

Question	Answer
## Part I: Introduction	
## What is the puzzle or problem?	
## Who is good and who is evil?	
## What is the research question?	
## What is the answer or solution?	
## What is the finding?	
## What is the contribution?	
## How do we know the answer is right/the problem is solved?	
## Part II: Theory Section	
## What is the cause? IV	
## What is the effect? DV	
## What are the assumptions?	
## What is the prediction?	
## Part III: Research Design/Applied Section	
## What design is being used?	
## Why is this design being used?	
## What is the effect construct of interest? DV	
## How is the effect construct defined? DV	
## How is the effect construct operationalized? DV	
## How do we know we have construct validity? DV	
## How does the DV vary?	
## What is the cause construct? IV	
## How is the cause construct defined? IV	
## How is the cause construct operationalized?	
## How do we know we have construct validity? IV	
## How does our IV vary?	
## Part IV: Results/Application	
## How do know the cause is the driving the effect?	
## What are the remaining threats to validity/alternative explanations?	
## How does the paper deal with these threats/alternatives?	
## Part V: Conclusion	
## What is the finding?	
## What is main point/contribution of the paper?	
## What implications can be drawn from the findings?	
## What are the limitations of the finding?	
## What should future research look at?	

Final Paper Assignment

During this course, you have learned about the principles of research design in social science, using examples from scholarly work on the intersections between ecology and security. For your final paper, you will demonstrate your mastery of the material by replicating a foundational work in the political science literature on the ‘resource curse,’ cited here:

Ross, Michael L. "How do natural resources influence civil war? Evidence from thirteen cases." *International Organization* 58.1 (2004): 35-67.

Replication is important in any scientific field, as if we want to be sure of our scientific discoveries, they must pass multiple tests. This would preferably involve using different research designs and multiple tests of the same research design. The more consistency across these different tests, the more confidence we have that our theories are correct in their predictions about the empirical world. For more on matters of research transparency in Political Science, please see the course reading by Lupia and Elman (2014).

In order to replicate a study, we must both reproduce the empirical data used to test the hypotheses and replicate the analysis of that data. You will be asked to go beyond a simple replication of the previous study and 1) analyze the strength and limitations of the previous study, 2) identify the implications of those strengths and limitations for the validity of the study’s findings, and 3) suggest improvements that could be undertaken in future research.

Process

The following steps give a rough guideline to the project. You will meet with me regularly during the term to discuss your progress.

- 1) Read the article and record your answers to the Empirical Article Checklist provided in class.** We will spend time in-class reviewing the article and discussing your answers to the prompts. Please prepare for an in-depth discussion. The better your understanding of the original article, the better your final product (and the less painful the process).
- 2) Assignment of replication cases.** Each student will be asked to replicate two cases from the 13 included in the study. Cases will be assigned by the professor, taking into account student interest and/or expertise.
- 3) Gather evidence on your assigned cases.** Your first job is to scour the original paper for all resources used in your case. You will also be expected to do outside research in order to fully evaluate the original analysis. You are encouraged to consult with the professor and subject librarians on campus to help you in your search for materials.
- 4) Replicate Ross’ analysis.** Look at the sources Ross used and reach your own conclusions about the validity of the research findings.
- 5) Write up your findings in your final paper.** See next section for details.

Final Paper

Your replication paper should have the following parts (labeled as such in the text) and answer the questions delineated for each part.

1) Abstract

Summarize your entire paper in 3-5 sentences (save this for last).

2) Introduction

What is the author's research question?

What theories being tested that purport to answer this question?

What are the author's key findings?

How does this paper fit into the literature on the resource curse generally and the relationship between natural resources and civil conflict specifically?

3) Theory

What is/are the independent variable(s)?

What is/are the dependent variable(s)?

What is/are the causal mechanism(s) or intermediate variable(s)?

What theoretical predictions are being assessed?

4) Research Design

What cases and evidence does the author select?

What is the author's justification for this research design?

What are the advantages to this research design?

What are the limitations of this research design?

How does the author define and operationalize the key independent, intermediate and dependent variables?

5) Evaluation of Data Access and Research Transparency (Please see Lupia and Elman 2014 for explication of these concepts)

Data Access: Does the author reference the data used to support their empirical claims? Describe the data and where it came from. If the data is the author's own, do they provide access to this data or explain why they cannot?

Production Transparency: Explain the procedures and note any missing information.

Analytic Transparency: Does the author clearly explain the links between their empirical data and their conclusions? Please describe.

6) Empirical Replication

What are the author's key findings?

Keeping in mind the principles of research transparency, describe the data and your efforts to replicate the original study.

Does your replication of the author's analysis *clearly* support the original findings?

If not, which of the findings are not *clearly* supported? Why does the evidence not clearly support the author's findings?

7) Analysis and Implications

Is the evidence consistent with an alternative theoretical prediction or interpretations?

What alternative research design might you employ to assess the authors' theoretical predictions?

What additional evidence and cases might you select?

What are the implications of your findings for the scholarship on this question and for policy more generally?

8) Data Appendix

Putting together an informative appendix is an unappreciated art, particularly, as researchers are limited in the number of words they may use to address a problem in a journal article. Please include the following materials:

Empirical Article Checklist

All data collected: this may include articles, newspaper entries, passages from books, scans of archival materials, quantitative data, etc. Please consult the professor if you have questions about what to include.

9) Reflection

A one- to two-page reflection on the process of producing your paper. What surprised you the most or the least about the process? What did you learn? What would you change?