University of California at Berkeley
Department of Economics

International Economics
Field Exam

August 2015

General Instructions:
This is a three-hour field exam. There are 7 questions in total but you only need to answer 4. Questions 1 - 3 correspond to course 280A and questions 4 – 7 correspond to courses 280B and 280C. You need to answer 2 among questions 1 – 3 and 2 among questions 4 – 7. Note that you have 3 hours for this exam, so you have 45 minutes average for each question.

Question 1
Consider the Melitz model with a Pareto distribution for firm productivity.

1. Assuming that fixed trade costs do not vary by origin (i.e., $f_{ij} = f_j$), show that if parameters were such that we are close to the situation under Zipf's Law then a policy to reduce the fixed costs of selling to a market (i.e., reduce f_j) would have very small effects on welfare.

2. What is the motivation behind Arkolakis (2010) to change the specification for fixed trade costs in Melitz (2003)? How does this change affect the expression for gains from trade in terms of the domestic trade share that one gets in the standard Melitz-Pareto model?

Question 2
Country size and welfare in the Ricardian Model.

1. In the Dornbush, Fisher, Samuelson (1977) model explain how an increase in the population of Foreign necessarily increases welfare in Home and decreases welfare in Foreign.

2. Explore this again in the Eaton and Kortum (2002) model by considering the simple case in which there are no trade costs. Specifically, write down an explicit expression for the real wage in terms of T_i and L_i for $i = 1, ..., N$ and derive the elasticity of the real wage in country i w.r.t. L_i. Use this expression to discuss how θ and the domestic trade share λ_{ii} affect this elasticity, and provide some intuition for these findings.

Question 3
Answer the following two questions in reference to Autor, Dorn and Hanson (2013):

1. Briefly explain how the authors identify the causal effect of Chinese import competition on economic outcomes across US commuting zones. State one potentially remaining concern (for biased estimates) with their strategy.

2. Explain what role the trade balance plays when they theoretically derive the estimation equations. How do they empirically address this issue? State one concern that may arise for the interpretation of their results.

Question 4

Global Imbalances, Autarky Interest Rates and Secular Stagnation

1. Define the concept of *autarky interest rates* r^a and explain theoretically using a Metzler diagram why –under financial integration– the direction of capital flows between countries is determined by the autarky rate.

2. Present at least two theories that have different implications for the determinants of autarky interest rates. Be precise. Which of these theories seems empirically plausible, given what you know about the general pattern of cross country capital flows?

3. Recently, Larry Summers argued that the U.S. may have entered a period of *'secular stagnation.'* For the purpose of this question, interpret Summer's secular stagnation hypothesis as the assumption that the U.S.' *natural* real interest rate r^n has become negative, but the U.S. economy is unable to achieve this negative real interest rate. Instead, it is stuck in a liquidity trap with a *nominal* interest rate $i = 0$ and a real interest rate $r = -\pi > r^n$. Analyze, in the context of the models you discussed above, the implication of Summer's Secular Stagnation hypothesis for (a) autarky interest rates in the US and the rest of the world and (b) the direction of capital flows.

4. Ben Bernanke, in a reply to Summers, argued that if the world economy is financially integrated, either all countries are in a secular stagnation, or none. Is Bernanke correct?

Question 5

International Portfolios and Home Bias. The empirical evidence indicates that international equity portfolios are strongly biased towards domestic stocks.

1. Empirically, consumption expenditures are also strongly tilted towards domestically produced goods. Explain what role this consumption home bias can play in explaining the structure of international equity portfolios. Illustrate with specific models, and discuss the role of two key parameters: the coefficient of relative risk aversion and the elasticity of substitution between domestic and foreign goods.

2. The empirical correlation between equity excess returns (the difference between the return on domestic and foreign equities) and the real exchange rate is essentially zero, after controlling for nominal exchange rate risk with forward contracts. Discuss what this implies for the link between home bias in goods and asset markets.

Question 6

Consider the one-good, two country stochastic growth model in the spirit of Backus, Kehoe, and Kydland (1992). The two economies are ex-ante symmetric, and have access to a complete set of state-contingent assets. What are the main discrepancies between theory and data that have come to be known as the 'quantity anomalies' in the study of international business cycles? You can illustrate the theoretical implications by examining the optimal conditions under a two-country model in which consumers in each economy have the following preferences:

$$u(c, l) = \mu log(c) + (1 - \mu) log(1 - l),$$

where c and l denote consumption and labor. Production is given by

$$F(K, L) = AK^{\alpha} L^{1-\alpha},$$

and is subject to country-specific productivity shocks A. K and L denote the aggregate stock of capital and labor in each economy. Show and explain what the discrepancies are between the theory and the data. Does restricting asset markets so that only trade in bonds is possible help resolve these anomalies?

Question 7

This problem asks you to characterize and discuss the optimal monetary policy in a new small open economy model with nominal rigidities in the spirit of Galí and Monacelli (2005). Consider a special case in which the intratemporal elasticity of substitution between home and foreign produced goods is equal to 1, and the period utility function takes the form

$$U(C, N) = log(C) - \frac{N^{1+\phi}}{1+\phi}.$$

where C and N denote, respectively, consumption and labor. The market clearing condition and the risk sharing condition imply that the consumption/output possibility set is given by

$$C = Y^{1-\alpha} (Y^*)^{\alpha} \tag{1}$$

where Y^* denotes foreign output. The planner's problem then becomes

$$max \quad U(C, N)$$

subject to (1) and the technological constraint

$$Y = AN$$

where A denotes productivity. Explain what the key distortions are in a new Keynesian small open economy, and how it differs from the closed-economy counterpart. Then describe the optimal policy, and what the implications are for exchange rates. Is potentially large exchange rate fluctuations an undesirable feature in this case?