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Prelude

This set of notes is meant to be a specific guide on how to critically assess an economics research paper, useful for discussions & referee reports. It is based on my own struggles during graduate school in evaluating papers rigorously. If you have any suggestions to improve or expand this guide, please send them to so2735@columbia.edu.

A. General Thoughts

1. **Is the paper too long?** Is it too repetitive? Can institutional details, if excessive, be relegated to the appendix?
2. **Is the contribution of the study clear?** Is the alleged contribution true? What are the possible policy implications?
3. **Is the paper relevant to another field that it is missing on?** Should they consider other moments jointly? Is the paper not citing a related paper?

B. Motivation

1. **Is the stylized fact true?** Is the stylized fact prone to measurement error? Is it consistent with existing set of facts, and if not why might this be the case?
2. **Is the question quantitatively important?** Is the story plausibly “first-order”?
3. **Are there big picture questions that the study further informs?** Does it reframe existing debates on key issues?

C. Empirical Analysis

C1. Data Issues

1. **Is the sample representative?** Is there possible selection into the sample, raising external validity concerns? Is the result driven by a few outliers or by a sub-period?
2. **Is the data cleaned appropriately?** Does the scaling make sense and ensure stationary variables? Does data scaling introduce extra, unintended variation that leads to spurious results?

C2. Methodological Choice

1. **Are the used methods well-warranted?** Is the usage of certain methods well justified in the context? Is there a simpler way that the authors bypass without explaining why?
 - If X is used to detrend an economic series, does the setting satisfy the required assumptions?
 - How accurate are model-implied X ? Can we use it without worrying about noise?
 - How useful are stationary models in non-stationary environments?
2. **Does the empirical design make sense?** Should they use quarterly or monthly frequencies? How do they deal with zeros? Is certain parametric transformation well-warranted? Does it make full use of the data granularity?
3. **Are the controls exhaustive?** Are there variables omitted that can be included in the regressions?
4. **Are standard errors calculated properly?** Are there any potential issues with the way standard errors are calculated or clustered? Are the authors using the appropriate technique given the data structure?

C3. Identification and Assumptions

1. **Are the assumptions reasonable?** Have they been justified in prior work? Are they too directly related to the result i.e. is the estimate mechanical? Are there arbitrary choices along the way?
 - Is X truly exogenous as the authors claim? Should we assume it is random?
 - Why was X so important in 2009? Was it actually important?
 - Are you implicitly assuming that investors know X ?
2. **How tight is identification?** Is the “plausibly exogenous” variation truly “exogenous”? Are the endogeneity concerns convincingly dismissed?
 - Is X a good instrument? Are the validity assumptions likely to be satisfied?
 - If the empirical strategy relies on some type of matching, is the matched sample truly comparable on observable and unobservable characteristics?

C4. Interpretation and Robustness

1. **Is the estimate interpretable? Is it properly interpreted?** Can we make it less of a black-box? Are there specific economic episodes that help us make the estimate more real?
 - If the empirical estimate is LATE, how do the authors make the connection to the literature's discussion of the ATE?
2. **Is an alternate story possible?** How do the authors convincingly rule out standard explanations?
3. **Are all empirical exercises necessary?** Does a portion of the analysis actually contribute to strengthening their main argument?
4. **Are the results robust?** Are there particular dimensions that warrant strong robustness checks?
 - How sensitive are results to X ? How stable is X ?

D. Theoretical Analysis

D1. Model Ingredients

1. **Is the general approach reasonable?** Does the model framework accurately capture the empirical phenomenon of interest? Is the model overly complicated / not necessary?
 - Is it reasonable to have agents maximize X while they may care about Y ?
 - Does a two-stage game make sense as opposed to three-stage?
 - If the authors claim to have an "optimal" X , is it clear what they mean by "optimal"?
 - How is your model different from other models of X ?
 - Aside from the two groups you model, should you also consider a third group of X ?
2. **Is the model interpretable?** Are any of the model components a black box?
 - Is there a variable X in the model that drives most of the results? Does X come with an obvious economic interpretation?

3. **Are the assumptions reasonable?** Are the stated assumptions chosen arbitrarily? How do the modeling assumptions map to the empirical setting and data used? Do the stylized components of the model capture the key institutional details?
 - If the authors posit that some function f is strictly increasing in x , is it consistent with the underlying economic mechanism that f allegedly captures?
 - If the model is dynamic, do the results hinge on the assumption that the future will be like the past?
 - Is it reasonable to assume that certain parameters are constant (e.g. risk aversion) as opposed to time-varying?
 - Are there other variables that are not in the model but should be in the model?
 - Are you allowing for short sales?

D2. Connection to the Real World

1. **Is the model calibrated properly?** Are there other properties of data that the model calibration should aim to match?
2. **Is the model estimated properly?** How do the quantitative results from the model align with empirical magnitudes or descriptive evidence? Are the model-implied values, elasticities, etc. reasonable?
3. **Does model work “out-of-sample”?** What are its implications for phenomena outside the paper’s scope? Does it generate interesting predictions that the authors omit?
4. **Is an alternate story possible?** Is the model consistent with stylized facts only under some conditions, which may fail to hold in other environments? Is the model missing some further implications that can plausibly arise in reality?

E. Other Stuff

E1. Exposition

1. **Is the paper clear?** Is the paper clearly written and logically organized? Are there any ambiguous statements or disconnects between sections? Are there any distracting stylistic issues with formatting, notation, acronyms etc. that make the paper harder to follow?

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2. **Is the paper scientific?** Are the authors explicit about the limitations and caveats of their analysis? Is the relation to prior literature clearly articulated? Do they effectively discuss how their work builds on or departs from past studies?