

**MIT Econ 14.581: Graduate International Trade, Spring 2008,**

**Time&Room:** Tu & Th 9-10:30; E51-393

**Instructor:** Kiminori Matsuyama; **Office:** E52-350; **Tel:** 617-324-3908; **Office Hours:** W1-2:30

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**Course Requirement:** No prerequisite, but students are expected to have the knowledge of the first-year graduate micro and macro sequences.

**Course Description and Outline:** Unlike a typical international trade course taught by others, my course emphasizes less on explaining the patterns and volume of trade *per se* and more on understanding how relative economic performances across countries and regions are affected by the interdependence caused by the fact that they trade with each other. The following outline is too ambitious for a semester, so that I will have to be more selective, but it should give you some ideas about this course.

**Part I: A General Theory of Competitive Trade**

Topic 1 Review; Duality Theory of Consumption and Production

Topic 2 Gains from Trade and Patterns of Trade

Topic 3 Some Comparative Statics

**Part II: Competitive Trade: Ricardian Theory**

Topic 4 Basics (2 Countries, No Trade Costs, Homothetic Demand, Exogenous Technologies)

Topic 5 Introducing Trade Costs

Topic 6 Non-Homothetic Preferences and North-South Trade

Topic 7 Multi-Country Extensions and Bilateral Trade

**Part III: Competitive Trade: Factor Proportion Theory**

Topic 8 Ricardo-Viner (Specific Factors) Model

Topic 9 Heckscher-Ohlin Model and Its Generalization

Topic 10 Models with Partially Mobile Factors

Topic 11 Factor Proportion-cum-Technological Heterogeneity

**Part IV: Scale Economies, Product Differentiation, & Imperfect Competition**

Topic 12 Endogenizing Technologies: External Economies & Increasing Returns

Topic 13 Competitive Trade with Nonconvex Technologies

Topic 14 Monopolistic Competition, Intra-industry Trade, and Gravity Equations

Topic 15 Trade Costs, Agglomeration, and Economic Geography

Topic 16 Monopolistic Competition with Heterogeneous Firms

Topic 17 Some Oligopoly Models of Trade

**Part V: Trade Dynamics**

Topic 18 Short-Run vs. Long Run: Structural Adjustments

Topic 19 Growth and Trade: Learning By Doing

Topic 20 Growth and Trade: Factor Accumulation

Topic 21 Growth and Trade: Innovation

**Part VI: Intertemporal Trade**

Topic 22 Dynamics of the Current and Trade Accounts

Topic 23 Risk, Diversification, and Asset Trade

Topic 24 Financial Frictions and International Capital Flows

**Evaluation:** 30%: Midterm; Thursday, March 20, during regular lecture hours  
50%: Final Exam; Thursday, May 15, during regular lecture hours  
20%: Class Participation

**Textbooks:** No textbook is used. But, the reading list refers to the following books, which are useful to own.

Bhagwati (ed.), International Trade: Selected Readings (2nd Ed.) MIT Press  
Dixit and Norman, Theory of International Trade Cambridge University Press  
Feenstra, Advanced International Trade, Princeton University Press.  
Grossman and Rogoff (eds.), Handbook of International Economics III, North-Holland  
Helpman and Krugman, Market Structure and Foreign Trade MIT Press  
Jones and Kenen (eds.), Handbook of International Economics I, North-Holland  
Krugman, Rethinking International Trade MIT Press  
Obstfeld and Rogoff, Foundations for International Macroeconomics, MIT Press.

**Reading List: The essential readings are in bold.** At least in the first half of the course, I teach mostly out of my own **Lecture Slides**, in which I try to give a unified treatment of the existing literature. These slides are constantly added and/or revised, and I will make them available on my homepage, <http://faculty.wcas.northwestern.edu/~kmatsu/>. In the second half of the course, however, I teach more directly out of selected articles.

#### Part I: A General Theory of Competitive Trade

Topic 1. Review; Duality Theory of Production and Consumption  
Topic 2. Gains from Trade and Patterns of Trade

#### **Matsuyama Trade Lecture Slides**

Dixit and Norman, Theory of International Trade Chs. 3 and 4.  
Deardorff, "The General Validity of the Law of Comparative Advantage," JPE Oct 1980  
Ethier, W. "Higher Dimensional Issues in Trade Theory," Ch. 3.2 Handbook I  
Feenstra, Chs. 1 and 6  
Bernhofen-Brown, "A Direct Test of the Theory of Comparative Advantage: The Case of Japan," JPE, Feb 2004.  
Bernhofen-Brown, "An Empirical Assessment of Gains from Trade: Evidence from Japan," AER, Mar 2005.

Topic 3. Some Comparative Statics

#### **Dixit and Norman, Ch.5**

**Bhagwati-Brecher-Hatta, "General Theory of Transfers and Welfare," AER Sep 1983, in**

Bhagwati, Readings Ch. 27

Corden, "Booming Sector and Dutch Disease Economics: Survey and Consolidation," Oxford Econ Papers 1984

#### Part II: Competitive Trade: Ricardian Theory

Overview:

**Matsuyama, "Ricardian Trade Theory," New Palgrave Dictionary of Economics, 2<sup>nd</sup> Edition.**

Topic 4 & 5. Basics

**Matsuyama, Trade Lecture Slides**

Dornbusch-Fischer-Samuelson, AER Dec 1977.

Matsuyama, "Uniform versus Non-Uniform Globalization," in progress.

Ito and Kiyono, "Welfare Enhancing Export Subsidies," JPE 1987

Krugman, P. Rethinking International Trade Ch. 10, "A Technology Gap Model..."

Topic 6. Non-Homothetic Preferences and North-South Trade

**Matsuyama, Trade Lecture Slides**

Matsuyama, "Productivity-Based Theory of Manufacturing Decline: A Global Perspective," in progress.

Matsuyama, "A Ricardian Model with a Continuum of Goods under Nonhomothetic Preferences," JPE, Dec 2000

Stibora and de Vaal, "Trade Policies in a Ricardian Model with a Continuum of Goods under Nonhomothetic Preferences," JDE.

Flam-Helpman "Vertical Product Differentiation and North-South Trade," AER Dec 1987

Stokey, "The Volume and Composition of Trade between Rich and Poor Countries," REStud Jan 1991

Topic 7. Multi-Country Extensions and Bilateral Trade

**Matsuyama, Trade Lecture Slides**

Yanagawa, "Economic Development in a Ricardian World with a Continuum of Countries," JDE 1996.

Eaton and Kortum, "Technology, Geography and Trade," Econometrica, Sep 2002

Alvarez and Lucas, "Some Implications of Eaton-Kortum," JME, Sep 2007

Part III: Competitive Trade: Factor Proportions Theory

Topic 8. Ricardo-Viner (Specific Factors) Model

**Matsuyama, Trade Lecture Slides**

Dixit and Norman, Theory of International Trade pp.38-43, 86-87 and 102-106

Jones, "A Three Factor Model in Theory, Trade, and History," in Essays

Ruffin and Jones, JET 1977.

Topic 9. Heckscher-Ohlin Model and Its Generalizations

**Matsuyama, Trade Lecture Slides**

Jones, "Heckscher-Ohlin Trade Theory," in New Palgrave Dictionary of Economics, 2<sup>nd</sup> Edition.

Mussa, "The Two-Sector Model in terms of Its dual," JIE Nov 1979, in Bhagwati, Readings Chs. 4.

Deardorff, "Weak Links in the Chain of Comparative Advantage," JIE May 1979; in Bhagwati, Readings Ch. 7.

Deardorff, "The General Validity of the Heckscher-Ohlin Theorem," AER Sep 1982.  
Deardorff, "FIRless FIRwoes," JIE 1986.  
Ethier, W. "Higher Dimensional Issues in Trade Theory," in Handbook I  
Helpman and Krugman, Market Structure and Foreign Trade Ch. 1  
Helpman, "The Structure of Foreign Trade," JEL, Spring 1999.  
Feenstra, Chs. 2 and 3.  
Dornbusch-Fischer-Samuelson, "Heckscher-Ohlin Continuum of Goods," QJE, 1980.

Topic 10. Models with Partially Mobile Factors

Mussa  
Grossman  
Ruffin

Matsuyama, "A Simple Model of Sectoral Adjustment," REStud, April 1992.  
Ohnsorge and Trefler, "International Trade with Heterogeneous Workers," JPE Nov 2007

Topic 11. Factor Proportion-cum-Technological Heterogeneity

**Matsuyama, Trade Lecture Slides**

Davis, "A Heckscher-Ohlin-Ricardo Approach," JIE Oct 1995  
Feenstra, Chapter 4  
Zhu and Trefler "Trade and Inequality in General Equilibrium," JIE 2005  
Matsuyama, "Beyond Icebergs," REStud, Jan 2007  
Matsuyama, "Beyond Icebergs," Working Paper.

Part IV: Scale Economies, Product Differentiation, and Imperfect Competition

Topic 12. Endogenizing Technologies: External Economies and Increasing Returns

**Matsuyama, Trade Lecture Slides**

Ethier, "International Decreasing Costs and World Trade," JIE 1979.  
Ethier, "Decreasing Cost in International Trade and Frank Graham's Argument for Protection," Ecta 1982

Topic 13. Competitive Trade with Nonconvex Technologies

**Matsuyama, Trade Lecture Slides**

Topic 14. Product Differentiation, Gains from Variety and Intra-Industry Trade

**Matsuyama, Trade Lecture Slides**

Feenstra, Ch. 5  
Krugman, , Rethinking International Trade Ch. 1; "Increasing Returns, Monopolistic Competition, ...." JIE 1979

Krugman, Rethinking International Trade Ch. 3; "Intraindustry Specialization, and Gains from Trade," JPE 1981  
Matsuyama, "Complementarities and Cumulative Processes in Models of Monopolistic Competition," JEL June 1995.  
Matsuyama, "A Chamberlain-Ricardo Approach," in progress  
Helpman, "A Chamberlain-Heckscher-Ohlin Approach," JIE 1981.  
Markusen, "Explaining the Volume of Trade: An Eclectic Approach" AER Dec 1986  
Foellmi-Hepenstick-Zweimueller, "Income Effects in the Theory of Monopolistic Competition and International Trade," Oct 2007  
Leamer and Levinsohn, "International Trade Theory: Evidence," Handbook III, Ch.3  
Romalis, "Factor Proportions and Structure of Commodity Trade," AER 2004  
Hanson and Xiang, "Home-Market Effect and Bilateral Trade Patterns," AER Sep 2004  
Broda and Weinstein, "Globalization and Gains from Variety" QJE

Topic 15. Trade Costs, Agglomeration, and Economic Geography

*Overview*

**Matsuyama, Trade Lecture Slides**

Helpman and Krugman, Market Structure and Foreign Trade Chs. 10-11.

*Nontraded Differentiated Goods*

Matsuyama, "Why Are There Rich and Poor Countries?: Symmetry-Breaking in the World Economy," JJIE 1996.

Matsuyama and Takahashi, "Self-Defeating Regional Agglomeration," REStud April 1998.

*Trade Costs in Differentiated Goods: Home Market Effect*

Krugman, Rethinking International Trade Ch. 2; "Scale Economies, Product Differentiation, ....," AER 1980

Helpman-Krugman, 1985

Matsuyama, "Geography of the World Economy"

Behrens, et. al.

*Trade Costs in Differentiated Goods; Agglomeration and Economic Geography*

Krugman, "Increasing Returns and Economic Geography," JPE June 1991.

Krugman and Venables, "Globalization and the Inequality of Nations," QJE, 1995.

Puga and Venables, "The Spread of Industry: Spatial Agglomeration in Economic Development," JJIE 1996.

Puga, "The Rise and Fall of Regional Inequalities," EER,

Fujita, Krugman, and Venables. The Spatial Economy, Cambridge: MIT Press, 1999.

Topic 16: Monopolistic Competition Models with Firm Heterogeneity

**Melitz, "The Impact of Trade on Intra-Industry Reallocations and Aggregate Industry Productivity," Ecta, Nov 2003.**

Helpman-Melitz-Yeaple, "Export vs FDI with Heterogeneous Firms" AER March 2004

Yeaple, "A Simple Model of Firm Heterogeneity, International Trade, and Wages," JIE January 2005

Chaney, "Liquidity Constrained Exporters,"

Bernard-Redding-Schott, "Comparative Advantage and Heterogeneous Firms," REStud, Jan 2007.

Bernard-Jensen-Redding-Schott, "Firms in International Trade," JEP Summer 2007.

**Melitz-Ottaviano, "Market Size, Trade, and Productivity," REStud January 2008**

Topic 17: Some Oligopoly Models of Trade

Brander-Krugman, "A Reciprocal Dumping Model..." JIE 1983, in Rethinking International Trade, Ch. 5. etc.

Helpman and Krugman, Market Structure and Foreign Trade Ch. 5

Neary, REStud

Part V: Trade Dynamics

Topic 18. Short Run vs. Long Run: Structural Adjustments

Neary, P, "Short-Run Capital Specificity..." EJ 1978, also in Bhagwati, Readings Ch. 5

Mussa, M. "Dynamic Adjustment in the Heckscher-Ohlin Model," JPE 1978.

Matsuyama, "A Simple Model of Sectoral Adjustment," REStud, April 1992.

Matsuyama, "Increasing Returns, Industrialization and Indeterminacy of Equilibrium" QJE May 1991

Topic 19 Growth and Trade: Learning-By-Doing

Krugman, Rethinking International Trade Chs. 7; "Narrow Moving Band, the Dutch Disease, ..." JDE, 1987.

Grossman and Helpman, "Technology and Trade," Handbook III, Ch.2, Secs. 1-3.

Matsuyama, K. "Agricultural Productivity, Comparative Advantage, and Economic Growth," JET, Dec 1992.

Young, QJE May 1991

Lucas, "Making a Miracle," Ecta

Brezis, Krugman and Tsiddon, "Leapfrogging in International Competition," AER, Dec 1993.

Topic 20 Growth and Trade: Factor Accumulation

**Acemoglu, Growth Manuscript, Ch. 18-19**

Findlay, A chapter in Handbook I

Smith, A chapter in Handbook I

Stiglitz,

Findlay, R., "Factor Proportions and Comparative Advantage in the Long Run, Bhagwati, Readings Ch. 6.

Matsuyama, "Life-Cycle Saving and Comparative Advantage in the Long Run," EL

Krugman, Rethinking International Trade Ch. 6, "Trade, Accumulation, and Uneven Development," JDE 1981

Ventura, "Growth and Interdependence," QJE

**Acemoglu and Ventura, World Income Distribution, QJE 2002**

Baldwin and Martin, "Agglomeration and Regional Growth," Handbook of Regional and Urban Economics

**Ventura, "A Global View of Economic Growth," in Handbook of Economic Growth**

Topic 21 Growth and Trade: Innovation

**Acemoglu, Growth Manuscript, Ch. 18-19**

Grossman and Helpman, "Quality Ladders in the Theory of Growth," REStud, 1991.

Taylor, "Quality Ladders and Ricardian Trade," JIE 1993.

Taylor, "TRIPS, Trade, and Growth," IER 1994

Acemoglu and Zilibotti, "Productivity Differences," QJE 2001

Howitt, "Endogenous Growth and Cross-Country Income Differences," AER 2000.

Acemoglu, "Patterns of Skill Premia," REStud April 2003

Thoenig and Verdier, "A Theory of Skill-Biased Innovation and Globalization," AER June 2003

**Grossman and Lai, "International Protection of Intellectual Property Rights," AER Dec 2004**

Scotchmer, "Political Economy of Intellectual Property Treaties," JLEO 2004.

Diwan and Rodrik, "Patents, Appropriate Technology, and North-South Trade," JIE 1991

Epifani and Gancia, "Skill Bias of the World Trade,"

Lucas, "Trade and Diffusion of the Industrial Revolution," Graham Lecture, 2007

Rossi-Hansberg and Wright, "Urban Structure and Growth," REStud, July 2007

Part VI: Intertemporal Trade

Topic 22 Dynamics of the Current and Trade Accounts

**Obstfeld and Rogoff, Foundations of Open Economy Macroeconomics, Chs. 1-3.**

Obstfeld and Rogoff, "Intertemporal Approach to the Current Account," Handbook III, Ch. 11.

Matsuyama, K. "Current Account Dynamics in a Finite Horizon Model," JIE November 1987

Matsuyama, K. "Terms of Trade, Factor Intensities and the Current Account in a Life-Cycle Model," REStud April 1988.

Topic 23 Risk, Diversification, and Asset Trade

Obstfeld, and Rogoff, Foundations of Open Economy Macroeconomics, Ch. 5

Newberry and Stiglitz, "Pareto-Inferior Trade," REStud

Eaton and Grossman, "Trade as Insurance," CJE, 1985.

Cole and Obstfeld, "Commodity Trade and International Risk Sharing," JME 1991

**Broner-Ventura, "Globalization and Risk-Sharing,"**

Topic 24. Financial Frictions and International Capital Flows

**Matsuyama, “Aggregate Implications of Credit Market Imperfections,” forthcoming in *Macroeconomics Annual 2007*.**

Obstfeld and Rogoff, *Foundations of Open Economy Macroeconomics*, Chs. 6

Gertler, and Rogoff, "North-South Lending and Endogenous Domestic Capital Market Inefficiencies," *JME* 1990.

**Matsuyama, “Credit Market Imperfections and Patterns of Trade and Capital Flows,” *JEEA* April-May 2005**

Wynne, “Wealth as a Determinant of Comparative Advantage,” *AER* Mar 2005

Manova,

Vogel, *JIE* Apr 2007

**Matsuyama, “Financial Market Globalization, ..., and Endogenous Inequality of Nations,” *Econometrica*, May 2004.**

Acemoglu and Zilibotti, *JPE* 1997

Martin and Rey, “Globalization and Emerging Markets: With or Without Crash,” *AER*.

Caballero and Krishnamurthy, *JME*

Aoki, Benigno, and Kiyotaki, “Adjusting to Capital Account Liberalization,” LSE and Princeton

Antras and Caballero, “Trade and Capital Flows: A Financial Friction Perspective,” Harvard and MIT