### Introduction

RRDAO is a platform to improve the computational reproducibility of published empirical research by crowdsourcing and sharing reproductions that are conducted but may otherwise go unpublished. Computational reproducibility is the ability to reproduce the results, tables, and other figures found in research articles using the data, code, and materials made available by the authors.

# **Our Motivation**

Empirical research has surprisingly low rates of computational reproducibility. For instance, fewer than half of published economics research articles prior to 2019 were reproducible. This lack of incentives for larger-scale reproduction audits is due to a lack of journal publishing. To address these issues efficiently, there needs to be a reevaluation on how we perform, reward, and communicate results from reproductions.

# Our Solution

RRDAO allows its users to increase the reproducibility of published work by guiding reproducers through a five-stage process.

- 1. [Select Paper] Select a candidate paper
- 2. [Scoping] Define the scope of the exercise by recording the claims, display items, and specifications you will focus on in the remainder of the reproduction
- 3. [Assessment] Review and describe in detail the available reproduction package and assess the current level of computational reproducibility of the selected display items
- 4. [Improvements] Making modifications (e.g., debugging code, acquiring required data files) to increase reproducibility
- 5. [Robustness] Verify the validity of the results with alternative analysis parameters.

Rather than designating entire research articles as reproducible or irreproducible, RRDAO allows for a more nuanced approach to reproducibility, where reproducers analyse individual claims and their associated display items, and take concrete steps to improve their reproducibility. Reproduction reports are transparent and publicly document their analyses to support collaboration, discussion, and reuse. These reports can be anonymously shared.

#### The Goal:

There was a non-Web3 project doing exactly the same thing <a href="https://www.socialsciencereproduction.org/">https://www.socialsciencereproduction.org/</a>. All we need to do is copy it and do it in a Web3 way.

There's five parts in the whole project. You only need to recreate the first step [Select Paper] for now.

Please create an account at <a href="https://www.socialsciencereproduction.org/">https://www.socialsciencereproduction.org/</a> and play around with the first step. This platform stopped development in 2021 but everything is still working.

#### Use your method to recreate. Please ask me if you have any questions.



