

## EC 380 Problem Set 02

**Instructions:** Answers must be submitted online through the designated Canvas assignment in a **PDF file**. Any other file type is not allowed. This Problem Set is due on **January 22 at 01:59pm**. Please write as legible and clearly as possible. You will not be given full credit if your answers cannot be easily understood.

### Questions

1. Answer the following short questions

(a) [4 points] In your own words, how would you define **Labor Abundance** in the Heckscher-Ohlin model setting?

(b) [4 points] How does the capital-labor ratio help us determine patterns of trade?

(c) [4 points] Describe the key difference(s) that separate the HO model from the Ricardian model

2. Suppose we are considering an **HO Model setting**, where countries have not yet opened up to trade. Two goods are produced: **Suits and Ozempic**. Suppose that tailoring **Suits** is **labor-intensive** in production as it is primarily done by hand and making **Ozempic** is **capital-intensive** in production as it requires exact and automated machinery. The countries, Country A and Country B, have the following **Labor (L) and Capital (K)** endowments.

Factor	L	K
Country A	1120	575
Country B	1680	950

- (a) [4 points] What are the **Capital-Labor Ratios** for each country?
- (b) [4 points] Which country has comparative advantage in producing Ozempic?
- (c) [4 points] How will trade flows look once each country specializes?

3. [8 points] How do trade outcomes play out for owners of factor inputs when trade opens? Address both capital and labor outcome when a country is abundant in either capital or labor.
4. [6 points] Consider the **Specific-Factor Model**. What are the implications for domestic labor income of switching from autarky to open trade, when a given country is **land-abundant**? Is this impact different if the country is **capital-abundant** instead?

5. [8 points] Recall the **Magnification Effect** we learned in lecture. Let the capital share be 27% and the labor share be 73% to produce Banana Bread. If the rental rate of capital were to remain constant, then a 12% increase in the price of Banana Bread must be accompanied by what percentage increase/decrease in wages?
6. [4 points] We covered ambiguities of changes in labor outcomes, given greater openness to trade. Who does **Autor et al (2013)** suggest are the most vulnerable with respect to labor market outcomes in the US, following Chinese trade liberalization between 1990 and 2007?