

Checklist for Writing about Data and Methods

Source: Jane E. Miller. *The Chicago Guide to Writing about Multivariate Analysis*, 2nd ed. (Chicago, Chicago University Press, 2013), pp. 294-96. Bold and underline added.

- Where possible, **refer to other publications** that contain details about the same data and methods.
- Regardless of audience, discuss how the **strengths and limitations** of your data and methods affect interpretation of your findings.

For scientific papers or grant proposals include a **separate data and methods section**.

- Use the W's [When, Where, Who] to organize material on context and methods of data collection.
- Discuss the study response rate, issues of missing by design, loss to follow-up, and extent of missing values on key variables; then report the final analytic sample size.
- Discuss treatment of outliers and representativeness.
- Define your **variables**
 - Include original wording of novel or complex questions in the text or an appendix for key variables, as you describe results for other variables.
 - Report units, defining them if unusual or complicated.
 - Describe how new variables were created.
 - Explain the imputation process used to fill in missing values.
 - Report on reliability and validity.
- Name the **statistical methods**. For models of categorical dependent variables, name the category being modeled.
- Mention whether sampling weights were used, and if so, their source. If you trimmed the weights, explain how and report sensitivity of results.
- Explain the analytic strategy used to arrive at your final model or a series of models you present.
 - If you used empirical approaches such as forward or backward selection, state the criteria (e.g., $\alpha = 0.05$).
 - If you used theoretical criteria, describe them.
 - If multicollinearity or serial correlation affect your data, explain how you account for them in your model specification.

- Convey your statistical specification, including dependent and independent variables, functional form, and interactions.
 - For statisticians and economists, use equations.
 - For other academic audiences use equations only to illustrate complex (e.g., multiterm) specifications, or new methods or applications.
- Suggest ways future research could address the limitations of your analysis.