UNIVERSITY OF CALIFORNIA AT BERKELEY
Department of Economics
International Economics Field Exam, 03 August 2020

GENERAL INSTRUCTIONS:

Please send your answers by email to Janene C. Martinez (jcarolm@berkeley.edu) by 4pm PST (this is a 3-hour (180 min) field exam). Typed answers in PDF or MS Word would be the easiest. (You can also write answers by hand as long as you scan/convert them into digital format to be sent by email to Janene.)

The exam has one question from each of the following courses: 280A, 280C, 280D, 236A and 270C.

Answer 3 questions in total and at least 2 questions from 280A, 280C and 280D.

Please start a new page for each of the 3 questions that you answer (and for the two sub-questions if the course is co-taught).

Each question is worth 30 points for a total of 90 points.

The exam is open-book, but no communication with anyone can take place during the exam. Based on the Berkeley Honor Code, you have given us your word on this.

Student name:

Student ID:

QUESTION 1: 280A (Andres and Ben) (30 points)

Part A (Andres) (15 points)

i) **(5 points)** Describe the approach in Costinot, Donaldson and Komunjer (2011) to estimate the sector-level trade elasticity. Specifically, derive the estimating equation and explain the challenges with this approach that CDK encountered.

ii) **(5 points)** One drawback of this approach is that the trade elasticity is necessarily common across sectors (CDK have data for 13 manufacturing subsectors). If you had the required data at a higher level of disaggregation, how would you extend this procedure to independently estimate a trade elasticity for each of those aggregate 13 subsectors?

iii) **(5 points)** Imagine that thanks to this or some other estimation procedure you had credible estimates of sector-level trade elasticities. What are other key elasticities you would need to compute the aggregate gains from trade?

Part B (Ben) (15 points)

Answer the following three questions in reference to Atkin, Faber and Gonzalez-Navarro (2018) “Retail Globalization and Household Welfare”:

(i) **(5 points)** Describe the welfare measure and its components that the paper uses to quantify the household gains from foreign supermarket entry.

(ii) **(5 points)** How do they estimate the “Direct Price Index Effect” of foreign retail entry?

(iii) **(5 points)** Discuss two different theoretical channels that could give rise to what the authors refer to as the “pro-competitive price index effect”. To what extent could it matter (or not) which channel is at work here for the size of the total effect on household welfare?

QUESTION 2: 280C (Maury) (30 points)

1. **(15 points)** Discuss one implication of imperfect asset substitutability for central bank policy in open economies, and explain why you think it is important. Sketch an explicit model, based on utility maximization, in which bonds denominated in different currencies are imperfect substitutes.

2. **(15 points)** Discuss the important elements in the choice between a fixed and a more flexible exchange rate regime, being sure to include any considerations relating to pricing practices in international trade. What about "dollarization"? Comment especially on how the fixed/flexible choice would be viewed by policymakers in a developing country.

QUESTION 3: 280D (Cecile) (30 points)

1. (**20 points**)

   Consider a country with N regions that are heterogeneous in their exogenous level of amenity and productivity. There is only one sector of production (that produces the traded good) and no housing, for simplicity. There are no trade costs between regions.

   a. Write down a simple spatial equilibrium model with free trade between these regions, in which local productivity is subject to agglomeration externalities, and local amenities are subject to congestion externalities.

   b. Under which conditions does the equilibrium population of a region increase with its exogenous productivity and amenity levels?

   c. Derive the expression for the welfare of a worker in this model. Is this equilibrium efficient? Why or why not?

   d. Explain how you would derive the efficient allocation, and write down the problem that determines the optimal policies a federal government could implement to reach the efficient allocation (you don't need to solve for it).

2. (**10 points**) The sorting of high-skilled into high-wage, dense cities has increased in the past few decades. What could be the causes of that increased sorting? What ingredients would you put in a spatial model that aims to speak to this fact and disentangle its causes? Explain.

QUESTION 4: 236A (Emi) (30 points)

1. (**10 points)** *No more than a page*
   a. Christian Broda's 2004 paper aims to assess the response of countries with fixed versus flexible exchange rate regimes to terms of trade shocks. What are the key identifying assumptions made in this empirical approach?
   [*Reference*: Broda, Christian (2004) "Terms of Trade and Exchange Rate Regimes in Developing Countries." Journal of International Economics, 62, 31-58.]
   b. What are the most important threats to this identification approach? Describe a specific scenario that would violate the identifying assumptions. How likely do you think this scenario is?
   c. In an ideal experiment, would you like to analyze the impact of different exchange rate regimes holding fixed (or controlling for) the behavior of the nominal interest rate?

2. (**20 points)** *No more than 1.5 pages*

   a. To what extent do you agree with the following statement: "If prices are sticky, pass-through is (by definition) low. Hence, sticky prices can explain the majority of the evidence of low pass-through in the open economy setting." Explain why or why not.

   b. Gopinath et al. (2010) report several different measures of exchange rate pass-through, including what the paper refers to as "medium-run" pass-through. What is the significance of looking at medium-run pass-through?

   [*Reference*: Gopinath, G., O. Itskhoki and R. Rigobon (2010): Currency Choice and Exchange Rate Pass-Through, *American Economic Review*, 100(1), 304{336.]

   c. When the cost of the coffee beans in a can of Folgers coffee goes up by one cent (all else equal), the price of the retail price of the Folgers coffee can goes up by roughly one cent. Does this constitute "full pass-through"?

   d. In the scenario described in part c above, suppose there is broad-based inflation due to a change in the central bank's inflation target. This leads to an increase in coffee commodity costs (in nominal terms). Would this, in turn, lead to a change in markups? Why or why not?

QUESTION 5: 270C (Andres and Ben) (30 points)

Part A (Andres) (15 points)

Consider a basic model of human capital accumulation in Schoellman (REStud 2012). People are born and choose to go to school up to year S, and work thereafter at some (known, constant) wage w (infinite lives) times their human capital, which is increasing in S according to $h = f(S, Q)$, where Q is schooling quality.

i) **(5 points)** Write down the first-order condition for this problem assuming time is continuous and that r is the instantaneous interest rate.

ii) **(5 points)** Imagine that we take the semi-elasticity of schooling (i.e., $f_s(S, Q)/f(S, Q)$) as the Mincer coefficient, and that we assume that $f(S, Q) = \exp\left(\frac{(SQ)^\eta}{\eta}\right)$. Show that if $\eta < 1$ then this will lead to more dispersion in human capital than what was found by Bils and Klenow. Provide an intuitive explanation for this.

iii) **(5 points)** Discuss the problems associated in taking the semi-elasticity of schooling as the Mincer coefficient.

Part B (Ben) (15 points)

Answer the following questions related to the two papers: 1) Greenstone, Hornbeck and Moretti (2010) ("GHM") "Identifying Agglomeration Spill-Overs: Evidence from Winners and Losers of Large Plant Openings", and 2) Manelici and Vasquez (2019) ("MV") "The Effects of Joining Multinational Supply Chains: New Evidence from Firm-to-Firm Linkages".

i) **(5 points)** Increases in TFP are generally defined as producing more physical units of output for a given allocation of inputs. What is a common concern when estimating such productivity effects using a revenue-based measure of TFP? Briefly discuss such potential concerns in the specific context of GHM and MV.

ii) **(5 points)** Describe how GHM and MV address this concern respectively.

iii) **(5 points)** Describe the components into which MV decompose the "composite TFP effect", and how they estimate each of these in the data.