The Truth about the ‘Top 5’: How Good are They?

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Abstract

In this paper, I will address the immense amount of importance that economic academia places on being published in one of the 'Top 5' academic journals, and attempt to discern whether or not the preeminence of these five is truly well-deserved. Using simple regression-based analysis and complimentary descriptive statistics, I find that in terms of five-year Impact Factors there is little variation amongst the 'Top 5' and other top performing journals. In addition, I find that these five are surprisingly not the top performing economic journals. To supplement these findings, I also analyze general time trends to indicate which journal fields are experiencing the most growth. General Interest journals, which four of the five 'Top 5' are, are not experiencing nearly as much growth as their contemporaries suggesting that the differences between the five and other journals in terms of their Impact Factors may continue to diminish as journals of faster growing fields continue to attract more and more attention and as a result more citations.

Introduction

The economics research community continues to place a massive amount of importance on being published in one of the Top 5 Economic journals; The *American Economic Review, Quarterly Journal of Economics, Journal of Political Economy, Review of Economic Studies*, and *Econometrica*. Publishing in one of these journals is seen to almost guarantee a researcher tenure and a large amount of respect within the research community. However, when determining tenure and making promotional decisions relying heavily on the fact of whether or not an economist published in one of these five journals can be quite an unfair and faulty system. Not only is it becoming increasingly competitive to get published in one of these journals, but the decision of whether or not your article is accepted is solely based on the opinions of a handful of individuals on the peer review boards and the journals' publisher.

With the vast amount of research that can be found outside of the 'Top 5' it is natural to question why these five journals alone are considered to be the most prestigious, and to question whether or not this prestige is in fact well deserved. Are their articles truly of considerably better quality than those that are published in slightly lesser regarded journals or is it simply their name and reputation that boosts a researcher's credibility? This paper will attempt to shed light on the true quality of the 'Top 5', and reveal if this perceived preeminence of the five is in fact legitimate or nothing more than folklore.

For this research, a dataset of 336 economic journals has been retrieved from the *Journal Citations Report Database* listing the journal's field category, the number of articles

they have published in a given year, and their five-year Impact Factor for the years ranging from 2010 to 2018. Some of the field categories given by *JCR* have been grouped together in order to simplify the analysis.

I begin by using regression-based analysis to isolate the effect that being one of the 'Top 5' has on the value of the five-year Impact Factor, which is used as a proxy for a journal's influence. Then I will compare this effect to the effect of being a journal that is not one of the five but has a five-year Impact Factor that falls in the top 5% of scores. I repeat this process for those with scores in the top 10% as well. The regression results indicate that a journal in the 'Top 5' indicates on average only a 1.59 larger five-year Impact Factor score than one in the top 10%, and only a 0.47 larger score than one in the top 5%. When restricting the focus even further, the time trends of Impact Factors show that combined *The Journal of Economic Perspectives, Journal of Finance, Journal of Economic Literature, Economic Geography*, and *Journal of Financial Economics* outperform the 'Top 5' year after year.

When analyzing the time trends of five-year Impact Factors for specific fields, one can see that General Interest Journals, which four of the five 'Top 5' are, are not growing at nearly the same speed as other journals that fall within field categories of Environmental and Agriculture Economics as well as Urban Economics. These two latter categories have experienced 60% and 88% growth while General Interest journals have experienced only about 20% growth. With other fields rapidly expanding it is only logical to infer that the difference in Impact Factors between the 'Top 5' and other journals will continue to diminish in size.

Literature Review

There has been a lot of discussion about the optimal ranking system for academic journals throughout the years, and the use of citations and Impact Factors have often been what many researchers turn to. One paper that uses such a system to compare the quality of journals is *Nine Facts about Top Journals in Economics* (2013), by David Card and Stefano Della Vigna, in which they not only analyze general trends in economic journal publishing, but also use regression-based analysis to compare the number of citations to papers amongst the 'Top 5' journals. They implement a model using the log number of citations from papers published in these five journals since 1970 as the dependent variable. The independent variables are dummies for each journal interacted with an indicator for pre or post 1990 publications in addition to a quartic function of years since publication used to capture time trends. Using this model, they identify the *Quarterly Journal of Economics* as the journal with the highest paper citations post 1990. They build off of this model further by adding field dummies, controls for length of paper, and number of coauthors to look at the specific attributes of a paper that is correlated with larger amounts of citations. This model is quite comprehensive, but it focuses its analysis solely on those published in the 'Top 5' and fails to expand further to include journals of a slightly lesser rank and identify how those papers compare and whether or not they outperform the 'Top 5'. What is of specific importance to this paper is Card and Della Vigna's analysis of the general trends in acceptance rates for these five journals. When comparing rates of acceptance from 1976-1980 to those from 2011-2012, they find that all of the 'Top 5' journals' acceptance rates have fallen to below 9% with the greatest drop seen by

Econometrica whose rate fell from 27.1% to 8.5%. The number of articles submitted has nearly doubled since 1990 while the number of articles being published has fallen 20% since the 1976-1980 period, according to Card and Della Vigna's study. These statistics suggest that the amount of research being done is growing and that the 'Top 5' are failing to keep up with this expansion. There is simply not enough room for every paper of great quality to fit into such a small group of journals. It is possible that the number of articles that these five journals are publishing needs to increase or that the number of journals that universities consider to be indicators of superior research quality needs to expand.

Using citations as indicators has always been a topic for debate, but it wasn't until relatively recently that the preeminence of the 'Top 5' specifically was called into question. *Citations in Economics: Measurement, Uses, and Impacts* (2018), by Daniel S. Hamermesh, discusses the use of citations as indicators in general as well as the differences in citation levels amongst individual authors, articles, and journals. Hamermesh analyzes the overlapping of citation distributions of articles published in 2007 and 2008 in the 'Top 5' and those published in the same years in slightly lower regarded journals, *Review of Economics and Statistics* and *Economic Journal*. A substantial amount of overlap in these distributions was found. These two "lesser" journals had a large number of articles that actually outperformed the majority of articles published in the 'Top 5'. For lack of a better indicator, Hamermesh uses citations as a proxy of influence and article quality, but makes sure to inform the reader that despite being a more or less objective way of measuring an article's influence in the economic community it does not necessarily measure the other indirect or direct effects it has on society as a whole.

Research can have an effect on public policy and public attitudes in general and cannot necessarily be quantified solely by the number of citations. This something that must be taken into consideration when interpreting the results of this study since Impact Factors, which are calculated using citations, are used as a proxy for quality.

Another key paper that challenges the preeminence of the 'Top 5' is *The Tyranny of the Top Five* (2018), in which James Heckman and Sidharth Moktan make strong arguments to upend the obsession of being published in one of these five journals. Heckman and Moktan first analyze longitudinal data of tenure track faculty which leads them to find that publishing in the 'Top 5' does in fact lead to an increase in a researcher's probability of receiving tenure. Specifically, they come to the conclusion that those who publish one article in the 'Top 5' are 90% more likely to receive tenure in a given year than those who have not published in the five. This probability increases drastically when additional articles are published in the 'Top 5'. Those who publish two articles are 260% more likely, and those who publish three are 370% more likely to receive tenure. Such a massive increase in the probability of receiving tenure is likely to push researchers to pursue follow-up and replica work that would be more likely to be published in the 'Top 5' rather than creating new and innovative work that could be extremely beneficial to the community as a whole. The authors also tackle the question of whether or not these five journals are in reality a good filter for quality research. They use citations as a proxy for influence, similar to the previous study, and carry out a simple comparison of the distributions of citations of individual articles within slightly lower ranked journals to the distributions of those in the 'Top 5'. They discovered a large amount of overlap in citation

distributions amongst those in the five and other top-ranking journals, and they come to the conclusion that many non 'Top 5' articles outperform articles in the 'Top 5' in terms of citations. Specifically, they mention how the *Review of Economics and Statistics*' median cited article ranked above the median cited articles in the combined distribution *Review of Economic Studies* and *Journal of Political Economics*. They also look at Impact Factor scores for top ranking journals as is done in this study, however, they only look at the scores for the year 2017. For the purposes of this study, the time frame will be expanded to include scores from the years ranging from 2010-2018. They do come to the conclusion that the 'Top 5' are in fact not the best performing journals of 2017 which corroborates this paper's findings.

Empirical Strategy

First, basic regression analysis is used in order to compare the differing levels of influence between the 'Top 5' and other high-ranking journals. For this simple model, a regression of the dependent variable, the five-year Impact Factor, is run onto two independent binary variables, one indicating if a journal is in the 'Top 5' and the other indicating if a journal is in the top 10% of journals ranked by the 2010 Impact Factor scores. This regression is run again replacing the dummy variable indicating if a journal is in the top 10% with a dummy indicating if the journal is in the top 5%. In this study, a journal's five-year Impact Factor acts as a proxy for a journal's quality. The five-year Impact factor is defined by *Clarivate Analytics* as the average number of times that an article published in that specific journal in the last five years has been cited in the indicated JCR year.

The resulting coefficients from the model are then used for comparative analysis. By subtracting the top 10% coefficient from the 'Top 5' coefficient, one can see the average difference in the Impact Factor scores of journals in the 'Top 5' and those in the top 10%. This process is repeated using the top 5% coefficient.

The dataset is then restricted to include only the top performing 15 journals. The average five-year Impact Factors of the 'Top 5', the average five-year Impact Factor scores of the highest ranked five journals that are not one of these five *(Journal of Economic Perspectives, Journal of Finance, Journal of Economic Literature, Economic Geograph*y, and *Journal of Financial Economics*), and then the five ranked just below those (*Journal of Accounting and Economics, Review of Environmental Economics and Policy, Review of Financial Studies, Journal of Human Resources,* and *American Economic Journal – Applied Economics*) are all plotted over time. This allows for the analysis of the general time trends of these groups Impact Factor scores.

Next, this type of analysis of the top fifteen journals' Impact Factors is expanded to include all 336 journals. A bar graph is used to show each year's combined five-year Impact Factor scores for journals in the 'Top 5' compared to the combined five-year Impact Factor scores for all other journals that are not members of the five. This method allows for an easy illustration of the five's growth and the remaining non 'Top 5' journals' growth over the eight-year period from 2010-2018.

Lastly, the general time trends of the average Impact Factor scores of specific subfields

of economics are analyzed in an attempt to discern which economic journal fields are experiencing fast growth and which are remaining relatively stagnant. The average Impact Factor score of each of the categories are found and then graphed over time.

Data Description

This study utilizes a dataset of 336 economic journals obtained from the *Journal Citations Report Database*. The key value of this dataset is the five-year Impact Factor of the journal for the years ranging from 2010-2018. In total, there are 2,679 observations. These journals were then given field categories that were pulled from the *JCR Database*. Some journals were only given economics as a field category while others were given one, sometimes two, and at the most three other field classifications. Using subjective reasoning and these provided JCR field categories each journal was placed into one of the more general categories: Agricultural and Environmental, Business and Financial, Development, General Interest, Health and Education, History, Hospitality Tourism and Sports, International, Labor, Law and Politics, Mathematics and Statistics, Social, and Urban Economics. Some of the original JCR categories were grouped together in order to simplify the analysis. For instance, the categories of agricultural economics and environmental studies were combined into one group. The math and interdisciplinary applications category was also combined with social studies/mathematical methods and with mathematics/statistics into a single group since there was a large amount of overlap between these categories.

The combined set of journals has an average five-year Impact Factor Score of 1.51. However, when the set is restricted to include only the top 25% of journals, ranked by Impact Factor in 2010, the average five-year Impact Factor score jumps to 3.36, and when you restrict it even further to include only the top 10% of journals the average five-year Impact Factor jumps even higher to 4.85.

Findings

The results of the first regression, running the five-year Impact Factor onto a dummy for journals in the 'Top 5' and the top 10%, shows that on average journals in the 'Top 5' have about a 5 point higher Impact Factor score than the journals in neither of these categories while journals in the top 10%, but not a member of the five, have on average a 3.40 point higher Impact Factor score than the other journals. For context, the top 10% consists of thirty-four journals, and the mean Impact Factor Score of the data is 1.51 as stated previously. The difference in the coefficients between these two indicator variables is only 1.59 meaning that the journals in the 'Top 5' on average have only a 1.59 point higher five-year Impact Factor score than journals that are ranked in the top 10%, but are not members of the 'Top 5'. This means that articles published in these five journals within the previous five years on average are cited 1.59 more times in a given year than an article published in another journal in the top 10%.

5 Year Impact Factor	**Coefficient (SE)**
Top 5	4.99 (.32)
Top 10%	3.40 (.12)
Difference =	1.59

This difference becomes even smaller when comparing the 'Top 5' to the journals in the top 5%, or top seventeen. According to this output, the five on average have only a 0.173 point higher Impact Factor score than the other journals that fall into the top 5% which is quite an insignificant difference. Both of these results are significant at the 99% significance level.

5 Year Impact Factor	**Coefficient (SE)**
Top 5	4.85 (.32)
Top 5%	4.38 (.22)
Difference =	0.47

Restricting the focus to an even smaller number of journals, it is apparent that the 'Top 5' are not truly the top performing economic journals out there. Figure 1 reveals that the *Journal of Economic Perspectives, Journal of Finance, Journal of Economic Literature, Economic Geograph*y, and *Journal of Financial Economics* on average outperform the 'Top 5' every single year in terms of their average Impact Factor. The five journals ranked just below these, the 'Following Ranked 5', do not have as high of an Impact Factor score as these other two groups, however, they have experienced the most growth in their average Impact Factor score with a growth of 90% while the 'Top Ranked 5' experienced 53% growth and the 'Top 5' experienced only 44% growth. With this growth rate it is possible that these 'Following Ranked 5' (*Journal of Accounting and Economics, Review of Environmental Economics and Policy, Review of Financial Studies, Journal of Human Resources,* and *American Economic Journal – Applied Economics*) will soon be outperforming the five as well.

Figure 1: Average Five-Year Impact Factor Scores from 2010-2018

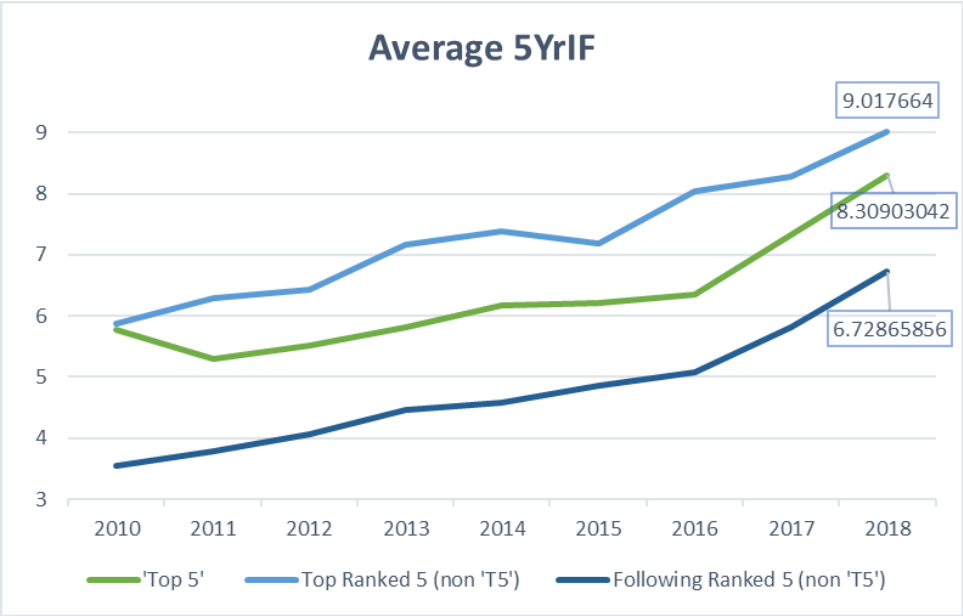
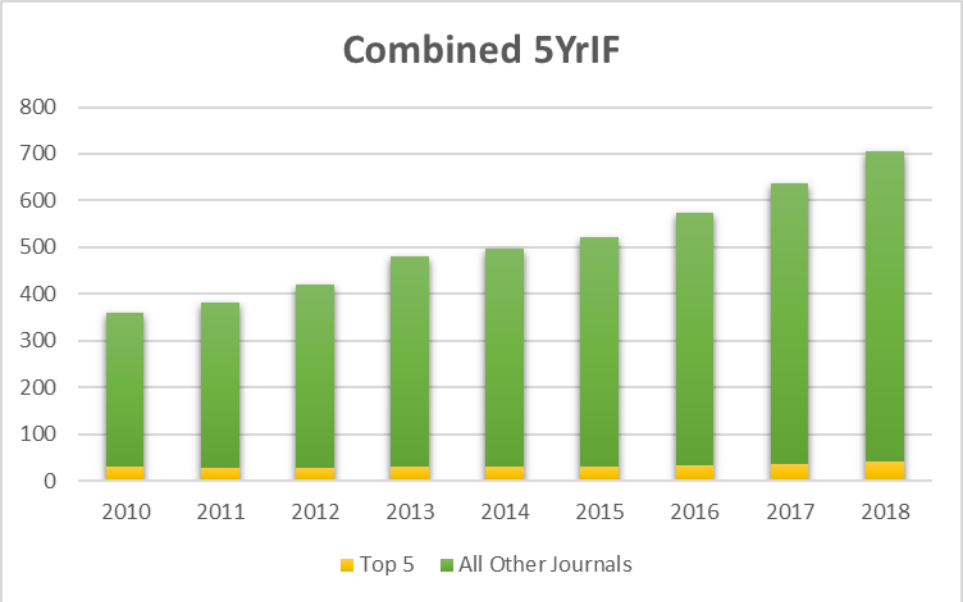


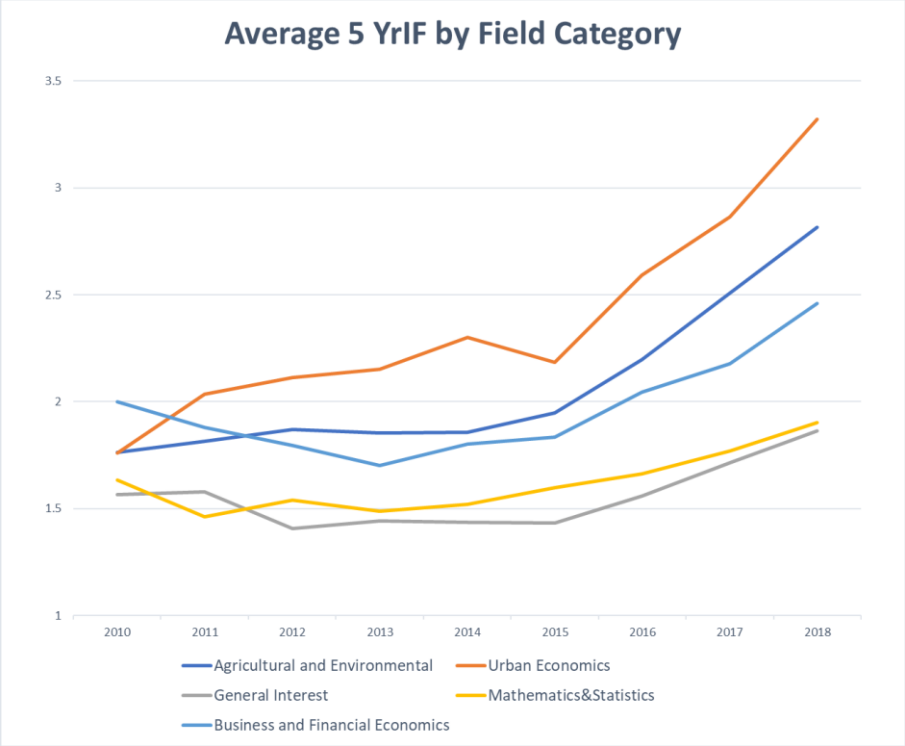
Figure 2 also highlights this slow growth of the 'Top 5' in terms of Impact Factor, but in this case, their growth is compared to the growth of all the other 331 journals in the sample. 'All Other Journals' experience just over 100% growth while the five experiences only 44% growth as mentioned previously.

Figure 2: Combined Five-Year Impact Factors of the 'Top 5' and 'All Other Journals' from 2010-2018



What could possibly explain this slow growth for the 'Top 5' is that all of the journals in the five, excluding *Econometrica,* are considered to be General Interest Journals, and when looking at Figure 3 it is apparent that General Interest Journals are failing to perform at the level other fields are performing at nor are they growing at the rate of most other fields. The average five-year Impact Factor of General Interest journals only experienced 19% growth since 2010. Mathematics and Statistics journals, which *Econometrica* falls under, experienced even worse growth with only 16%. Business and Financial Economics journals experienced 23% growth, Agriculture and Environmental Economics journals experience 60% growth, and Urban Economics Journals experienced the most dramatic increase with 88% growth. These five categories contain over 80% of all economic journals and for that reason the other field categories were seen to be of small significance and have been excluded from this figure.

Figure 3: Average Five-Year Impact Factors of Specific Journal Field Categories from 2010-2018



Conclusion

When looking specifically at the top ranked 34 economic journals, it is apparent that there is not a great deal of differences in quality among the 'Top 5' and other top performing journals. The *Journal of Economic Perspectives, Journal of Finance, Journal of Economic Literature, Economic Geograph*y, and *Journal of Financial Economics* on average are actually outperforming the five every single year, and are also outgrowing them in terms of their Impact Factor scores. The growth of the 'Top 5' is quite slow in comparison to not only these specific journals, but in comparison to the growth of all economic journals in general which suggests that more and more lower ranked journals will continue to improve their Impact Factor scores and reach the level that the five are performing at.

Having so much significance placed on publishing within such a small group of journals pushes researchers away from pursuing new and innovative research and towards follow-up and replica work that is more likely to get them published in the 'Top 5'. This can be a hindrance to the growth and advancement of the field of economics as a whole. Not only is this hyper-focus on publishing in such a small group of journals counter-productive, but these five in reality are not outperforming their competition in any grandiose way.

The 'Top 5' are no longer the best journals out there thus it is unfounded to use publishing in these journals alone as an indicator of superior research. In order for a university to make an educated decision regarding tenure and promotions, it is highly encouraged to look beyond the fact of whether or not a researcher has published in one of the 'Top 5' and focus on

the quality of an individual's work itself or at the least expand upon the number of journals that one considers to be of great quality because there are many more than five out there. It is also encouraged to update this type of journal quality research every few years in order to remain up to date on which journals are truly performing at the highest levels. As a result of these updates, the community will no longer be subject to relying on outdated indicators of quality.

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