

**SYRACUSE UNIVERSITY
DEPARTMENT OF ECONOMICS**

Economics 741, Urban Economics
Professor Yinger

Fall 2006

Final Exam

This is a closed-book exam. It is designed to take two hours, but you may take three if you like. Turn the exam in to the CPR receptionist when you are finished.

This exam consists of two parts. Each part is required, although you have some choice within each part.

Part I. Urban Models

Answer either 1 of the following 2 questions.

1. Explain how and why the comparative statics derivative $dR\{u\}/dt$ differs in open and closed models. You may answer this question using graphs and intuition if you like, but you should be as precise as possible. Which derivative is appropriate for evaluating a nationwide change in the price of gasoline? Explain.
2. Assume that utility functions take the Cobb-Douglas form and that transportation costs equal a constant operating cost per mile plus time costs, which are the same fraction of income for all income classes. Suppose there are two income classes, both of which have the same utility parameters. Prove that the high-income class lives outside the low-income class.

Part II. Empirical Work in Urban Economics

Answer 1 of the following 2 questions.

1. Several scholars have argued that the degree of property tax capitalization may not be the same under all circumstances. One possible example arises in North Carolina, where reassessment is mandated every six years.

Present the basic theory of property tax capitalization. Show how this theory can be tested with double-sales data (that is, data for houses that sold twice).

Show how this type of test could be extended to test the hypothesis that the degree of capitalization depends on the time remaining until a reassessment. Assume you have the necessary data from North Carolina.

2. Many scholars have studied the causes of discrimination in housing using fair housing audit data. Suppose you have data for a large sample of rental audits (based on a random sample of apartment rentals) plus data from a follow-up survey of all the rental agents whose advertised apartments were selected for the study. This survey includes questions that give you an index measuring the racial prejudice of each agent.

How would you use all these data to test the hypothesis that discrimination in rental housing is caused by the prejudice of rental agents? Focus on discrimination in showing the advertised apartment.