Econometrics Game Prelim

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1 Prompt

Your task is to use the data on labor markets to identify a causal effect related to gender.

The gender wage gap has been the focus of many studies in economics (Goldin, 2014). finds that the gap widens in the first few decades of working life, and that it is larger for occupations with longer and less flexible hours. She argues that these findings are consistent with a model of compensating differentials (Blau and Kahn, 2017). document multiple explanations, and find that within-occupation differences account for a large proportion of the gap. They also find that the gap is more persistent at higher quantiles of the wage distribution. Other papers focus on the effect of specific events or policy changes, such as having children (Andresen and Nix, 2022; Kleven et al., 2019), or implementing a female board quota (Bertrand et al., 2019).

You may choose to focus on outcomes other than wages. For example, Sarsons et al. (2021) study tenure decisions to identify biases in recognition for group work in economics, and Hsieh et al. (2019) argue that declining occupational barriers to entry for female and black employees has led to a better allocation of talent and a significant increase in GDP per capita.

2 Data

The dataset from Blau and Kahn (2017) is linked below. You will need to create an account with openICPSR to access it. A brief description of each dataset:

1. PSID: Panel dataset consisting of 33,398 observations for 274 variables including gender, age, hours worked, years of schooling, occupation, race, region, income, and experience. Members of households are sampled annually before 1999, and then biennially after 1999.

2. CPS: Repeated cross-sectional dataset consisting of 344,287 observations for 234 variables including including gender, age, hours worked, years of schooling, occupation, race, region, and income. Members of households are sampled monthly. Blau and Kahn (2017) focus on the March CPS in 1981, 1990, 1999, and 2011.

For more information, see the online appendix of Blau and Kahn (2017) provided on openICPSR. Feel free to supplement this dataset with other datasets. Links to data and replication files for papers cited here:

1. Click here for complete data and replication files for Blau and Kahn (2017)

2. Click here for complete data and replication files for Hsieh et al. (2019)

3. Click here for complete data and replication files for Sarsons et al. (2021)

4. Click here for partial data and replication files for Goldin (2014)

5. Click here for partial data and replication files for Kleven et al. (2019)

3 Guidelines

As noted above, the prompt is to **use the data on labor markets to identify a causal effect related to gender**.

The goal of the assessment is to assess your ability to analyze data and identify a causal estimate that is policy relevant, interesting, and well-defended. The goal is not to produce a statistically significant result, nor to produce informative, but causally unidentified descriptives. We want to understand how you think about economics problems, and how you can use the economic and econometric toolkit to analyze those problems. The information provided in the prompt was relevant to gender in the labor market and should serve as a helpful starting guide, but you should not feel limited to only thinking about what was discussed in the prompt.

The response should contain three portions:

1. A description of the policy relevant causal relationship you hope to uncover. This section is where any relevant literature should be cited. Although we do not expect a full literature review, you may find it helpful to review methodologically or topically similar work

2. A description of the data and method you use. You may find it helpful to divide this into two sections: a data, and a method section.

   (a) **Data:** If you use any additional data sources, describe them here and discuss their value add. Discuss the sample you are using and the sample population of interest.

   (b) **Method:** Building upon your discussion of the data, describe the method you use to identify the causal effect. We're interested in not just the method you are using, but why you chose it and why it is well suited to your empirical situation. We also want you to think critically about the potential flaws with the methodology that you are using. No method is perfect, and we expect you to understand that. If there is a different method that you would like to use but given the time constraints associated with obtaining that data, you are unable to do so, you are also welcome to discuss that here. We would like to see some evidence that you are able to work empirically with causal inference tools but knowing how to obtain a valid result is more important than obtaining results of poor quality.

3. Results and Discussion. Do the results you have obtained make sense? What might be driving them? Given the time limits, a single table and/or chart may be sufficient. We certainly do not expect robustness checks, although we would value discussion of checks you would do in a hypothetical world.

4. Please state at the end of the paper how much time you spent on the task.

Note on Plagiarism

Please note that the use of ChatGPT or generative AI tool is expressly prohibited. In addition, if we identify or suspect that a team plagiarized a paper from the literature, we will contact the team and that team may be barred from participating in this and future iterations

of the econometrics game. We understand that the literature can serve as an inspiration, and that no idea is truly unique, but there is a difference between being inspired by, and copying the methods section of a paper.

References

Andresen, M. E. and E. Nix (2022). What causes the child penalty? evidence from adopting and same-sex couples. *Journal of labor economics 40*(4), 971–1004.

Bertrand, M., S. E. Black, S. Jensen, and A. Lleras-Muney (2019). Breaking the glass ceiling? the effect of board quotas on female labour market outcomes in norway. *The Review of Economic Studies 86*(1), 191–239.

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Hsieh, C.-T., E. Hurst, C. I. Jones, and P. J. Klenow (2019). The allocation of talent and us economic growth. *Econometrica 87*(5), 1439–1474.

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Sarsons, H., K. Gërxhani, E. Reuben, and A. Schram (2021). Gender differences in recognition for group work. *Journal of Political economy 129*(1), 101–147.