THE CONVERSATION





This isn't the first time a gap has been identified. Gary Conner/Alamy

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My new research suggests there is a stubborn pattern in academic publishing. My co-author and I examined some 8,000 articles published in the world's most reputable economics journals to study citations, which are where academics cite previously published research in their papers. We found papers whose lead author had a Chinese surname received on average 14% fewer citations than comparable papers written by those with a non-Chinese name.

This supports similar findings from previous studies in chemistry and other natural sciences, suggesting that citation prejudice is a cross-disciplinary problem.

In reaching that conclusion, we put our raw findings through every test we could think of to rule out other explanations. Our first thought was that maybe Chinese-authored papers are more recently published on average than non-Chinese-authored

papers, and therefore less cited. However the same citation gap holds for papers published in all years.

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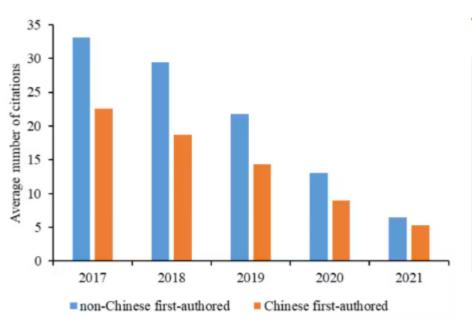


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Average citations of economic articles by author ethnicity:

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Another obvious guess is that Chinese-authored papers are of lower quality. Some readers will have heard about the issue of China's "paper mills", companies which have in recent years been churning out research papers based on fraudulent findings for Chinese universities. There are reports that this may have made some western academics more reluctant to take Chinese research seriously, but these are largely a problem for low-quality journals.

We only looked at articles published in the top journals (rated as 4 or 4* in the <u>ABS journal rankings</u>). Each paper has gone through a strict process of editorial review, often taking a couple of years, so they are far less likely to have been produced by high-volume paper mills. Additionally, almost half of the Chinese authors in our sample were affiliated outside China, so paper-mill allegations against Chinese authors are not relevant in our observations.

Alternatively, you may be wondering if Chinese authors' papers are less citable because of a language barrier in the writing. Again, this shouldn't be an issue when all these papers which have been strictly quality-assured by peer reviews and editorial reviews. The writing styles of Chinese authors in these journals do not seem significantly different from non-Chinese authors.

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We probed still more possibilities to explain the apparent discrimination, controlling for different factors and so on. But each time, the citation gap persisted – and sometimes became larger.

Eventually we gave up trying to falsify the hypothesis, and turned to understanding why this ethnic discrimination exists.

Why do economists discriminate?

Picture the market for ideas as a miniature galaxy. Each paper is like a planet with its own mass, based on its quality, the authors' stature and the perceived importance of the topic. Citations are like gravity, tugging knowledge towards these planets; the heavier the planet's mass, the stronger the pull.

Yet gravity also fades with distance, in this case meaning not kilometres but culture – language, networks and the subtle signals that tell us who feels familiar. It may be that the farther away a scholar seems on the cultural map, the weaker their intellectual pull.

Our findings show this "cultural distance" at work. Interestingly, the same thing happens in both directions: the ratio of Chinese-authored references is significantly higher in Chinese-authored papers than in non-Chinese-authored papers.

Our next step was some detective work to deduce who exactly is discriminating. We identified four "suspects": journal editors, reviewers, publishers, and finally citers.

If discrimination began with journal editors, they should only be publishing Chinese-led papers of comparably higher quality than other papers they publish. If so, you would expect these superior papers to be cited more, not less, which is at odds with the evidence.

As for reviewers, most journals adopt a "double-blind" approach where reviewers and authors don't know each other's identities. If reviewers don't know when they're dealing with a Chinese author, they cannot be discriminating against them. Similarly, publishers are not usually allowed to intervene in editorial decisions, so they cannot be discriminating either.



Editors, reviewers and publishers don't appear to be discriminating. Chainarong06

This leaves the citers as the main discriminators, those who read academic papers and cite them in their own work. To get a clearer picture of what is happening, we compared three pairs of subgroups: Chinese versus non-Chinese, top economists versus non-top economists, and those with US university affiliations versus non-US affiliations.

We concluded that non-Chinese top economists from non-US institutions are the ones least likely to cite authors with Chinese surnames. This seems surprising given US rivalry with China, but actually it is a natural consequence. For US economists to study their biggest opponent, you would expect them to cite studies about China –and most are done by Chinese authors.

Mitigating the discrimination

One way of reducing the "Chineseness" of authorship is coauthoring with a non-Chinese academic. However in academic writing, a citation convention is that when a paper has over three authors, you only keep the surname of the first author (who is also the lead researcher). For example, a paper written by Zhang, Smith and Armstrong in 2025 will simply become "Zhang et al. (2025)". Therefore bringing in more non-Chinese academics will make no difference. Another way of diluting "Chineseness" is for the lead author to become affiliated with a US institute. Per our study, this reduces the citation bias by 16%. However, obtaining such a US affiliation is not always feasible.

This led us to conclude that the best way of reducing discrimination is to reduce the amount of author information in citations. For example, journals can request for citations to be by initials ("BG 1957") or numeric codes (1, 2, 3), as market leaders like Nature already do. Journals can also use a digital object identifier (DOI), for example "10.1234/example.article", instead of disclosing author names in published references.

This may not solve the problem of papers not being cited in the first place, but it can reduce the likelihood of subsequent citation bias as readers no longer know the surnames of cited papers.

Discrimination is self-sabotage. Each time we discount a paper because the surname feels "foreign", we put the brakes on our own progress. This slows insight, muffles debate and leaves the world poorer in ideas.