

PO 141: Introduction to Public Policy
Prof. Claire Leavitt
25 June 2015
Final Exam

Instructions: You will have **three and a half hours** (1 PM-4:30 PM) to complete the exam, though you may not need all of the allotted time. The exam is **closed book** (meaning no course materials, photocopied or in book form, no notes and no Internet). You will answer **5 out of 7** short-answer questions (approximately one paragraph apiece) and **2 out of 3** longer essay questions (approximately 4 Blue Book pages apiece). Please plan your time accordingly.

I: SHORT ANSWER: Please answer 5 of the following 7 questions (*10 points each; 50 points total*)

1. What is a Nash equilibrium (in the context of the Prisoner's Dilemma game)? Is this outcome Pareto-efficient? Why or why not?
2. True or false? Were it not for gerrymandering, Democrats would have a majority in the US House of Representatives. Explain your reasoning.
3. Describe John Rawls' "difference principle." What does this principle tell us about whether or not income inequality is acceptable?
4. What do we mean when we say that a policy would have a disparate impact on a group of people? Give an example of this kind of policy.
5. What do classical economic models predict will happen if minimum-wage policies are implemented? Why? What do we mean when we say that a certain wage is the "equilibrium wage?"
6. What are the differences between libertarianism and Communism/Marxism?
7. What is Bayesian inference? How was it used during the O.J. Simpson trial of 1994-1995?

II: ESSAY QUESTIONS: Please answer 2 of the following 3 questions (*25 points each; 50 points total*)

1. Assume you are a lawmaker advocating for a policy that would grant economic reparations to African-Americans in recompense for slavery. Using cost-benefit analysis (and other policymaking tools), propose a scheme for administering government payments to African-Americans. Make sure you consider a) *how much money* should be awarded (i.e., how should policymakers come up with dollar amounts and a discount rate?); b) how this money should be distributed (through which institutions?); and c) how to maximize *fairness* in terms of how the awards are distributed.

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2. Policymakers have three major tools for assessing whether a certain policy is likely to achieve its goal: **Formal models** (including game theoretical and classic economic supply-and-demand models); **experiments**; and **regression analysis**.

a.) Discuss at least two pros and cons for each method of assessment (six in total).

b.) If you were to assess each of the three policy proposals listed below, which method of evaluation would work best for each proposal? Why?

- The government should provide subsidies (payments) to the American people when energy (gas) prices are very high in order to alleviate economic suffering
- The government should support educational voucher programs (payments from the government that can be used to attend a private school) because students who attend private schools have higher test scores than students who do not
- Every country should implement programs to increase adult literacy rates, because nations with higher adult literacy rates also have higher economic output (GDP)

3. You are a state lawmaker listening to testimony about how to improve educational outcomes in your state. The policy expert testifying before your legislative committee argues that a policy of *increased funding for after-school programs* will lead to better educational outcomes. The expert presents the following regression equation (based on his collected data):

$$y = 45 + 20X_1 - 6X_2 + 9X_3 + 10X_4$$

where y = student statewide standardized-test scores on a 1-100 scale; X_1 = household income of the student's family, in \$10,000 increments; X_2 = a dummy variable indicating whether or not the student is a member of a racial minority group (a value of 1 means the student is a member of a racial minority group); X_3 = hours spent on homework by each student per night (self-reported); and X_4 = a dummy variable indicating whether or not a student attends an after-school program (a value of 1 means the student currently attends such a program). The evidence shows that the following variables' beta-coefficients (slopes) are *statistically significant*: X_1 , X_3 and X_4 .

Explain this regression model in detail (what does it tell us about student achievement?) and describe at least two ways you might critique the expert's argument. What questions (name at least two) would you ask to determine if you should vote "yes" on increased funding for after-school programs?