An Introduction to International Trade Theory

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This short course will focus on the theory of international trade, with some reference to empirical evidence. I will not present a highly technical course, but aim for a balance between a comprehensive presentation of the breadth of existing topics and more formal approaches to central questions. It is my goal that students will come away from the course with the ability to successfully tackle professional journal articles with an understanding of the place and the importance of the topic in the larger scheme of things.

There will be two textbooks referred to throughout the course. Students who have not had an undergraduate course in trade theory are strongly advised to read through the Markusen el. al. textbook prior to the course. Lectures will be accompanied by computer slide presentations, and all of these notes will be available well before the course starts (this frees students from more extensive note taking).

Material and References


Detailed class notes, prepared by myself, will be available well before the course begins.

Supplementary reading list of journals articles will be available in late November (or see my syllabus the Colorado Economics website given below).

For details about my own interests and research, see [http://spot.colorado.edu/~markusen](http://spot.colorado.edu/~markusen)

For a look at the class notes, see [http://www.colorado.edu/Economics](http://www.colorado.edu/Economics) Click on “courses”, click on “Fall 2005 Courses”, click on “ECON 8413-001 International Trade Theory”. You will see 19 .pdf files which contain my course notes.
Assessment

Methods of course assessment are not set at this time, but will likely include several exams plus daily exercise assignments.

Course Outline: Organized by Topic into 19 Lectures. One lecture does not always correspond to one day (course presented over 10 days)

Part I: Tools of General-Equilibrium Analysis

Lecture 1: Review of Production Theory

1. Production: Functions, Set, Frontier: Transformation Function

3. Production Frontier (2 good case)
   (A) Position
       Factor endowments
       Real factor productivities (technology)
       Scale economies
   (B) Slope
       Relative factor productivities
       Relative endowments
       Scale Economies
   (C) Curvature
       Factor intensity effects
       Scale economies

4. Competitive Equilibrium

5. The gains from trade theorem

Lecture 2: Review of Consumer Theory, General Equilibrium

1. Equilibrium for the single consumer
   Utility function
   Budget Constraint
   Equilibrium

2. Market Demand
   The aggregation problem
   Identical homothetic utility
   Quasi-homotheticity
   Positive, normative interpretations of aggregate indifference curves
3. Equilibrium in the closed economy  
   Equilibrium as the solution to an optimization problem  
   Equilibrium as the solution to a system of inequalities

Lecture 3: Duality, Excess Demand and Offer Functions
1. The national product or revenue function
2. The expenditure function
3. Excess demand functions
4. Offer functions

Lecture 4: Gains from Trade
1. The gains from trade theorem - free trade versus no trade (autarky)
2. Restricted/subsidized trade versus autarky
3. Free trade versus restricted trade
4. Failures of the gains from trade theorem  
   "non-convexities"  
   "non-tangencies"
5. Distribution of gains between countries  
   Equilibrium prices relative to autarky prices
6. Distribution of gains between individuals within countries  
   Identical endowments, different preferences  
   Identical preferences, different endowments

Part II: Bases for Trade

The No-Trade Model

(A) Identical production functions in all countries  
(B) Same relative factor endowments in all countries  
(C) Constant returns to scale  
(D) Identical, Homogeneous preferences in all countries  
(E) No Distortions (imperfect competition, externalities, taxes).
Lecture 5: Ricardian Models - Technology as a basis for Trade

1. A one-factor model of technology differences

2. Comparative versus absolute advantage
   Existence of trading opportunities depends only on comparative Advantage.

3. Production frontier, closed-economy equilibrium

4. Comparative advantage and autarky price ratios
   Pattern of comparative advantage reflected in autarky prices

6. Excess demand and international equilibrium
   Constructing the excess demand curve
   Specialization

8. The distribution of gains between countries
   Big versus small countries
   More productive versus less productive countries

7. Real wage comparisons across countries
   The role of equilibrium prices
   The role of absolute advantage

Lecture 6: Heckscher-Ohlin Theory

1. Basic assumptions

2. The production set
   Define factor intensities
   The Edgeworth Box
   Strict convexity of the production set
   Slope

3. The Heckscher-Ohlin Theorem

4. The Factor-Price-Equalization Theorem

5. The Stolper-Samuelson Theorem

6. The Rybczynski Theorem

7. Policy Implications
Lecture 7: The Specific-Factors Model (Ronald Jones), Generalizations of Factor-Proportions Models

1. Production functions, convexity of the production set.
2. The direction of trade - modification of the Heckscher-Ohlin theorem.
3. Factor endowments and outputs - modification of the Rybczynski theorem.
4. Commodity prices and factor prices - modification of the FPE and Stolper-Samuelson theorems.

Lecture 8: Government Policies and Distortions as Determinants of Trade

1. Distinguishing among producer, consumer, and world prices.
2. Autarky equilibrium, where does tax revenue go?
3. Small economy facing fixed world prices: distortions as a basis for (bad) trade.
4. Two identical economies, except one has a distortion.
5. Gains-from-trade analysis: the expansion condition revisited.
6. Factor market distortions.

Lecture 9: External Economies of Scale

1. Firm and industry production functions
2. Non-tangency and non-convexity
3. Country size as a determinant of trade
4. Possible multiple equilibria and low-level traps
5. International external economies
6. A note on factor prices
Lecture 10: Oligopoly Models with Homogenous Goods

1. Trade between identical countries in a Cournot duopoly
2. The “linear” model: linear demand and constant marginal cost
3. Cournot duopoly in the linear model
4. A free-entry version of the Cournot linear model
5. Positive trade costs: the “reciprocal dumping” model with segmented markets
6. The “home-market effect”: per capital welfare difference in the presence of trade costs and country size differences
7. Notes on segmented versus integrated markets

Lecture 11: Monopolistic - Competition

1. Dixit-Stiglitz preferences - “love of variety”
   The basic Krugman model - variable markups
   Fixed markups (“large-group” monopolistic competition)
2. Differentiated intermediate inputs and the “division of labor”
   Ethier’s model
   Extensions - traded and non-traded intermediate inputs
3. Differentiated goods and the volume of trade - zero trade costs
   The Helpman-Krugman FPE analysis
   Intra-industry and inter-industry trade volumes
   Extensions - non-homothetic demand
4. Transport costs and home-market effects
   Differences in country size, real wages and Linder effects
   Two-sector models
   Factor-price and agglomeration effects
5. Lancaster’s “location” model - “ideal variety”
Lecture 12: Demand, Linder Hypothesis, Vernon’s Product Cycle, Gravity, Grubel-Lloyd Indices, Miscellaneous

1. Different tastes between countries as a determinant of demand
2. Differences in per-capita income as a determinant of trade
3. The Linder hypothesis, product cycles, and extensions
4. The gravity equation, intra-industry trade indices

Lecture 13: Trade in Factors

1. A gains-from-trade theorem
2. The Jones-Coelho-Easton two-factor, one-good model.
3. The Heckscher-Ohlin Model: trade in goods and factors as substitutes
   Zero trade costs, specialization
   Positive trade costs
4. Possible different results in the three-good specific-factors model
5. Trade in goods and factors as complements
   Countries differ in technology
   Product market distortions
   Increasing returns.
6. Home market effects in models with scale economies and transport costs.

Lecture 14: Multinational Firms

1. Review of empirical evidence
2. Dunning’s OLI, joint inputs, firm versus plant-level scale economies
3. A model with endogenous multinationals
4. Pattern of trade in goods and services
5. Motives for internalization
6. A model of internalization
Part III: Trade Policy

Lecture 15: Tariffs

1. Tariffs, prices and welfare in a small economy
2. Equivalence of an import tariff and export tax
3. Tariff = consumption tax + production subsidy
4. Export subsidies
5. Existing distortions, second best, “infant industry argument
6. Terms of trade and the optimal tariff
7. Tariffs and retaliation, trade wars
8. Effective protection, internal income redistribution

Lecture 16: Quotas and Other Barriers

1. Methods of instituting a quota
   auctions
   domestic give-away
   VER
   red tape, DUPS
2. Comparison of methods
3. Non-equivalence of tariffs and quotas
   distributional effects within countries and between countries
   retaliation, Nash equilibria in tariffs versus quotas
   foreign monopolist supplying the import good
   domestic monopoly producer of the import-competing good.
   economy is growing
   fluctuations, “shocks”

Lecture 17: Strategic Trade Policy

1. Definition: Trade policy with increasing returns and imperfect competition
   Domestic distortions, profit shifting
2. Cournot competition - production subsidy
   One firm in each country
   Firm numbers fixed, but $> 1$
   Add domestic consumption
   Free entry
   Foreign ownership

3. Bertrand competition

5. Import protection as export promotion

6. Voluntary export restraints, facilitating collusion

7. Monopolistic competition

8. Complementarity of domestic and imported intermediate inputs

9. Segmented versus integrated markets

Lecture 18: Preferential Trade Areas

1. Inherent difficulties of second-best problems

2. Traditional approach: trade creation and diversion

3. Problems with traditional approach

4. Kemp-Wan theorem

Lecture 19: Political Economy

1. Basic postulates

2. Median-voter model

3. Participation costs, free riding, logrolling

4. Status-quo bias

5. Multi-issue bargaining and exchange of market access

6. Mayer’s median voter model

7. Grossman-Helpman protection for sale
Reading List

Below is the list of chapters in Feenstra and in Markusen et. al. I have also included “classic” articles for each topic, but I will not expect students to master these in such a short course.

Lecture 1, Lecture 2, Lecture 3:
Markusen, Melvin, Kaempfer and Maskus, Chapters 2-4, Appendices 1-2
Feenstra, Chapter 1, 3
Dixit and Norman, Chapters 1-3

Lecture 4:
Markusen, Melvin, Kaempfer, and Maskus, Chapter 5
Feenstra, Chapter 6
Corden, "The Normative Theory of International Trade", in Jones and Kenen.
Dixit and Norman, Chapter 3, parts 2-4.

Lecture 5:
MMKM, Chapters 6, 7.
Feenstra, Chapter 1
Jones and Neary, "The Positive Theory of International Trade", in Jones and Kenen.

Lecture 6:
MMKM, Chapters 8.
Feenstra, Chapters 1-3.
Dixit and Norman, Chapter 4.

Lecture 7:
MMKM, Chapter 9.
Jones, "A Three Factor Model in Trade, Theory and History", in Bhagwati et. al. (editors), Trade, Balance of Payments and Growth, North Holland, 1971.
Ethier, "Higher Dimensional Trade Theory," in Jones and Kenen.

Lecture 8:
MMKM, Chapter 10, 11

Lecture 9:
MMKM, Chapter 12.
Feenstra, Chapter 5.

Lecture 10:
MMKM, Chapter 12.
Feenstra, Chapter 5.

Lecture 11:
MMKM, Chapter 12
Feenstra, Chapter 5.

Lecture 12:
MMKM, Chapter 13.

Lecture 13:
MMKM Chapter 21.
Feenstra, Chapter 4.

Lecture 14:
MMKM, Chapter 22.
Feenstra, Chapter 10
Markusen and Venables, "The General Theory of Inter-Industry-, Intra-Industry-, and

Lecture 15:
MMKM, Chapter 15.
Feenstra, Chapter 7
Dixit and Norman, Chapters 4, 5.
Corden, "The Normative Theory", in Jones and Kenen, Chapter 2.

Lecture 16:
MMKM, Chapter 16.
Feenstra, Chapter 8.
Corden, "The Normative Theory", in Jones and Kenen, Chapter 2.

Lecture 17:
MMKM, Chapter 17.
Feenstra, Chapter 8.
Harris, "Why Voluntary Export Restraints are Voluntary", Canadian Journal of Economics, 1985, 799-809.

Lecture 18:
MMKM, Chapter 18.
Feenstra, Chapter 6.

Lecture 19:
MMKM, Chapter 17
Feenstra, Chapter 9.

**OTHER REFERENCES**


