

# International Trade

3<sup>rd</sup> module, 2018-2019

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## Course information

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**Course Website:** my.nes.ru

**Instructor's Office Hours:** TBA

**Class Time:** TBA

**Room Number:** TBA

**TAs:** TBA

## Course description

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**The objective of this course:** to study how international trade affects the national economies and what benefits and risks it brings to participating countries.

**Course methodology:** the course covers both theoretical and empirical aspects of classical and neo-classical theories, new theory and heterogeneous firms' theory of international trade.

**The learning goal:** at the end of the course, the students will be able to discuss the major economic theories of international trade, to analyze the economic implications of globalization process, to understand the important redistributive effects of international trade and use instrumental approaches to trade analysis.

## Course requirements, grading, and attendance policies

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This course is a prerequisite for the course "International Trade Policy".

The final grade is based on a final exam (70%), home assignments (20%) and presentation (10%).

10% for presentation is credited subject to participation in presentation class (last week of the module).

The topic for presentation should be approved by lecturer (no later than 4<sup>th</sup> week of the module).

Final exam format: closed book+ A4; 2 hours; exit – no; questions – yes.

## Sample tasks for course evaluation

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### Sample: topics of presentations in 2012-2013

Market of Production and Distribution of Video Games  
The Icelandic weather comparative advantage  
Visa regimes and export  
Evolution of Chinese trade  
New trends in energy market: shale gas, heavy crude oil  
World market of post stamps  
World wine market

### Sample: Final exam, 2012-2013

You have 2 hours to answer 4 questions.

Necessary conditions for a satisfactory grade:

- 1) Positive points for three questions,
- 2) Sum of points bigger than 35.

Good luck!

### Question 1 (15 points)

**A) (5 points)** The assumption of increasing returns to scale in production makes trade theory more realistic. How exactly it helps to explain the structure of international trade?

**B) (5 points)** Why the increase in variety of products available in the markets of trading countries can be considered as the gain from trade? Could the increase in diversity be economically disadvantageous?

**C) (5 points)** Is the assumption of the differentiation of goods necessary to explain intraindustry trade?

### Question 2 (15 points).

**A) (10 points)** In the general framework of Ricardian model for 2 countries and 2 goods compare real wages (in terms of both goods) for workers in both countries in autarky and free trade.

**B) (5 points)** Does the result in A) depend on the sizes of the countries?

### Question 3 (35 points).

The economy produces two goods. Production of each good requires two factors (eg, labor and capital). Factor supply is inelastic.

The first good is homogeneous and the industry is perfectly competitive.

The second good is differentiated, production technologies of each variety are the same, and, the marginal costs are equal  $c_2(w, r)$  while fixed costs are  $\alpha c_2(w, r)$ ,  $\alpha > 0$ , where  $w$  and  $r$  are wages and capital rent, respectively.

Consumer preferences can be represented as  $U = u(c_1, c_2) = c_1^\phi c_2^{1-\phi}$ ,  $0 < \phi < 1$ , where  $c_1$  is the consumption of first good, and  $c_2$  is the index of consumption of second goods which, in turn,

can be expressed as  $c_2 = \left( \sum_j c_{2,j}^\theta \right)^{1/\theta}$ ,  $0 < \theta = (\sigma - 1)/\sigma < 1$

where  $c_{2,j}$  is consumption of the variety  $j$  of second product.

- 1) **(15 points)** Is Stolper-Samuelson theorem valid in this economy?
- 2) **(10 points)** Is Rybchinsky theorem valid in this economy?

- 3) **(10 points)** How the answers to 1) and 2) change if fixed costs in second technology cannot be represented as a constant fraction of marginal costs.

**Question 4 (35 points).**

**A) (15 points)** Suppose that there are several economies and each economy is described by Melitz' 2003 model. How does the transition from autarky to free trade affects

- welfare of each economy;
- minimum and average productivity of firms in each economy;
- market shares and profits of producers with different levels of productivity in each economy?

Provide qualitative and, where possible, quantitative (you can refer to results obtained in class, explaining what they mean) explanations of the changes brought by trade liberalization.

**B) (20 points)** Suppose that one more country (similar to the others) joins the trade block described above. How will it affect

- welfare of the original members of the trade bloc;
- minimum and average productivity of firms in original member economies, the minimum level of productivity of their exporters;
- market shares and profits of firms with various productivity levels and export status?

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## **Course materials**

### **Required textbooks and materials**

There is no formal textbook for the course, I will refer in some cases to the following monographs and papers:

Krugman, P., M. Obstfeld, M. Melitz, *International Economics: Theory and Policy*, Pearson Education, 2011 (KO)

Helpman, E. and P.R. Krugman, *Market Structure and Foreign Trade*, MIT Press, Cambridge, 1985. (HK)

Grossman, G.M. and K. Rogoff (eds.), *Handbook of International Economics*, Vol. III, (Amsterdam, North Holland), 1995 (HB3)

Gopinath, G., E. Helpman and K. Rogoff (eds.), *Handbook of International Economics*, Vol. IV, (Amsterdam, North Holland), 2014 (HB4)

Feenstra, R., *Advanced International Trade: theory and evidence*, Princeton University Press, 2004 (F)

Melitz (2003), "The impact of trade on intra-industry reallocations and aggregate industry productivity", *Econometrica*, 1695

Melitz, Redding (2014) "Heterogeneous Firms and Trade" in Gopinath, Helpman, Rogoff (eds.) *Handbook of International Economics*, vol. IV

Costinot, Rodríguez-Clare (2014) "Trade Theory with Numbers: Quantifying the Consequences of Globalization", in Gopinath, Helpman, Rogoff (eds.) *Handbook of International Economics*, vol. IV

Head, Mayer (2014) "Gravity Equations: Workhorse, Toolkit, and Cookbook", in Gopinath, Helpman, Rogoff (eds.) *Handbook of International Economics*, vol. IV

Bernard, Jensen, Redding, Schott (2012), "The Empirics of Firm Heterogeneity and International Trade," *Annual Review of Economics*, *Annual Reviews*, vol. 4(1), pages 283-313, 07.

## Course contents and additional materials

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### 1. Dynamics and structure of international trade flows

F, pp.56-60

Estevadeordal, Frantz, Taylor (2003). "The Rise And Fall Of World Trade, 1870-1939," *The Quarterly Journal of Economics*, MIT Press, vol. 118(2), pages 359-407"

International Trade Statistics, 2009

### 2. Why do countries trade -I: comparative advantage theory

HK, Ch. 1-3.

F, Ch.1-3.

#### ***Gains from trade and basic law of comparative advantage***

F, pp.179-188.

Bernhofen, D.M. and J.C. Brown, "An Empirical Assessment of the Comparative Advantage Gains from Trade: Evidence from Japan," *American Economic Review* 95(1), 2005, 208-225.

#### ***Ricardian model***

Dornbusch, R., S. Fischer and P.A. Samuelson, "Comparative Advantage, Trade and Payments in a Ricardian Model with a Continuum of Goods," *American Economic Review*, 1977, 823-39.

Eaton, J. and S. Kortum, "Technology, Geography, and Trade," *Econometrica*, 70 (5), 2002, 1741-1779.

Costinot, A. D. Donaldson and I. Komunjer and Ivana Komunjer, "What Goods Do Countries Trade? A Quantitative Exploration of Ricardo's Ideas", *Review of Economic Studies*, 2012, vol. 79, issue 2, pp. 581-608

Balassa (1963) "An Empirical Demonstration of Classical Comparative Cost Theory", *Review of Economics and Statistics*, 231-238

#### ***Heckscher-Ohlin model***

Leontief (1953), «Domestic Production and Foreign Trade: the American Capital Position Re-examined», *Proceedings of the American Philosophical Society*, 97, 332-349.

Leamer (1980), "The Leontief Paradox, Reconsidered", *Journal of Political Economy*, 495-503

Bowen H., E. Leamer and L. Sveikauskas (1987) "Multicountry, Multifactor Tests of the Factor Abundance Theory," *American Economic Review*, Vol . 77, No. 5, 791-809

Trefler (1993), "International Factor Prices: Leontief Was Right!," *Journal of Political Economy*, Vol. 101, No. 6, pp. 961-987

Trefler (1995), "The Case of the Missing Trade and Other HOV Mysteries," *American Economic Review*, Vol. 85, No. 5, pp. 1029-1046

Trefler, D. and S.C. Zhu (2010). "The Structure of Factor Content Predictions," *Journal of International Economics* 82: 195-207

### **3. Why do countries trade -II: monopolistic competition, increasing return to scale, and differentiated goods.**

#### ***New theory***

HK, Ch. 6-11.

F, Ch. 5.

Krugman (1979), "Increasing Returns, Monopolistic Competition, and International Trade", *Journal of International Economics*, 469-479

Krugman (1980), "Scale Economies, Product Differentiation, and the Patterns of Trade", *American Economic Review*, 950-959

Head and Ries (1999), "Rationalization Effects of Tariff Reductions", *Journal of International Economics*, 295-320

Trefler (2004) "The Long and Short of the Canada-U.S. Free Trade Agreement", *American Economic Review*, v94(4,Sep), 870-895

#### ***Heterogeneous firms theory***

Bernard, Eaton, Jensen, Kortun (2003), "Plants and productivity in International Trade", *American Economic Review*, 1268

Melitz (2003), "The impact of trade on intra-industry reallocations and aggregate industry productivity", *Econometrica*, 1695

Melitz, Redding (2013) "Heterogeneous Firms and Trade" in HB4

Pavcnik (2002), "Trade Liberalization, Exit, and Productivity Improvements: Evidence from Chilean Plants", *The Review of Economic Studies*, 245-276.

Bernard, Redding and Schott (2007), "Comparative Advantage and Heterogeneous Firms", *Review of Economic Studies*, 74, 31-66

Freund, Pierola, (2012) "Export Superstars", *Review of Economics and Statistics*, Vol.97, Is.5, pp. 1023-1032

Bernard, Jensen, Redding, Schott (2011), "The empirics of firm heterogeneity and international trade", NBER WP17627

Fajgelbaum, P., G. Grossman and E. Helpman, "Income Distribution, Product Quality, and International Trade," *Journal of Political Economy* 119: 721- 765, 2011.

Melitz, M.J. and S.J. Redding, "New Trade Models, New Welfare Implications," *American Economic Review* 105(3): 1105-1146, 2015.

Bernard A., M. Grazzi and C. Tomasi, 2015, "Intermediaries in International Trade: Products and Destinations", *Review of Economics and Statistics*, Vol. 97, No. 4: 916-920

Bernard, Jensen, Redding, Schott (2012), "The Empirics of Firm Heterogeneity and International Trade," *Annual Review of Economics*, *Annual Reviews*, vol. 4(1), pages 283-313, 07.

### **4. Gravity model of international trade**

Helpman (1987), "Imperfect Competition and International Trade: Evidence from Fourteen Industrial Countries", *Journal of the Japanese and International Economics*, 62-81

Deardorff (1997), "Determinants of Bilateral Trade: Does Gravity Work in a Neoclassical World?" in J. Frankel ed. *The Regionalization of the World Economy*, University of Chicago Press

Hummels and Levinsohn (1995), "Monopolistic Competition and International Trade: Reconsidering the Evidence," *Quarterly Journal of Economics*, Vol. 110, No. 3, pp. 799-836

Debaere (2005), "Monopolistic competition and trade, revisited: testing the model without testing for gravity", *Journal of International Economics*, 249– 266

McCallum (1995), "National Borders Matter: Canada-U.S. Regional Trade Patterns," *American Economic Review*, Vol. 85, No. 3, pp. 615-623

Anderson and Wincoop (2003), "Gravity with Gravitas: A Solution to the Border Puzzle," *American Economic Review*, v93, 170-192.

Baier and Bergstrand (2001), "The Growth of World Trade: Tariffs, Transport Costs and Income Similarity," *Journal of International Economics*, Volume 53, Issue 1, Pages 1-27

Gorodnichenko and Tesar (2005), "A Re-Examination of the Border Effect", NBER Working Paper 11706

Helpman, E., M. Melitz and Y. Rubinstein, "Trading Partners and Trading Volumes" *Quarterly Journal of Economics* 2008, 123, 441—487.

Head, Mayer (2014) " Gravity Equations: Workhorse, Toolkit, and Cookbook", in Gopinath, Helpman, Rogoff (eds.) *Handbook of International Economics*, vol. IV

### **5. Multinational firms (time permitting)**

Brainard (1997), "An Empirical Assessment of the Proximity-Concentration Trade-off Between Multinational Sales and Trade," *American Economic Review*, 520-544.

Antràs, P., "Firms, Contracts, and Trade Structure," *Quarterly Journal of Economics*, 2003, 1375-1418.

\*Helpman, Melitz and Yeaple (2004), "Exports versus FDI with Heterogeneous Firms," *American Economic Review*, vol. 94, no. 1, pp. 300-316

Markusen. and Venables (2000), "The Theory of Endowment, Intra-industry and Multinational Trade," *Journal of International Economics*, 209-234.

Antràs, P. and E. Helpman, "Global Sourcing," *Journal of Political Economy* 112(3), 2004, 552-580.

Antràs, Pol and Esteban Rossi-Hansberg, "Organizations and Trade," 2008, *Annual Review of Economics*, Annual Reviews, vol. 1(1), pages 43-64, 05.

Bernard, Andrew B., J. Bradford Jensen, Stephen J. Redding and Peter K. Schott, "Firms in International Trade," *Journal of Economic Perspectives*, 2007, 21(3), 105-130.

Nunn, Nathan, "Relationship-Specificity, Incomplete Contracts, and the Pattern of Trade," *Quarterly Journal of Economics*, May 2007, CXXXII (2), 569- 600.

Fajgelbaum, P., G.M. Grossman and E. Helpman, "A Linder Hypothesis for Foreign Direct Investment," *Review of Economic Studies* 82: 83—121, 2015.

### **Academic integrity policy**

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Cheating, plagiarism, and any other violations of academic ethics at NES are not tolerated.