

Problem Set 2: International Trade Policy

January 28, 2025

Due: Friday, February 14, 2025, at 4:50pm
Format: Submit scan to canvas.ucsd.edu
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1 Measures of Comparative Advantage and Trade Barriers

Trade barriers discourage trade and reduce trade flows. As a consequence, measures of comparative advantage might be distorted.

- 1.1. One measure of comparative advantage is to compute relative opportunity costs between countries. How can one find (historic) measures of opportunity cost?
- 1.2. The Balassa measure of revealed comparative advantage. State the Balassa measure of comparative advantage. How might subsidies or tariffs distort the measure? Does it still reveal comparative advantage, or something else? If something else, how would you describe it?

2 Trade Interventions

Trade interventions can restrict or promote trade. A first-order effect of these interventions is to distort a country's relative prices and, if the country is large, its terms of trade.

- 2.1. Suppose the home economy is large in at least some export and some import markets. Explain why trade restrictions on the export side or the import side will improve a large country's terms of trade.
- 2.2. Why do we not observe export tariffs as frequently as import tariffs?
- 2.3. In multilateral trade negotiations, it is important to compute the restrictiveness of quantitative non-tariff measures such as quotas in terms of their ad-valorem tariff equivalents. Explain how such a number can be computed using a partial-equilibrium approach.

3 Industry-level and General Equilibrium Analysis

We can analyze trade interventions and the consequence in industry-level ("partial") equilibrium or general equilibrium.

- 3.1. In general-equilibrium analysis, we typically assume that production has constant returns to scale. In industry-level analysis, we typically assume that production has decreasing returns to scale. Which perspective do you consider more adequate for long-term and short-term analysis?

- 3.2. To infer a country's overall welfare, which approach is more adequate? To make cost-benefit analysis by industry, which approach is more helpful?
- 3.3. Can we analyze the case of a small country (with no impact on world market prices) in either industry-level and general equilibrium? Can we analyze the case of a large country in either way?
- 3.4. To study the distribution of gains from an import tariff or an export subsidy between producers and consumers, which approach is more helpful? To study the distribution of gains between different factors of production in the long-term, which approach is more helpful?
- 3.5. Considering a large country, how does an import tariffs and how does an export subsidy affect welfare overall, the income of the relatively abundant factor if there are two factors of production, and the distribution of gains between producers and consumers in a single industry market?

4 External Economies

External economies of scale are a driving force of industrial clusters.

- 4.1. Give two examples of sources for external economies of scale. [You may try to avoid examples from class; as is generally the case, thinking of own examples helps solidify ideas.]
- 4.2. Suppose a country with a large internal (domestic) consumer market wants to launch an electronics industry. No entry occurs although average production costs would be lower than anywhere else in the world at any given scale. The government hires you as a consultant. Explain why no domestic entry might occur. What policy options can you offer the government? What are their advantages and disadvantages? For how long should the policies remain in place? [You may use numeric examples, graphs, or clear verbal arguments for your answers.]
- 4.3. Explain why an export subsidy worsens a country's terms of trade. Under what conditions may export promotion, such as East Asian economies used to pursue it, be preferable to import protection, such as other developing economies used to pursue it under Import Substitution Industrialization?

5 Trade and Growth

State three main sources of growth. Which of the three is arguably the most lasting source?

There are several mechanisms by which trade may affect productivity change. [You may use numeric examples, graphs, or clear verbal arguments for any of your answers.]

- 5.1. Suppose there are external economies of scale, driven by free entry into industrial clusters. Explain how comparative advantage changes over time as entrants join a cluster.
- 5.2. Suppose there is learning by doing in a model with multiple goods and productivity differences across countries. Explain how the pattern of comparative advantage changes over time as each trading partner learns by doing.

- 5.3. State the principal-agent problem when there is uncertainty over both a project's return and an agent's effort. In which ways can foreign trade affect competition, product-market shares and a project's return? How can foreign trade therefore alter incentives for efficiency and innovation?
- 5.4. What is the impact of adjustment costs and temporarily idle production factors after trade reform on growth?