Economics 741, Urban Economics   Fall 2012
Professor Yinger

Final Exam

This is a closed-book exam. You have two hours to complete it. Please turn the exam in to the economics office when you are finished.

This exam has two parts. **You must answer one question from each part**.

PART I.

1. A simple monocentric urban model with Cobb-Douglas utility functions, Cobb-Douglas housing production, and commuting costs equal to operating costs (which are not a function of income) plus time costs (which are proportional to income) predicts that higher-income households will always live farther from the center than lower-income households.

    a. Prove this result.
    b. This result might not hold if the income elasticity of demand for housing is less than one. Identify at least two reasons why the same pattern of income sorting might still hold even if the income elasticity of demand for housing is small.
    c. Outline a strategy for modeling one of these reasons.

2. Any study to estimate the demand for housing faces many challenges. Present a model of the demand for housing. Explain how you would estimate your model. Identify at least four of the challenges facing this study.   Provide a detailed explanation of the way you would address at least one of these challenges.

3. Fair housing audits have been used both to measure housing discrimination and to test hypotheses about why discrimination persists. Identify one type of housing agent behavior that might involve discrimination. Explain how you would measure discrimination in this behavior with an audit study. Explain one hypothesis concerning the persistence of discrimination in this type of behavior. Explain how you would test this hypothesis using audit data. Be sure to describe both the audit study that would generate your data and the way you would use these data to test your hypothesis.

PART II.

4. Rustbelt City used to have a large toxic waste site near a downtown neighborhood. This site was finally cleaned up and turned into a park. All toxic material was removed. The park has playgrounds, walking trails, and other attractive features. You have been asked to design a study to estimate the impact of this clean-up on property values in Rustbelt City. Describe the data you would need, the methods you would use, and the way you would interpret your results.

5. House values are affected by many variables, some of which may not be observed. As a result, the estimated parameters in the first-stage of a Rosen two-step procedure might be subject to omitted variable bias. Describe some variables that might be difficult to observe when estimating a hedonic regression. Identify at least two strategies for addressing the resulting omitted variable bias. Discuss the strengths and weaknesses of each strategy. Indicate your preferred strategy.