

Models & Methods
Preliminary Examination
Spring 2004

RULES AND DIRECTIONS: You will have eight hours in which to answer the required questions. The exam must be handed in no later than 4:00 p.m. Be sure to save some of your time for putting your answers into an organized, typed or legibly written version in good English. Also be sure that you answer all the parts of each question and that you refer to the appropriate scholarly literature in each answer. This is a “closed book” exam. Students may not use notes or books, nor may they discuss the examination with anyone while taking it.

Important: Be sure that you choose your questions in order to demonstrate the breadth as well as the depth of your knowledge. It is your responsibility to ensure that your selection of questions and answers to them are distinctive and do not contain undue overlap and repetition.

Please answer one question from Part I, and two questions from Part II.

THEMATIC QUESTIONS

PART I:

Write one (1) of the following essays.

1. In your view, can formal theory apply to any political question, or is it more successful for some topics than with others? Do you perceive “categories” or “boundaries” to the application of formal theory? If so, what are they?
2. What is the level of analysis problem? Illustrate its seriousness. What can be done to solve it?
3. What are the key assumptions of the regression model? Which of its assumptions is (are) most often violated in actual research, or in research in given subfields? Are these violations serious? Why? Why not?

SEMINAR QUESTIONS

PART II:

Write two (2) of the following essays.

1. Evaluate the following statement: “Logit or probit is always the best way to estimate a ‘regression model’ with a dichotomous dependent variable.”
2. Describe some of the circumstances in which it is preferable to use a structural/multiequation model instead of a single equation model to study politics. When is it “safe” to use OLS estimation in a structural/multiequation model? How can we tell it is safe? What are some of the difficulties one encounters in using more complex models of this kind. [Be sure to consider the identification problem and the often arbitrary decisions we make about which variables are exogenous.]
3. Using Robert Groves’ (1989) conceptual structure of sources of error in surveys, describe how you would design as “error proof” of a survey as possible, while keeping in mind time and cost constraints (i.e. don’t assume unlimited resources to conduct the survey). Describe each type of error, why it is a problem for surveys, what you would do to reduce the error, and why your approach would be effective (with citations to the survey research literature).
4. In the 1970s and 1980s scores of research papers were written that used Box-Jenkins, univariate time series methods in combination with intervention analyses of various kinds. Critically evaluate this literature. What were (are) its methodological strengths and weaknesses.
5. Discuss the evolution and importance of different equilibrium concepts in game theory. In each case, explain the value-added of each equilibrium refinement and how each advanced our ability to explain strategic behavior of political agents. Defend your evaluation with references to specific bodies of work in political science.
6. What is a signaling game? Describe the assumptions (e.g., concerning players, rules or sequence of decisions, outcomes, and payoffs). Describe also solutions to a conventional signaling game. Finally, provide an illustration—explain the usefulness of the signaling game literature in the study of a specific political question.
7. Perhaps the toughest problem that can undermine the value of data from in-depth, open-ended interviewing and participant observation is the inevitable influence of researcher’s identity upon subjects’ responses. Outline the forms this problem can take (with concrete examples from published research where possible) and discuss the practical techniques for addressing them.