Null Results Guidelines

Background

To accumulate knowledge, science requires both transparency and replication. Transparency facilitates the ability of scholars to explore the underlying data and understand the process by which inferences were made from that data. Replication enables scholars to probe whether published results are robust to alternative specifications and measurements. It also builds on the findings of prior studies in establishing the conditions under which demonstrated relationships may or may not hold in other contexts. A commitment to publishing studies with null results-studies where the results are not statistically significant at conventional levels-has important implications for both replication and transparency. This type of commitment would provide full visibility for researchers into the entire range of studies that have been carried out, facilitating our collective ability to build on prior work and update our beliefs on the basis of both published and unpublished studies.

Unfortunately, the publication of null results remains uncommon in the social sciences due in part to publication bias, in which journals prize statistically significant findings on a given topic and not those without such relationships. Publication bias disincentivizes scholars from investing time in writing up and sharing null findings, ultimately preventing valuable information from reaching the scientific community.

At the Immigration Policy Lab (IPL), we believe that a commitment to posting null results reflects an important part of the scientific enterprise. The following guidelines are designed to mitigate the issue of publication bias within our scholarly community by establishing a standardized and efficient mechanism to disseminate studies with null results. We will adhere to these guidelines within IPL to the best of our ability.

Eligibility

To avoid publication bias, all pre-registered work involving an IPL faculty director or funded by IPL must be made available to the scholarly community in some form. If, for any reason, the authors of a pre-registered study with null results decide against publishing the study in a peer-reviewed journal or publicly available working paper, they will post a null results report as described in this document. Note that when the authors decide to publish a study with null results in a peer-reviewed journal or post a working paper, they do not need to produce a null results report.

Studies that are not pre-registered can also be published as null results reports. This process largely applies to non-experimental work, and may involve a set of rejected conjectures in the course of analyzing observational data. While authors are not required to produce null results reports for

these types of studies, we encourage them to do so if they decide against publishing them in peer-reviewed journals or as working papers. Whether the study has been written or only some analysis has been done before deciding against publishing the study in a journal or as a working paper, we encourage authors to write a short report as part of IPL's null results series.

Format

Reports should be short to ensure that 1) authors are not deterred by the need to invest a lot of time writing them and 2) other scholars can digest the main findings quickly. As a result, we suggest a maximum limit of 5 single-spaced pages, with shorter reports encouraged as well.

The reports should include the following sections: First, they should begin with an introduction that provides an overview of the project and the hypotheses it was designed to test. Next, they should offer a brief overview of the research design, which will be followed up by the main results. The results section should be very brief and only report the results of the main hypotheses that are presented in the description section and follow the pre-analysis plan (if there is one). The authors can also include additional tests, including subgroup analysis, in an optional appendix which can be referenced in in the results section. After presenting the results, scholars should engage in an informed discussion about the possible explanations for the null results according to the interpretation guidelines described below. Finally, the reports should conclude with a short section describing implications for the literature and next steps for researchers interested in related topics.

To write the report, authors should use the null results template available on the IPL website. This template should enable authors to complete their reports quickly and comprehensively.

Interpretation Guidelines

This section is particularly important in the null-results report, but challenging to write. One of the main purposes of the null-results report is to combat publication bias. This section should therefore make clear whether the null results were more likely caused by design and implementation, or by a flaw in the theory the study attempted to test. Before addressing the standing of the theory, this section should comment on all of the following:

First, this section should comment on the statistical power of the study. Was the sample size large enough to detect an effect? The authors can refer to effect sizes in related studies, confidence intervals, and power analysis to discuss the statistical power of the study.

Second, this section should discuss the measurement strategy. Were the outcome and treatment variables measured accurately? Are there alternative measures of these variables that may have caused other results? Are the results insignificant across a variety of measures?

Third, this section should discuss the implementation of the research design. Were there any difficulties during the implementation? Is it plausible that these difficulties may have caused the null results? How can future researchers who implement similar studies avoid such difficulties?

Fourth, this section should discuss any possible spillover or contamination of the control and treated groups. If possible, this section can also refer to analysis of possible spillover that is shown in the appendix.

Finally, the authors should discuss potential problems with the theory after ruling out alternative explanations for the null results, such as whether the theory may apply differently across contexts.

Data Sharing

In line with transparency standards for published quantitative research, data relevant to results in the report should be shared online. This data sharing will enable replication by other scholars. All data should be anonymized and in line with general standards for online data publication. Publicly posting data is subject to relevant data use agreements and Institutional Review Board approval.

Internal Review Process

Before publication, each report must complete an internal review process. First, the results should be replicated within the team of scholars on the project. Second, the full report should be reviewed by an IPL scholar who was not involved in the original project.

Logistics

Upon obtaining a null result, all co-authors should discuss whether to write a full working paper for submission to a peer-reviewed journal or publish a short null-results report. The project director(s) can make a final decision if there are different preferences among co-authors.

Null results reports should be cited in the following format:

Authors. Year. "Article Name." IPL Null Results Series.

Authorship of null results reports should follow the Author Guidelines for Collaborative Projects in the Immigration Policy Lab.

To post your null results report to the IPL website, please contact Amy Cui (amycui@stanford.edu). In your email, please indicate who outside the research team reviewed the study. IPL will provide a cover page for the report. Once you append the cover page, please post the report to a preprint server of your choosing. The link will then be used to complete the posting on the IPL website.

Finally, authorship of relevant projects is dictated according to the Author Guidelines for Collaborative Projects in the Immigration Policy Lab.

Template for Null Results Report

Introduction

In one or two paragraphs, explain what motivated the project, the academic literature to which it relates, and the argument it was designed to address.

Research Design

Briefly review the research design, including but not limited to:

- Data used for the study.
- Identification strategy.
- Independent and dependent variables.
- Primary hypotheses tested in the study.

Results

In one or two paragraphs (and one or two figures / tables as appropriate), describe the results for the study's primary hypotheses. Any additional analysis can be reported in an appendix as needed.

Explanation of Null Results

Consider whether the following factors contributed to null findings in the study:

- Statistical Power:
  - Was the sample size large enough to detect an effect?
- Measurement Strategy:
  - Were independent and dependent variables measured correctly?
  - Would alternative measures have produced other results?
  - Are results insignificant across a variety of measures?
- Implementation of Experimental Design:
  - Were unexpected difficulties encountered during implementation that may have contributed to null findings?
  - Were there potential problems with how the treatment was designed?
- Spillover or Contamination of Control and Treated Groups

  - Did spillover occur?

- Theoretical Issues
  - If the above explanations are unlikely to account for the null findings, are there shortcomings of existing theories that could explain the results?
  - Briefly describe what these shortcomings might be.

Implications

Briefly describe the implications of the study. When considering implications, examine the following:

- Implications of the study for the academic literature.
- Implications of the study for policymakers and practitioners.
- Suggest next steps for research related to this topic.