ECO 552: International Trade II
Tue 1:00 - 4:00 PM, Room: 298 Julis Romo Rabinowitz Building

Instructor: L. Kamran Bilir, A23 Julis Romo Rabinowitz Building, lbilir@princeton.edu

Office Hours: By appointment

Course Website: We will use the Blackboard website for posting announcements and materials.

Grading: Your grade will be based on:

(a) *A paper with a research idea.* You should send your answer electronically to both lbilir@princeton.edu and ecmorale@princeton.edu by May 10th.

(b) *Class participation and in-class presentation of research idea on 4/30.*

Lectures:

Lecture 1: Trade and Innovation I – Productivity Dynamics. (3/26) [3 hours]

Lecture 2: Trade and Innovation II – Technology and Policy. (4/2) [3 hours]

Lecture 3: Multinational Firms I – Technology and Policy. (4/9) [3 hours]

Lecture 4: Multinational Firms II – Theory and Evidence. (4/16) [3 hours]

Lecture 5: Diffusion and Networks. (4/23) [3 hours]

Lecture 6: Class Presentations. (4/30) [3 hours]

Lecture 1: Trade and Innovation I – Productivity Dynamics. (3/26)

Required Readings

1. Bustos (2011). "Trade Liberalization, Exports, and Technology Upgrading: Evidence on the Impact of MERCOSUR on Argentinian Firms," American Economic Review, 101(1), 304-340.
2. De Loecker, Jan (2011). "Product Differentiation, Multi-Product Firms and Estimating the Impact of Trade Liberalization on Productivity," Econometrica, 79(5), 1407-1451.
3. Aw, Bee Yan, Mark J. Roberts and Daniel Yi Xu (2011). "R&D Investment, Exporting, and Productivity Dynamics," American Economic Review, 101(4), 1312-1344.

Additional Readings

1. Pavcnik, Nina (2002). "Trade Liberalization, Exit, and Productivity Improvements: Evidence from Chilean Plants," The Review of Economic Studies, 69, 245-76.
2. Goldberg, Penny, Amit Khandelwal, Nina Pavcnik, and Petia Topalova (2010). "Imported Intermediate Inputs and Domestic Product Growth: Evidence from India," Quarterly Journal of Economics, 125(4), 1727-67.
3. Atekson, Andy, and Ariel Burstein (2010). "Innovation, Firm Dynamics, and International Trade,"Journal of Political Economy, 118(3), 433-484.
4. Bloom, Draca, Van Reenen (2015), "Trade Induced Technical Change? The Impact of Chinese Imports on innovation, IT and Productivity," The Review of Economic Studies, 83(1), 87-117.
5. Bøler, Ester Ann, Andreas Moxnes and Karen Helene Ulltveit-Moe (2015) "R&D, International Sourcing, and the Joint Impact on Firm Performance," American Economic Review, 105(12), 3704-3739.
6. Atkin, David, Amit Khandelwal, and Adam Osman (2017), "Exporting and Firm Performance: Evidence from a Randomized Trial," Quarterly Journal of Economics, 132(2), 551-615.

Background Readings

1. Olley, Steven G., and Ariel Pakes (1996). "The Dynamics of Productivity in the Telecommunications Equipment Industry," Econometrica, 64(6), 1263-1295.
2. Doraszelski, Ulrich, and Jordi Jaumandreu (2013). "R&D and Productivity: Estimating Endogenous Productivity," Review of Economic Studies, 80, 1338-1383.
3. Ackerberg, Daniel A., Kevin Caves, and Garth Frazer (2015). "Identification Properties of Recent Production Function Estimators," Econometrica, 83(6), 2411-2451.
4. Gandhi, Amit, Salvador Navarro, and David Rivers (2016). "On the Identification of Production Functions: How Heterogeneous is Productivity?" mimeo.

Lecture 2: Trade and Innovation II – Technology and Policy. (4/2)

Required Readings

1. Krugman, Paul (1979). "A Model of Innovation, Technology Transfer, and the World Distribution of Income," Journal of Political Economy, 87(2), 253-266.
2. Helpman, Elhanan (1993). "Innovation, Imitation, and Intellectual Property Rights," Econometrica, 61(6), 1247-1280.
3. McCalman, Phillip (2001). "Reaping What You Sow: An Empirical Analysis of International Patent Harmonization," Journal of International Economics, 55, 161-186.
4. Chaudhuri, Shubham, Pinelopi K. Goldberg, Panle Jia (2006). "Estimating the Effects of Global Patent Protection in Pharmaceuticals: A Case Study of Quinolones in India," American Economic Review, 96(5), 1477-1514.

Additional Readings

1. Grossman, Gene M., and Elhanan Helpman (1991). "Quality Ladders and Product Cycles." Quarterly Journal of Economics, 106(2), 557-586.
2. Grossman, Gene M., and Edwin L. C. Lai (2004). "International Protection of Intellectual Property," American Economic Review, 94(5), 1635-1653.
3. Atekson, Andy, and Ariel Burstein (2018). "Aggregate Implications of Innovation Policy," forthcoming Journal of Political Economy.

Background Readings

1. Pakes, Ariel (1986). "Patents as Options: Some Estimates of the Value of Holding European Patent Stocks,' Econometrica, 54(4), 755-784.
2. Schankerman, Mark A., and Ariel Pakes (1986). "Estimates of the Value of Patent Rights in European Countries During the Post-1950 Period," Economic Journal, 96, 1052–1077.
3. Levin, Richard C., Alvin K. Klevorick, Richard R. Nelson, Sidney G. Winter, Richard Gilbert, and Zvi Griliches (1987). "Appropriating the Returns from Industrial Research and Development." Brookings Papers on Economic Activity, Special Issue On Microeconomics, 783–831.
4. Aghion, Philippe, and Peter Howitt (1992). "A Model of Growth Through Creative Destruction," Econometrica 60(2), 323-351.
5. Cohen, Wesley M., Richard R. Nelson, and John P. Walsh (2000). "Protecting Their Intellectual Assets: Appropriability Conditions and Why U.S. Manufacturing Firms Patent (Or Not)." National Bureau of Economic Research Working Paper 7552.
6. Moser, Petra (2005). "How Do Patent Laws Influence Innovation? Evidence from Nineteenth-Century World Fairs," American Economic Review, 95(4), 1214-1236.
7. Qian, Yi (2007). "Do National Patent Laws Stimulate Domestic Innovation In A Global Patenting Environment?" Review of Economics and Statistics, 89(3), 436-453.
8. Qian, Yi (2008). "Impacts of Entry by Counterfeiters,' Quarterly Journal of Economics, 123(4), 1577-1609.
9. Williams, Heidi (2013). "Intellectual Property Rights and Innovation: Evidence from the Human Genome," Journal of Political Economy, 121(1), 1-27.

Lecture 3: Multinational Firms I – Technology and Policy. (4/9)

Required Readings

1. Branstetter, Lee, Raymond Fisman and Fritz Foley (2006). "Do Stronger Intellectual Property Rights Increase International Technology Transfer? Empirical Evidence from U.S. Firm-Level Panel Data." Quarterly Journal of Economics, 121(1), 321-349.
2. Bilir, L. Kamran (2014). "Patent Laws, Product Lifecycle Lengths, and Multinational Activity," American Economic Review, 104(7), 1979-2013.
3. Bilir, L. Kamran and Eduardo Morales (2018). "Innovation in the Global Firm," mimeo.

Additional Readings

1. Vernon, Raymond (1966). "International Investment and International Trade in the Product Cycle," Quarterly Journal of Economics, 80(2), 190-207.
2. Teece, David J. (1977). "Technology Transfer by Multinational Firms: The Resource Cost of Transferring Technological Know-how," Economic Journal, 87, 242-261.
3. McCalman, Phillip (2004). "Foreign Direct Investment and Intellectual Property Rights: Evidence from Hollywood's Global Distribution of Movies and Videos," Journal of International Economics, 62, 107-123.
4. Guadalupe, María, Olga Kuzmina, and Catherine Thomas (2012). "Innovation and Foreign Ownership." American Economic Review, 102(7), 3594-3627.
5. Keller, Wolfgang, and Stephen R. Yeaple (2013). "The Gravity of Knowledge," American Economic Review, 103(4), 1414-1444.
6. Holmes, Thomas J., Ellen R. McGrattan, and Edward C. Prescott (2015). "Quid Pro Quo: Technology Capital Transfers for Market Access in China," Review of Economic Studies, 82(3), 1154-1193.

Background Readings

1. Arrow, Kenneth J. (1975). "Vertical Integration and Communication." Bell Journal of Economics, 6(1), 173-183.
2. Cohen, Wesley M., and David A. Levinthal (1989). "Innovation and Learning," Economic Journal, 99, 569-596.
3. Klepper, Steven (1996). "Entry, Exit, Growth, and Innovation over the Product Life Cycle" American Economic Review, 86(3), 562-583.
4. Cohen, Wesley M., and Steven Klepper (1996). "Firm Size and the Nature of Innovation within Industries: The Case of Process and Product R&D," Review of Economics and Statistics, 78(2), 232-243.
5. Wilson, Daniel J. (2009). "Beggar Thy Neighbor? The In-State, Out-of-State, and Aggregate Effects of R&D Tax Credits," Review of Economics and Statistics, 91(2), 431-436.
6. Hall, Bronwyn H., Jacques Mairesse, and Pierre Mohnen (2010). "Measuring the Returns to R&D," mimeo.
7. Atalay, Enghin, Ali Hortaçsu, and Chad Syverson (2014). "Vertical Integration and Input Flows," American Economic Review, 104(4), 1120-1148.

Lecture 4: Multinational Firms II – Theory and Evidence. (4/16)

Required Readings

1. Helpman, Elhanan (1984). "A Simple Theory of International Trade with Multinational Corporations," Journal of Political Economy, 92(3), 451-471.
2. Antràs, Pol (2005). "Incomplete Contracts and the Product Cycle," American Economic Review, 95(4), 1054-1073.
3. Irrarazabal, Alfonso, Luca Opromolla, and Andreas Moxnes (2013). "The Margins of Multinational Production and the Role of Intrafirm Trade," Journal of Political Economy, 121(1), 74-126.
4. Arkolakis, Costas, Natalia Ramondo, Andres Rodriguez-Clare, Stephen Yeaple (2018). "Innovation and Production in the Global Economy," American Economic Review, 108(8), 2128-73.

Additional Readings

1. Markusen, James R. (1984). "Multinationals, Multi-Plant Economies, and the Gains from Trade," Journal of International Economics, 16(3), 205-226.
2. Rodríguez-Clare, Andrés (1996). "Multinationals, Linkages and Economic Development," American Economic Review, 86(4), 852-873.
3. Brainard, Lael (1997). "An Empirical Assessment of the Proximity-Concentration Trade-off Between Multinational Sales and Trade," American Economic Review, 87(4), 520-544.
4. McLaren, John (2000). "Globalization and Vertical Structure," American Economic Review, 90(5), 1239-1254.
5. Carr, David, James Markusen and Keith Maskus (2001). "Estimating the Knowledge-Capital Model of the Multinational Enterprise," American Economic Review, 91(3), 693-708
6. Yi, Kei-Mu (2003). "Can Vertical Specialization Explain the Growth of World Trade?" Journal of Political Economy, 111(1), 52-102
7. Antràs, Pol, and Elhanan Helpman (2004). "Global Sourcing," Journal of Political Economy, 112(3), 552-580.
8. Helpman, Elhanan, Marc Melitz, and Stephen Yeaple (2004). "Exports versus FDI with Heterogeneous Firms," American Economic Review, 94(1), 300-316
9. Muendler, Marc-Andreas, and Sascha O. Becker (2010). "Margins of Multinational Labor Substitution," American Economic Review, 100(5), 1999-2030.
10. Ramondo, Natalia, and Andrés Rodríguez-Clare (2013). "Trade, Multinational Production, and the Gains from Openness," Journal of Political Economy, 121(2), 273-322.
11. Ramondo, Natalia, Veronica Rappaport, and Kim Ruhl (2016). "Intrafirm Trade and Vertical Fragmentation in U.S. Multinational Corporations," Journal of International Economics, 98, 51-59.
12. Head, Keith, and Thierry Mayer (2018). "Brands in Motion: How Frictions Shape Multinational Production," mimeo.
13. Tintelnot, Felix (2017). "Global Production with Export Platforms," Quarterly Journal of Economics, 132(1), 157-209.

Lecture 5: Diffusion and Networks. (4/23)

Required Readings

1. Keller, Wolfgang (2002). "Geographic Localization of International Technology Diffusion," American Economic Review, 92(1), 120-142.
2. Chaney, Thomas (2014) "The Network Structure of International Trade," American Economic Review, 104(11), 3600-3634.
3. Allen, Treb, L. Kamran Bilir, and Christopher Tonetti (2019). "The Network Diffusion of Knowledge," mimeo.

Additional Readings

1. Eaton, Jonathan and Samuel Kortum (1999). "International Technology Diffusion: Theory and Measurement," International Economic Review, 40(3), 537-570.
2. Sampson, Thomas (2016). "Dynamic Selection: An Idea Flows Theory of Trade and Growth," Quarterly Journal of Economics, 131(1), 315-380.
3. Davis, Donald, and Jonathan Dingel (2019). "A Spatial Knowledge Economy," American Economic Review, 109(1), 153-170.
4. Perla, Jesse, Christopher Tonetti, and Michael Waugh (2015). "Equilibrium Technology Diffusion, Trade, and Growth," mimeo.
5. Buera, Paco and Ezra Oberfield (2016). "The Global Diffusion of Ideas," mimeo
6. Cockburn, Iain M., Jean O. Lanjouw, and Mark Schankerman (2016). "Patents and the Global Diffusion of New Drugs," American Economic Review, 106(1), 136-164.

Background Readings

1. Griliches, Zvi (1957). "Hybrid Corn: An Exploration in the Economics of Technological Change," Econometrica, 25(4), 501-522.
2. David, Paul A. (1966). "The Mechanization of Reaping in the Ante-Bellum Midwest," Chapter 1 of H. Rosovsky, ed., Industrialization in Two Systems: Essays in Honor of Alexander Gerschenkron, New York: Wiley and Sons.
3. Arrow, Kenneth J. (1969). "Classificatory Notes on the Production and Transmission of Technological Knowledge," American Economic Review, Papers and Proceedings, 59(2), 29-35.
4. Caselli, Francesco, and Wilbur John Coleman (2001). "Cross-Country Technology Diffusion: The Case of Computers" American Economic Review, 91(2), 328-335.
5. Comin, Diego, and B. Hobijn (2004). "Cross-Country Technology Adoption: Making Theory Face the Facts," Journal of Monetary Economics, 51, 39-83.
6. Keller, Wolfgang (2004). "International Technology Diffusion," Journal of Economic Literature, 42(3), 752-782.
7. Giraud, Xavier (2013). "Proximity and Investment: Evidence from Plant-level Data," The Quarterly Journal of Economics, 128(2), 861-915.
8. Manuelli, Rodolfo, and Ananth Seshadri (2014). "Frictionless Technology Diffusion: The Case of Tractors," American Economic Review, 104(4), 1368-91.
9. Doepke, Matthias, David de la Croix and Joel Mokyr (2018). "Clans, Guilds, and Markets: Apprenticeship Institutions and Growth in the Pre-Industrial Economy," mimeo.