

UNIVERSITY OF CALIFORNIA AT BERKELEY
Department of Economics

International Economics Field Exam
August 2016

GENERAL INSTRUCTIONS:

This is a 1.5 hour (90 min) field exam. There are 3 questions in total but you only need to answer 2 questions. Questions 1 and 2 correspond to course 280A, and question 3 corresponds to course 280D.

Note that you have 1.5 hours for this exam, so you have 45 minutes on average for each of the 2 questions.

Question 1

Answer the following questions with as much formalism as you can:

1. Consider the 2x2 Ricardian model with Cobb-Douglas preferences (i.e., the one studied in Lecture Notes 2 in 280A).
 - a. What is the condition on technology, country size, and preferences so that the equilibrium entails complete specialization by both countries? (Feel free to come up with your own notation.)
 - b. Under the condition derived in the previous question, how does population size and preferences affect Home's terms of trade? Explain these effects at an intuitive level.
2. Why is it that we prefer working with the Dornbusch-Fischer-Samuelson (1977, DFS) model rather than the model in the previous question?
3. What are the advantages of working with the Eaton-Kortum (2002) model relative to the DFS model? Are there some disadvantages?

Question 2

Answer the following three questions in reference to Broda and Weinstein (2006) "Globalization and the Gains from Variety":

- a) Define "love of variety" under CES preferences.
- b) Outline how the analysis in Broda and Weinstein (2006) differs from an import price index that does not take into account the gains from variety.
- c) Assume there are both exiting and entering varieties over time. Using their framework, define the empirical conditions under which the variety-adjusted price index will be

higher or lower than the standard Sato-Vartia import price index (that does not take into account changes in variety).

- d) Briefly describe how the authors provide qualitative robustness checks on their estimates for the elasticity of substitution by comparing those estimates across product groups with different characteristics, and why.

Question 3

Answer the following questions with as much formalism as you can:

- a) Describe at least three ways to model dispersion forces (i.e. forces that prevent the population of a country from agglomerating in a single city) in a spatial equilibrium model with agglomeration externalities.
- b) Consider a country with N cities that vary in their exogenous level of amenity and productivity. Write down a simple spatial equilibrium model with free trade between these cities, in which local productivity is subject to agglomeration externalities. Show that the equilibrium population of a city increases with its exogenous productivity and amenity levels.
- c) Derive the expression for per capita welfare in this model. Show that welfare increases with the exogenous productivity and amenity levels of each city.