Course: Advanced Macroeconomics 2

Faculty: Martí Mestieri

Term: Winter

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Description and Objectives

This course has the goal of introducing students to active research areas in economic growth and international trade. We will study a set of models and tools that are commonly used in these fields, and we will cover recent papers. The assignments for the course are intended to foster engagement with the current research frontier and to stimulate creative thinking about the students' own research projects.

Course Outline:

The course covers the main theories of structural transformation and the associated empirical evidence; the impact of international trade on economic growth in models with endogenous technology and heterogeneous firms and the associated empirical evidence; and models of technology diffusion. I will also likely cover some connection of structural change models to climate change.

References

A basic reference of the class will be Acemoglu's Introduction to Modern Economic Growth and Feenstra's Theory of International Trade. The references below contain more than what the course will cover. They are meant to give relevant background and potential presentation topics (as discussed in the grading section). The list of references will be updated before the class starts.

1. Structural transformation in a Closed Economy

Supply side: Theories with Exogenous Technology

Ngai and Pissarides (2007), "Structural Change in a Multi-Sector Model of Growth", AER.

Acemoglu and Guerrieri (2008), "Capital Deepening and Nonbalanced Economic Growth", JPE.

Alvarez-Cuadrado, Long and Poschke, (2017) "Capital-labor Substitution, Structural Change and Growth", TE.

Herrendorf, Rogerson, Valentinyi, (2021) "Structural Change in Investment and Consumption: A Unified Approach", Review of Economic Studies.

Garcia-Santana, Pijoan-Mas, Villacorta, (2021) "Investment Demand and Structural Change", Econometrica.

Background readings:

Acemoglu, "Introduction to Modern Economic Growth", Chapter 20

Herrendorf, Rogerson, Valentinyi, "Growth and Structural Transformation", Handbook of economic growth.

Buera, Kaboski "Can Traditional Theories of Structural Change Fit The Data?," JEEA 2009, vol. 7(2-3), pages 469-477, 04-05.

Buera, Kaboski, Mestieri and O'Connor, "The Stable Transformation Path", CEPR WP 2019.

Empirical evidence on Supply Side Effects

Bustos, P., B. Caprettini, and J. Ponticelli (2016). Agricultural Productivity and Structural Transformation: Evidence from Brazil. American Economic Review.

Heblich, S., Redding, S. J., & Voth, H. J. (2022). Slavery and the British Industrial Revolution (No. w30451). National Bureau of Economic Research.

Fajgelbaum, Pablo, and Stephen J. Redding. "Trade, Structural Transformation, and Development: Evidence from Argentina 1869-1914." Journal of Political Economy 130.5 (2022): 1249-1318.

Bustos, P., G. Garber, and J. Ponticelli (2020). Capital accumulation and structural transformation. The Quarterly Journal of Economics 135 (2), 1037-1094.

Colmer, J. (2021). Temperature, labor reallocation, and industrial production: Evidence from India. American Economic Journal: Applied Economics 13 (4), 101-24.

Adao, Rodrigo, Costas Arkolakis, and Federico Esposito. "General Equilibrium Effects in Space: Theory and Measurement" (2022).

Borusyak, Kirill, Rafael Dix-Carneiro, and Brian Kovak. "Understanding Migration Responses to Local Shocks." (2022).

Albert, Christoph, Paula Bustos, and Jacopo Ponticelli. The Effects of Climate Change on Labor and Capital Reallocation. No. w28995. National Bureau of Economic Research, 2021.

Asher, Sam, and Paul Novosad. 2020. "Rural Roads and Local Economic Development." American Economic Review, 110 (3): 797-823.

Hjort, Jonas, and Jonas Poulsen. 2019. "The Arrival of Fast Internet and Employment in Africa." American Economic Review, 109 (3): 1032-79.

Background reading

Corden and Neary, (1982) "Booming Sector and De-Industrialisation in a Small Open Economy", Economic Journal.

Matsuyama, Kiminori, "Agricultural Productivity, Comparative Advantage, and Economic Growth," Journal of Economic Theory 58 (December 1992): 317-334.

Matsuyama, Kiminori, "Structural Change in an Interdependent World: A Global View of Manufacturing Decline", Journal of the European Economic Association, 2009.

Gollin, D., Jedwab, R. & Vollrath, D. Urbanization with and without industrialization. J Econ Growth 21, 35-70 (2016).

Redding, Stephen, and Anthony J. Venables. "Economic geography and international inequality." Journal of international Economics 62.1 (2004): 53-82.

Donaldson, Dave, and Richard Hornbeck. "Railroads and American economic growth: A "market access" approach." The Quarterly Journal of Economics 131.2 (2016): 799-858.

Borusyak, Kirill and Hull, Peter, Non-Random Exposure to Exogenous Shocks: Theory and Applications (January 29, 2020). University of Chicago, Becker Friedman Institute for Economics Working Paper No. 2020-130.

Demand Side Theories of Structural Change

Kongsamut, Rebelo and Xie (2001), "Beyond Balanced Growth", Restud

Boppart, Timo (2014), "Structural Change and the Kaldor Facts in a Growth Model," Econometrica.

Comin, Lashkari, and Mestieri (2021) "Structural Transformation with long-run Income and Price effects," Econometrica

Alder, Mueller, Boppart "A Theory of Structural Change that Can Fit the Facts", AEJ: Macro.

Bohr, Yavuz and Mestieri (2023), "Aggregation and Closed-Form Results for Nonhomothetic CES Preferences", WP

2. Endogenizing Technology and Comparative Advantage: Home Market Effects, Directed Technical Change and Non-homothetic Preferences

Krugman, Paul, (1980), Scale Economies, Product Differentiation, and the Pattern of Trade, American Economic Review, 70, issue 5, p. 950-59

Matsuyama, Kiminori, (2019) "Engel's Law in the Global Economy," Econometrica.

Matsuyama, Kiminori (2000), "A Ricardian Model with a Continuum of Goods under Nonhomothetic Preferences: Demand Complementarities, Income Distribution, and North-South Trade," JPE, pp.1093-1120.

Bohr, Mestieri, and Robert-Nicoud (2023), "Heterothetic Cobb Douglas: Theory and Applications", working paper.

Foellmi, R. and Zweimuller, J. (2006)," Income Distribution and Demand-Induced Innovations", Review of Economic Studies, 73(4):941-960.

Foellmi, R. and Zweimüller, J. (2008), "Structural change, Engel's consumption cycles and Kaldor's facts of economic growth", Journal of Monetary Economics, 55(7):1317-1328.

Yi, Sposi and Zhang (2021), "Deindustrialization and Industry Polarization", Chicago Fed Working Paper.

Comin, Lashkari, Mestieri (2022), "Structural Change in Innovation" NBER WP.

Bohr, Mestieri and Yavuz (2022), "Engel's Treadmill ", working paper.

Cecilia Fieler, "Non-homotheticity and Bilateral Trade: Evidence and a Quantitative Explanation," Econometrica

Caron-Fally-Markusen, "International Trade Puzzles: a solution linking production factors and demand," QJE 2014

Khandelwal, A. Pablo Fagjelbaum, "Measuring the Unequal Gains from Trade," QJE (2016).

Aghion, Boppart, Peters, Schwartzman and Zilibotti (2025) "A Theory of Endogenous Degrowth and Environmental Sustainability" WP

3. Technology diffusion (time permitting)

Buera & Oberfield (2020 Econometrica),"The Global Diffusion of Ideas"

Alvarez, Buera, & Lucas (2008, 2013), "Models of Idea Flows"

Eaton & Kortum (1999)," International Technology Diffusion"

Perla, Tonetti & Waugh (2015, AER) "Equilibirium Technology Diffusion, Trade and Growth"

Benhabib, Perla & Tonetti (2021, Econometrica) “Reconciling Diffusion and Innovation”

Cai et al. (2020 AEJ - Macro), “ Knowledge Diffusion, Trade, and Innovation Across Countries and Sectors”

Lind & Ramondo (AER), “Trade with Correlation”

Lind & Ramondo (AERI, 2023), “Global Innovation and Knowledge Diffusion”

Sampson, Thomas (QJE) "Dynamic Selection: An Idea Flows Theory of Entry, Trade, and Growth"

De Souza, Gaetani, Mestieri (2025, WP) “More Trade, Less Diffusion: Technology Transfers and the Dynamic Effects of Import Liberalization.”

Berkes, Gaetani, Mestieri (2025 ,JPE Macro) "Technology Waves, Knowledge Diffusion and Local Growth"

Matsuyama, Kiminori & Fujiwara, Ippei (2024), *A Technology-Gap Model of 'Premature' Deindustrialization*, American Economic Review, 114(11): 3714–3745.

4. Departures from CES, Applications to Monopolistic Competition and ideas for the students’ presentation

Foellmi & Zweimuller, 2006. "Income Distribution and Demand-Induced Innovations,"

REStud. 2006

Foellmi, Zweimueller, and Wuergler, "Macroeconomics of Model T," JET

Foellmi, Hepenstrick and Zweimueller, "International Arbitrage and the Extensive Margin

of Trade Between Rich and Poor Countries," REStud 2018

Foellmi, Hanslin, and Kohler, "A Dynamic North-South Model of Demand-Induced Product Cycles," JIE 2018

Bertoletti-Etro, "Monopolistic Competition When Income Matters," EJ, 2016

Bertoletti-Etro, "Preferences, Entry, and Market Structure," RJE 2016

Bertoletti-Etro-Simonovska, "International Trade with Indirect Additivity," AEJ Micro 2018

Parenti-Uschev-Thisse, "Toward a Theory of Monopolistic Competition, " JET 2017

Thisse-Uschev, "Monopolistic Competition Without Apology," Handbook of Game Theory and Indusrial Organization

Boucekkine, Latzer, Parenti, "Variable Mark-up in the Long Run," JME

Matsuyama and Ushchev, "Beyond CES: three alternative classes of flexible homothetic demand systems" WP

Matsuyama, Kiminori (2023), "*Non-CES Aggregators: A Guided Tour*, Annual Review of Economics."

Matsuyama, Kiminori (2024), "*Homothetic Non-CES Demand Systems with Applications to Monopolistic Competition*," CEPR Discussion Paper DP19376.

Matsuyama, Kiminori & Ushchev, Philip (2021), "*Constant Pass-Through"*, CEPR Discussion Paper DP15475.

Matsuyama, Kiminori & Ushchev, Philip (2021), "*When Does Procompetitive Entry Imply Excessive Entry?"*, CEPR Discussion Paper DP14991.

Matsuyama, Kiminori, Latzer, Hélène & Parenti, Mathieu (2020), *Reconsidering the Market Size Effect in Innovation and Growth*, CEPR Discussion Paper DP14250.

Fally, T. (2022, JET)"Integrability and Generalized Separability: Consumer Demand with a Price Aggregator" WP

Melitz, Marc and Gianmarco Ottaviano (2003), "Market Size, Trade and Productivity," RES

Fajgelbaum-Grossman-Helpman, "Income Distribution, Product Quality, and International Trade," JPE.

Fieler, "Nonhomotheticity and Bilateral trade." Econometrica, 2011.

Lewis, Monarch, Sposi and Zhang, "Structural Change and Global Trade," JEEA

Sposi, Yi, and Zhang, "Deindustrialization and Industry Polarization," Nov 2021, NBER W29483

Lind-Ramondo, "Trade with Correlation," AER 2023.

Fieler and Eaton, "The Margins of Trade," Econometrica 2025.

Oberfield, "Inequality and Measured Growth" WP

Grossman-Helpman, "Growth, Trade, and Inequality," Econometrica 2018

Grossman-Helpman-Kircher, "Matching and sorting and distributional effects of international trade," JPE 2017.

Behrens-Duranton-RobertNicoud, "Productive Cities: Sorting, Selection, and Agglomeration," JPE 2014.

Davis-Dingel, "A Spatial Knowledge Economy," AER 2019F3

Davis-Dingel, "Comparative Advantage of Cities, JIE 2020.

Gaubert, "Firm Sorting and Agglomeration," AER 2018

Duranton-Puga, "Nursery Cities: Urban Diversity, Process Innovation and the Life Cycle of Products," AER 2001.

Grading

Final grades will be based on the following components:

- **Problem set (40%)** – One problem set covering the core material on structural change, possibly applied to climate change.
- **Student presentation (40%)** – A presentation of two papers from the syllabus or, with the instructor's approval, other relevant papers. Alternatively, it can be a research proposal.
- **Class participation (20%)** – Active engagement in class.

Tentative Schedule

January 12 and 14: Structural change, supply side (4h)

January 19 and 21: Structural change, supply side (2h), demand side (2h)

January 26 and 28: Structural change, demand side (4h)

February 2 and 4: DTC and structural change, (4h)

February 9 and 11: Technology diffusion (2h), Student presentations (2h)