visibility				
Authors	0.040*(0.021)	0.039*(0.021)	0.068***(0.021)	0.068***(0.021)
Internal Collaboration	-0.060(0.039)	-0.055(0.039)	-0.076*(0.039)	-0.070*(0.039)
Financial Support	-0.003(0.032)	-0.002(0.032)	0.011(0.032)	0.012(0.032)
Acknowledgement	0.008***(0.002)	0.008***(0.002)	0.009***(0.002)	0.008***(0.002)
Conferences	0.030***(0.006)	0.030***(0.006)	0.027***(0.006)	0.027***(0.006)
Seminars	0.009**(0.004)	0.009**(0.004)	0.006(0.004)	0.006(0.004)
RAs	0.024**(0.011)	0.024**(0.011)	0.019*(0.011)	0.019*(0.011)
Personal Promotion				
References	0.006***(0.001)	0.006***(0.001)	0.006***(0.001)	0.005***(0.001)
Presentation				
First-Page Attention				
Title Length	-0.028***(0.005)	-0.029***(0.005)	-0.018***(0.005)	-0.018***(0.005)
Subtitle	0.023*(0.039)	0.029*(0.039)	0.000(0.039)	0.005(0.039)
Abstract Length	0.002**(0.001)	0.001**(0.001)	0.001(0.001)	0.001(0.001)
Expositional Clarity				
Tables	0.034***(0.005)	0.034***(0.005)	0.031***(0.005)	0.031***(0.005)
Pictures	0.005(0.006)	0.004(0.006)	0.010*(0.006)	0.010(0.006)
Footnotes	-0.002(0.002)	-0.002(0.002)	-0.004**(0.002)	-0.004**(0.002)
Appendices	-0.114***(0.035)	-0.107***(0.034)	-0.079**(0.034)	-0.075**(0.034)
Other Variables				
JF	0.462***(0.047)	0.457***(0.047)	0.417***(0.047)	0.415***(0.047)
RFS	-0.106**(0.045)	-0.127***(0.045)	-0.070(0.044)	-0.091**(0.044)
Paper Age	0.473***(0.020)	0.149***(0.020)	0.629***(0.020)	0.314***(0.019)
$(Paper\ Age)^2$	-0.016***(0.001)	-0.005***(0.001)	-0.023***(0.001)	-0.013***(0.001)
R^2	0.510	0.259	0.563	0.283
Adjusted R^2	0.506	0.253	0.560	0.277
Number of Observations	3363	3363	3177	3177

Table 11: Robustness Check-Adjustment for Heteroskedasticity

Table 11 shows empirical results for the impact drivers of citations based on negative binomial models with robust standard errors for the total sample. The dependent variables in the four columns are *Citation_GS*, *Citation_GS_Annual1*, *Citation_WOS*, and *Citation_WOS_Annual1* respectively. All variables are defined in Appendix 1. ***, **, * denote significance at 1%, 5%, and 10% level respectively. The robust standard errors are given in parenthesis.

Variable	***Citation_GS***	***Citation_ GS_Annual1***	***Citation_WOS***	***Citation_ WOS_Annual1***
Intercept	1.813***(0.168)	1.618***(0.164)	-1.104***(0.187)	-1.282***(0.183)
Universalism				
Quality				
Top Schools	0.118***(0.020)	0.117***(0.020)	0.112***(0.021)	0.109***(0.021)
Pages	0.005*(0.002)	0.005**(0.002)	0.005**(0.003)	0.006**(0.002)
Order	-0.026***(0.008)	-0.026***(0.008)	-0.019**(0.010)	-0.019*(0.010)
Lead Paper	0.175**(0.081)	0.173**(0.076)	0.148*(0.078)	0.132*(0.070)
Working Paper Age	0.129***(0.013)	0.131***(0.013)	0.083***(0.014)	0.083***(0.015)
Domain				
Methods	-0.317***(0.073)	-0.311***(0.071)	-0.333***(0.073)	-0.331***(0.070)
Social Constructivism				
Visibility				
Authors	0.018*(0.025)	0.017(0.024)	0.050*(0.028)	0.050*(0.028)
Internal Collaboration	-0.059(0.045)	-0.057(0.045)	-0.052(0.048)	-0.047(0.048)
Financial Support	0.016(0.035)	0.016(0.035)	0.018(0.036)	0.023(0.036)
Acknowledgement	0.008***(0.002)	0.008***(0.002)	0.008***(0.002)	0.008***(0.002)
Conferences	0.028***(0.008)	0.028***(0.008)	0.026***(0.008)	0.026***(0.008)
Seminars	0.005(0.006)	0.004(0.006)	0.007(0.008)	0.007(0.008)
RAs	0.040**(0.018)	0.040**(0.018)	0.040(0.025)	0.038(0.024)
Personal Promotion				
References	0.006***(0.001)	0.006***(0.001)	0.006***(0.001)	0.006***(0.001)
Presentation				
First-Page Attention				
Title Length	-0.023***(0.006)	-0.024***(0.006)	-0.015**(0.006)	-0.018***(0.006)
Subtitle	0.027(0.046)	0.037(0.045)	0.027(0.050)	0.046*(0.050)
Abstract Length	0.001*(0.001)	0.001(0.001)	0.001*(0.001)	0.001(0.001)
Expositional Clarity				
Tables	0.026***(0.005)	0.026***(0.005)	0.026***(0.005)	0.025***(0.005)
Pictures	0.007(0.008)	0.007(0.008)	0.013(0.010)	0.015(0.011)
Footnotes	-0.006***(0.002)	-0.006***(0.002)	-0.006***(0.002)	-0.007***(0.002)
Appendices	-0.065*(0.039)	-0.059(0.038)	-0.052(0.039)	-0.046(0.038)
Other Variables				
JF	0.426***(0.054)	0.423***(0.053)	0.376***(0.060)	0.365***(0.060)
RFS	-0.086*(0.044)	-0.107**(0.044)	-0.051(0.045)	-0.072(0.045)
Paper Age	0.454***(0.021)	0.133***(0.021)	0.696***(0.022)	0.374***(0.022)
$(Paper\ Age)^2$	-0.015***(0.001)	-0.004***(0.001)	-0.026***(0.001)	-0.015***(0.001)
Robust Std. Errors	Yes	Yes	Yes	Yes
Number of Observations	3365	3365	3365	3365

Table 12: Robustness Check-Winsorized Citations

Table 12 shows empirical results for the impact drivers of citations based on negative binomial models for the total sample that is winsorized at 1% level (top 1% highly cited papers are removed). The dependent variables in the four columns are *Citation_GS*, *Citation_GS_Annual1*, *Citation_WOS*, and *Citation_WOS_Annual1* respectively. All variables are defined in Appendix 1. ***, **, * denote significance at 1%, 5%, and 10% level respectively. The standard errors are given in parenthesis.

Variable	***Citation_GS***	***Citation_ GS_Annual1***	***Citation_WOS***	***Citation_ WOS_Annual1***
Intercept	1.936***(0.134)	1.794***(0.130)	-0.942***(0.147)	-1.037***(0.141)
Universalism				
Quality				
Top Schools	0.110***(0.018)	0.109***(0.017)	0.114***(0.019)	0.101***(0.018)
Pages	0.003(0.002)	0.005**(0.002)	0.004*(0.002)	0.005**(0.002)
Order	-0.033***(0.005)	-0.031***(0.005)	-0.030***(0.005)	-0.028***(0.005)
Lead Paper	0.131**(0.052)	0.170***(0.051)	0.088(0.056)	0.113**(0.010)
Working Paper Age	0.113***(0.010)	0.114***(0.010)	0.063***(0.011)	0.065***(0.059)
Domain				
Methods	-0.268***(0.058)	-0.218***(0.056)	-0.254***(0.061)	-0.251***(0.059)
Social Constructivism				
Visibility				
Authors	0.009(0.019)	0.010(0.019)	0.035*(0.020)	0.031(0.020)
Internal Collaboration	-0.081**(0.035)	-0.074**(0.034)	-0.087**(0.038)	-0.078**(0.036)
Financial Support	0.000(0.029)	0.006(0.028)	-0.008(0.031)	0.001(0.030)
Acknowledgement	0.008***(0.002)	0.008***(0.002)	0.008***(0.002)	0.008***(0.002)
Conferences	0.027***(0.005)	0.021***(0.005)	0.030***(0.006)	0.024***(0.006)
Seminars	0.002(0.003)	0.002(0.003)	0.002(0.004)	0.002(0.004)
RAs	0.027***(0.010)	0.022**(0.009)	0.020*(0.010)	0.018*(0.010)
Personal Promotion				
References	0.005***(0.001)	0.005***(0.001)	0.005***(0.001)	0.005***(0.001)
Presentation				
First-Page Attention				
Title Length	-0.019***(0.005)	-0.019***(0.005)	-0.014***(0.005)	-0.011**(0.005)
Subtitle	-0.001(0.035)	0.005(0.034)	-0.008(0.038)	-0.014(0.036)
Abstract Length	0.002***(0.001)	0.001(0.001)	0.002***(0.001)	0.001*(0.001)
Expositional Clarity				
Tables	0.025***(0.005)	0.026***(0.005)	0.027***(0.005)	0.026***(0.005)
Pictures	0.003(0.005)	-0.003(0.005)	0.007(0.006)	0.007(0.006)
Footnotes	-0.004***(0.002)	-0.004***(0.002)	-0.005***(0.002)	-0.005***(0.002)
Appendices	-0.086***(0.030)	-0.077***(0.023)	-0.065**(0.033)	-0.062**(0.031)
Other Variables				
JF	0.444***(0.043)	0.451***(0.042)	0.397***(0.046)	0.392***(0.043)
RFS	-0.077(0.042)	-0.093**(0.041)	-0.030(0.045)	-0.061(0.043)
Paper Age	0.460***(0.018)	0.124***(0.017)	0.709***(0.020)	0.358***(0.019)
$(Paper\ Age)^2$	-0.016***(0.001)	-0.004***(0.001)	-0.028***(0.001)	-0.015***(0.001)
Dispersion	0.642(0.015)	0.571(0.015)	0.690(0.018)	0.414(0.016)
Value/DF for Deviance	1.109	1.083	1.138	1.015
Value/DF for Pearson χ^2	1.362	1.298	1.232	1.201
Number of Observations	3331	3331	3330	3331

Table 13: Average Marginal Effects

Table 13 shows empirical results for average marginal effects (dy/dx) of the impact drivers of citations based on negative binomial models with robust standard errors for the total sample. The dependent variables in the four columns are *Citation_GS*, *Citation_GS_Annual1*, *Citation_WOS*, and *Citation_WOS_Annual1* respectively. All variables are defined in Appendix 1. ***, **, * denote significance at 1%, 5%, and 10% level respectively. The robust standard errors are given in parenthesis.

Variable	***Citation_GS***	***Citation_ GS_Annual1***	***Citation_WOS***	***Citation_ WOS_Annual1***
Universalism				
Quality				
Top Schools	24.941***(4.488)	2.908***(0.521)	4.854***(0.934)	0.508***(0.098)
Pages	0.963*(0.500)	0.136**(0.058)	0.217**(0.105)	0.029**(0.011)
Order	-5.498***(1.420)	-0.644***(0.166)	-0.827**(0.337)	-0.086*(0.038)
Lead Paper	39.537**(18.578)	4.601**(2.088)	6.757*(3.652)	0.642*(0.352)
Working Paper Age	27.317***(2.916)	3.261***(0.335)	3.613***(0.627)	0.386***(0.067)
Domain				
Methods	-67.325***(15.928)	-7.769***(1.812)	-14.427***(3.320)	-1.538***(0.338)
Social Constructivism				
Visibility				
Authors	3.730(4.918)	0.420(0.572)	2.146*(1.050)	0.231*(0.115)
Internal Collaboration	-12.508(9.492)	-1.415(1.099)	-2.233(2.027)	-0.219(0.215)
Financial Support	3.429(7.412)	0.399(0.864)	0.789(1.567)	0.108(0.168)
Acknowledgement	1.633***(0.456)	0.188***(0.053)	0.366***(0.094)	0.039***(0.010)
Conferences	5.863***(1.557)	0.694***(0.183)	1.122***(0.320)	0.119***(0.036)
Seminars	0.946(1.077)	0.104(0.126)	0.291(0.262)	0.033(0.030)
RAs	8.468**(3.549)	0.999**(0.413)	1.738*(0.902)	0.177(0.974)
Personal Promotion				
References	1.241***(0.274)	0.144***(0.031)	0.265***(0.059)	0.027***(0.006)
Presentation				
First-Page Attention				
Title Length	-4.850***(1.268)	-0.596***(0.145)	-0.668**(0.260)	-0.082***(0.027)
Subtitle	5.812(9.357)	0.925(1.095)	1.191(1.946)	0.215(0.212)
Abstract Length	0.305*(0.166)	0.031(0.019)	0.061*(0.033)	0.005(0.004)
Expositional Clarity				
Tables	5.516***(1.124)	0.638***(0.131)	1.124***(0.232)	0.118***(0.024)
Pictures	1.450(1.569)	0.165(0.183)	0.554(0.349)	0.067*(0.040)
Footnotes	-1.246***(0.386)	-0.153***(0.045)	-0.276***(0.081)	-0.031***(0.009)
Appendices	-13.739*(7.923)	-1.489(0.920)	-2.279(1.625)	-0.213(0.172)
Other Variables				
JF	94.210***(12.017)	11.187***(1.446)	16.834***(2.536)	1.773***(0.279)
RFS	-17.828*(9.265)	-2.601**(1.076)	-2.195(1.942)	-0.326(0.205)
Paper Age	96.349***(5.353)	3.327***(0.528)	30.175***(1.389)	1.739***(0.117)
$(Paper\ Age)^2$	-3.165***(0.272)	-0.108***(0.031)	-1.123***(0.064)	0.071***(0.006)
Number of Observations	3365	3365	3365	3365

Figure1: Trends of Paper Characteristics: 2000-2013

Figure 1 depicts the time-series trends of the means of paper characteristics from 2000 to 2013 based on the total sample of 3365 published papers in *Journal of Finance*, *Journal of Financial Economics*, and *Review of Financial Studies*. The numbers are normalized at 100 in year 2000 for all variables. Figure1A, Figure1B, and Figure 1C refer to the variables in Universalism, Social Constructivism, and Presentation respectively.

Figure1A: Trends of Paper Characteristics-Universalism

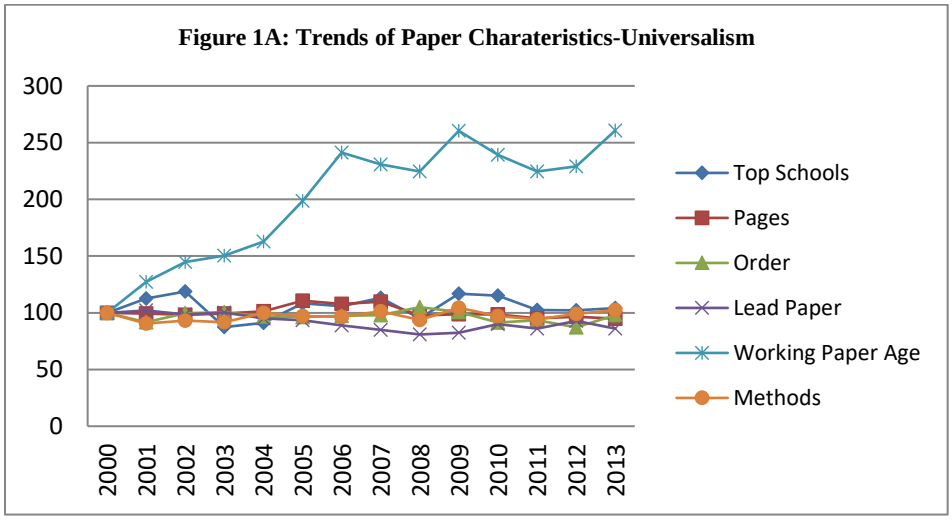

Figure1B: Trends of Paper Characteristics-Social Constructivism

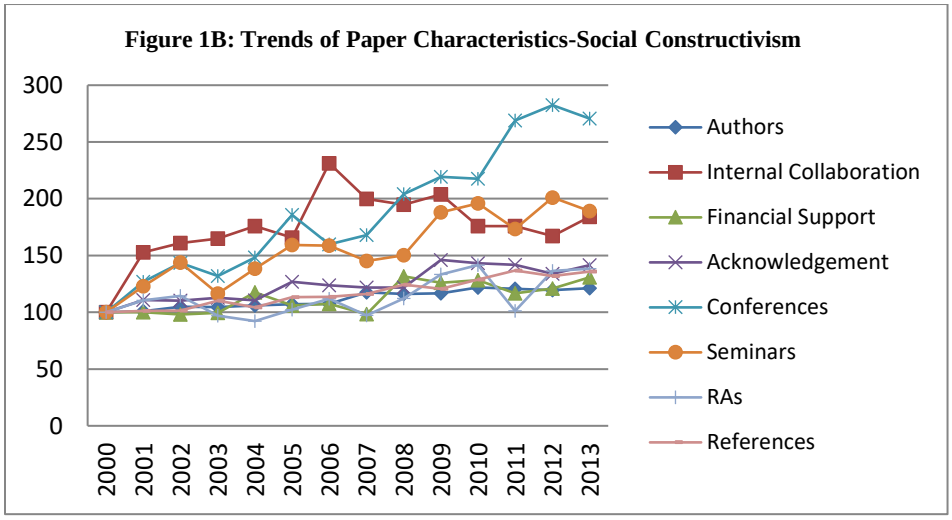

Figure1C: Trends of Paper Characteristics-Presentation