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Does your surname affect the citability of your publications?

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ABSTRACT

Prior investigations have offered contrasting results on a troubling question: whether the alphabetical ordering of bylines confers citation advantages on those authors whose surnames put them first in the list. The previous studies analyzed the surname effect at publication level, i.e. whether papers with the first author early in the alphabet trigger more citations than papers with a first author late in the alphabet. We adopt instead a different approach, by analyzing the surname effect on citability at the individual level, i.e. whether authors with alphabetically earlier surnames result as being more cited. Examining the question at both the overall and discipline levels, the analysis finds no evidence whatsoever that alphabetically earlier surnames gain advantage. The same lack of evidence occurs for the subpopulation of scientists with very high publication rates, where alphabetical advantage might gain more ground. The field of observation consists of 14,467 scientists in the sciences.

1. Introduction

Questions concerning authors' surnames have attracted attention in the scientometric literature for some time. Among other issues, the surname initial is considered as a possible influencing factor on citability and the individual's academic career. Advantages from a name coming earlier in the alphabet could be expected in the disciplines with the alphabetical ordering tradition for the author byline.

In fact there is a substantial degree of heterogeneity in the manner in which author orderings are assigned, both across and within disciplines (Joseph, Laband, & Patil, 2005). Empirical analysis revealed that the use of alphabetical ordering in scientific publishing is declining over time (Waltman, 2012). The use of such ordering seems most common in mathematics, economics (including finance), and high energy physics. Instances of "alphabetical discrimination" could then arise because of several reasons. First of all, the common use of the "et al." citation rule in the body of the text could immediately establish a higher level of attention to the first author. In this regard, there is also the fact that certain citation indices and research engines, such as Econlit in the field of economics, follow a long-established practice of registering only the first surnames in the byline (van Praag & van Praag, 2008). Second, in the case of evaluators originating from disciplines with contribution-based name ordering, the evaluator could then associate a higher contribution to the individuals listed first in the byline

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solely on the basis of their name (Levitt & Thelwall, 2013; van Praag & van Praag, 2008). Third, as the reference lists at the close of the articles are usually ordered alphabetically, it is likely that the first-placed authors will receive greater recognition and be easier to remember.

The literature seems to confirm that scientists are generally aware of the potential of discrimination due to alphabetized bylines. Kadel and Walter (2015) examined the co-authorship behavior in economics and showed that scholars late in the alphabet refrain from publishing articles with three or more authors. However, no such evidence was found in the field of finance. Some researchers even seem to manipulate the use of their surnames to obtain a higher position in the byline, for example by choosing between more than one last name, by using the family name with or without prefix, or through the transcription of Greek names into English (Efthyvoulou, 2008).

Several studies have analyzed whether the surname position in the alphabet can affect an individual's academic career. Einav and Yariv (2006) found that the probabilities of receiving tenure at top-5 and top-10 American economics departments are roughly one percentage point higher per letter earlier in the alphabet. At the same time, their analysis revealed no significant correlation between the first letter of surnames and tenure status in psychology, where authors follow the convention of organizing the byline according to the authors' contributions. Efthyvoulou (2008) revealed that the probability of being employed in a highly considered U.S. economics department is 21.5% higher for "A-professors" than it is for "Z-professors". The same author also considered the number of downloads and page views on research networks as a measure of success. Regarding this, he detected that for individuals with last name initial "A", compared to "Z", there was a nearly 58% increase in the probability of being among those authors with the most downloaded papers. Similarly, having a name beginning with A rather than Z resulted in a 39% increase in the probability of being among the authors whose works received the highest attention.

Van Praag and van Praag (2008) examined individuals' surname initials relative to publication rates in 11 mainstream economics journals for a sample of highly productive economists, finding that there was a significant relationship between the two. Their estimates indicate that a Z-author should be considered as deserving a 16% "premium" in the compensation for his or her performance, measured in average yearly publications, if compared directly to an A-author. Arsenault and Larivière (2015) showed that "uncitedness rates tend to increase with the progression of the first author's last name in the alphabet indicating that papers with a first author whose last name starts with a letter that occurs later in the alphabet might be less visible". They further observed that the phenomenon is more noticeable in Mathematics and Physics, where the alphabetical ordering practice for the author byline is well established.

To the best of our knowledge, only three studies have focused on the specific question of the effect of the surname initial on publications' citability. Shevlin and Davies (1997) were the first to investigate the phenomenon. They analyzed the 1994 Web of Science (WoS) Science Citation Index, and found no effect. However the citations in this study were not field-normalized and we also note that the citation window was too short for a reliable prediction of the definitive impact of publications. Huang (2015) analyzed a WoS 1990–2005 extract of 846,122 U.S.-authored papers in 12 fields of the sciences. The results were that papers where the first-listed author has an alphabetically "early" surname are cited more frequently, but that there is no distinction in citations when considering the names of the other authors of the publication. In particular, "the estimates show that shifting surname initial from the bottom of the alphabet to the top is associated with a 0.44 percentile increase in rank of citations among the papers published in the same year," indicating a sizable alphabetical bias. Ong, Chan, Torgler, and Yang (2015) applied the same methodology as Huang to the fields of economics and management, and found "a positive citation rank trend on author initials for single-authored economics papers when compared with management single-authored papers, alone and as compared to economics coauthored papers".

These three studies analyze the surname effect at publication level, i.e. whether papers with the first author early in the alphabet trigger more citations than papers with a first author late in the alphabet. We adopt instead a different approach, by analyzing the surname effect on citability at the individual level, i.e. whether authors with alphabetically earlier surnames result as being more cited. The rationale is that if alphabetical order leads to an increased visibility of authors with earlier surnames, this should affect all their output and thus their overall citability. The research question is not at all trivial, given that it touches on the careers of hundreds of thousands of academics. Should the surname effect reveal true and significant, then the matter should be taken into consideration in the assessment of research activities, at both individual and group levels, in the disciplines still applying simple alphabetical order for publication bylines.

We consider all of the publications by all professors in sciences of Italian universities, with the exception of the life sciences where standard practice in Italy is to order the byline according to the authors' intellectual contributions. We examine the link between the first letter of the surname and the field-normalized citations received, at the overall level and the discipline level. We then check for differences in these links when the dataset is restricted to "top" scientists, defined as those with the highest number of publications. The reason for this second analysis is that the higher the number of publications by the scientists, the more evident the surname effect should be.

We restrict our analysis to Italy only for three reasons: (i) we can rely on highly accurate disambiguated data at individual level; (ii) in Italy, alphabetical authorship is a relatively common phenomenon in many fields; (3) we do not have access to WoS data for other countries. In fact, we have disambiguated all the authorships of WoS indexed publications by professors of Italian universities since 2001. Knowing the entire publication portfolio of each professor, we are able to assess the effect of the surname initial on citability of their overall scientific output, not just of that falling in the extracted publication sample