Department of Economics, University of Toronto
ECO2120H1F – Topics in Growth and Development
Fall 2021

Lectures: M 5-7pm FE324

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Overview:
The purpose of this course is to introduce students to a selected set of frontier research on growth and (the macro aspects of) development. Lectures will provide empirical motivations for the selected topics and introduce/discuss key papers/model frameworks in the literature. The main objective of this course is to apply economic theory to understand and interpret empirical observations on economic development and growth. In this course, we will study in detail the ability of theoretical models to account for the empirical facts characterizing economic development and growth over time and across countries. Students are expected to read all the papers that will be presented in class and participate actively in class discussions.

Course Work and Grading:
The final grade will be determined as follows: Final exam (30%), research proposal (20%), presentation/discussion/report (30%), and class participation (20%). No other work will count towards your final grade. Paper presentations and discussions will be assigned in advance based on the tentative outline below. More details on paper presentations, discussions, report as well as the research proposal will be discussed in class.

E-mail Policy:
In my experience, e-mail is not the most effective tool for discussing economics, office hours are more appropriate. I will only respond to e-mails from utoronto accounts and that are clearly identified as ECO2120 in the subject line.

Academic integrity will be strictly enforced.

Tentative outline (subject to change):

1. Lecture 1 and 2: Development facts and the neoclassical growth model
    - Lecture slides
2. Lecture 3: Structural transformation
    - Lecture slides

3. Lecture 4: Structural transformation
    - Lecture slides
    - Presentation: Huneeus and Rogerson (2020) "Heterogeneous paths of industrialization," NBER working paper 27580.
4. Lecture 5: Presentations
    - Bick, Lagakos, Fuchs-Schuendeln, and Tsujiyama (2021) "Structural Change in Labor Supply and Cross-Country Differences in Hours Worked," manuscript Boston University.
    - Poschke (2019) "Wage Employment, Unemployment and Self-Employment Across Countries," manuscript McGill University.
5. Lecture 6: Agriculture and cross-country income differences
    - Lecture slides
    - Presentation: Donovan (2021) "The Equilibrium Impact of Agricultural Risk on Intermediate Inputs and Aggregate Productivity," The Review of Economic Studies.
6. Lecture 7: Misallocation and aggregate productivity
    - Lecture slides
7. Lecture 8: Presentations
    - Hsieh, Hurst, Jones, and Klenow (2019) "The allocation of talent and U.S. economic growth," Econometrica.
    - Aghion, Bergeaud, and Van Reenen, "The Impact of Regulation on Innovation," NBER working paper 28381.
8. Lecture 9: Misallocation in agriculture
    - Lecture slides
    - Presentation: Beg, Sabrin (2021) "Digitization and Development: Property Rights Security, and Land and Labor Markets," Journal of the European Economic Association.
9. Lecture 10: Poverty and inequality
    - Lecture slides
    - Presentation: Balboni, Bandiera, Burgess, Ghatak, and Heil (2021) "Why do people stay poor?," unpublished manuscript, LSE.
10. Lecture 11: Technology adoption and diffusion

- Presentation: Ayerst. Stephen (2020) "Distorted Technology Adoption," manuscript, International Monetary Fund.
- Presentation: Alviarez, Cravino, and Ramondo (2020) "Accounting for cross-country productivity differences: new evidence from multinational firms," manuscript University of British Columbia.

11. Lecture 12: Productivity slowdown

    - Lecture slides
    - Presentation: Andrews, Criscuolo, and Gal (2016) "The global productivity slowdown, technology divergence and public policy: a firm level perspective," unpublished manuscript, OECD.
    - Wrap up

Selected readings:

1. Development facts and the neoclassical growth model

    - Peter Klenow and Andres Rodriguez-Clare (1997), "The Neoclassical Revival in Growth Economics: Has It Gone Too Far?", NBER Macroeconomics Annual, Cambridge MA.
    - Francesco Caselli (2005), "Accounting for Cross-Country Income Differences," Handbook of Economic Growth.
    - Margarida Duarte and Diego Restuccia (2006), "The Productivity of Nations," Federal Reserve Bank of Richmond Economic Quarterly, Volume 92 (3), Summer, pp. 195-223.
    - Chang-Tai Hsieh and Peter Klenow (2010), "Development Accounting", American Economic Journal: Macroeconomics, vol. 2(1), pages 207-23.
    - Restuccia, Diego (2011), "Recent Developments in Economic Growth," Federal Reserve Bank of Richmond Economic Quarterly, Volume 97 (3), Third Quarter, pp. 329-357.
    - Mankiw, N. Gregory, David Romer, and David N. Weil (1992), "A contribution to the empirics of economic growth." The quarterly journal of economics 107, no. 2: 407-437.
    - Erosa, Andres, Tatyana Koreshkova, and Diego Restuccia. "How important is human capital? A quantitative theory assessment of world income inequality." The Review of Economic Studies 77, no. 4 (2010): 1421-1449.
    - Manuelli, Rodolfo E., and Ananth Seshadri (2014). "Human capital and the wealth of nations." American Economic Review 104, no. 9: 2736-62.
    - Restuccia, Diego and Guillaume Vandenbroucke (2014), "Explaining Educational Attainment across Countries and over Time," Review of Economic Dynamics, Volume 17 (4), October, pp. 824-841.

- Chad Jones (2016), "The Facts of Economic Growth," Handbook of Macroeconomics, Volume 2A, pp. 3-69.
- Hendricks, Lutz, and Todd Schoellman (2017), "Human capital and development accounting: New evidence from wage gains at migration." The Quarterly Journal of Economics 133 (2): 665-700.
- Alviarez, Vanessa, Javier Cravino, and Natalia Ramondo (2019), "Accounting for Cross-Country Productivity Differences: New Evidence from Multinational Firms," manuscript, UBC.

2. Structural transformation and growth

- Berthold Herrendorf, Richard Rogerson and Akos Valentinyi (2014), "Growth and Structural Transformation," Handbook of Economic Growth.
- Kongsamult, Rebelo and Xie (2001), "Beyond Balanced Growth," Review of Economic Studies October.
- L. Rachel Ngai and Christophe Pissarides (2007), "Structural Change in a Multi-Sector Model of Growth," American Economic Review, 97, 429-443.
- Ngai and Petrongolo (2017) "Gender gaps and the rise of the service economy," American Economic Journal: Macroeconomics.
- Daron Acemoglu and Veronica Guerrieri (2008), "Capital Deepening and Nonbalanced Economic Growth," Journal of Political Economy, vol.116, no.3.
- Doug Gollin, Stephen Parente, and Richard Rogerson (2002), "The Role of Agriculture in Development," American Economic Review, P&P.
- Margarida Duarte and Diego Restuccia (2010), "The Role of the Structural Transformation in Aggregate Productivity," Quarterly Journal of Economics 125 (1), 129173.
- Margarida Duarte and Diego Restuccia (2020), "Relative Prices and Sectoral Productivity," Journal of the European Economic Association, 18 (3), 1400-1443.
- Berthold Herrendorf and Akos Valentinyi (2013), "Which Sectors Make the Poor Countries so Unproductive?" Journal of the European Economic Association, (10), pp. 323-41.
- Rogerson, Richard (2008). "Structural transformation and the deterioration of European labor market outcomes," Journal of Political Economy 116, no. 2: 235-259.
- Timo Boppart (2014), "Structural Change and the Kaldor Facts in a Growth Model with Relative Price Effects and Non-Gorman Preferences," Econometrica, 82(6), November: 2167-96.
- Diego Comin, Danial Lashkari, and Marti Mestieri (2015), "Structural Change with Long-Run Income and Price Effects," NBER working paper 21595, September.

- Boppart and Krusell (2020) "Labor Supply in the Past, Present, and Future: A Balanced-Growth Perspective," Journal of Political Economy 128(1), 118157.
- Alder, Boppart, Muller (2021) "A Theory of Structural Change That Can Fit the Data," American Economic Journal: Macroeconomics.
- Tomasz Swiecki (2017), "Determinants of Structural Change," Review of Economic Dynamics 24: 95-131.
- Uy, Timothy, Kei-Mu Yi, and Jing Zhang (2013). "Structural change in an open economy." Journal of Monetary Economics 60, no. 6: 667-682.
- Duarte, Margarida (2019). "A Sectoral Perspective on the Slowdown of U.S. Employment," manuscript, University of Toronto.
- Rodrik, Dani (2019). "Premature deindustrialization." Journal of Economic Growth 21, no. 1 (2016): 1-33.
- Sposi, Mike, Kei Mu Yi, and Jing Zhang (2019). "Structural Change and Deindustrialization," manuscript, University of Houston.

3. Agriculture and cross-country income differences

- Diego Restuccia, Dennis Tao Yang and Xiaodong Zhu (2008), "Agriculture and Aggregate Productivity: A Quantitative Cross-Country Analysis," Journal of Monetary Economics 55(2), 234-250.
- David Lagakos and Michael Waugh (2013), "Selection, Agriculture and Cross-Country Productivity Differences," American Economic Review 103(2): 948-980.
- Adamopoulos and Restuccia (2021) "Geography and Agricultural Productivity: Cross-Country Evidence from Micro Plot-Level Data," The Review of Economic Studies.
- Donovan, Kevin (2018), "Agricultural Risk, Intermediate Inputs, and Cross-Country Productivity Differences," manuscript, Yale University.
- Gollin, Douglas, David Lagakos and Michael E Waugh (2014), "The Agricultural Productivity Gap in Developing Countries," Quarterly Journal of Economics.
- Herrendorf, Berthold, and Todd Schoellman (2018). "Wages, human capital, and barriers to structural transformation." American Economic Journal: Macroeconomics 10, no. 2: 1-23.
- Caunedo, Julieta, and Elisa Keller. 2020. Capital Obsolescence and Agricultural Productivity, Quarterly Journal of Economics, forthcoming.
- Chen, Chaoran. 2020. Technology Adoption, Capital Deepening, and International Productivity Differences, Journal of Development Economics, Volume 143, March 2020, 102388.

4. Misallocation and productivity

- Diego Restuccia and Richard Rogerson (2008), "Policy Distortions and Aggregate Productivity with Heterogeneous Plants," Review of Economic Dynamics, vol. 11(4), pages 707-720, October.

- Chang-Tai Hsieh and Peter J. Klenow (2009), "Misallocation and Manufacturing TFP in China and India," Quarterly Journal of Economics 124, November 1403-1448.
- Bartelsman, Eric, John Haltiwanger, and Stefano Scarpetta (2013). "Cross-country differences in productivity: The role of allocation and selection," American Economic Review 103, no. 1: 305-34.
- Diego Restuccia and Richard Rogerson (2013), "Misallocation and Productivity," Review of Economic Dynamics 16(1): pp. 1-10.
- Diego Restuccia (2013), "Factor Misallocation and Development," The New Palgrave Dictionary in Economics, Online edition.
- Hugo Hopenhayn (2014), "Firms, Misallocation, and Aggregate Productivity: A Review," The Annual Review of Economics.
- Diego Restuccia and Richard Rogerson (2017), "The Causes and Costs of Misallocation," Journal of Economic Perspectives, 31(3), 151-74.
- Restuccia, Diego (2019). "Misallocation and Aggregate Productivity across Time and Space," Canadian Journal of Economics, 52(1): 5-32.
- Gorodnichenko, Yuryi, Debora Revoltella, Jan Svejnar, and Christoph T. Weiss. "Resource Misallocation In European Firms: The Role Of Constraints, Firm Characteristics And Managerial Decisions," Working Paper 24444, National Bureau Of Economic Research, March 2018.

5. Specific Policies and Dynamic Implications of Misallocation

- Nezih Guner, Gustavo Ventura, and Daniel Xu (2008), "Macroeconomic Implications of Size Dependent Policies," Review of Economic Dynamics, 11(4): pp. 721-44.
- Chang-Tai Hsieh, Erik Hurst, Chad Jones and Peter J. Klenow (2019), "The Allocation of Talent and U.S Economic Growth," Econometrica, 87(5) September: 1439-74.
- Fajgelbaum, Pablo D., Eduardo Morales, Juan Carlos Suarez Serrato, and Owen Zidar (2018). "State taxes and spatial misallocation," The Review of Economic Studies 86, no. 1: 333-376.
- Chang-Tai Hsieh and Peter J. Klenow (2014), "The Life Cycle of Plants in India and Mexico," Quarterly Journal of Economics.
- Pedro Bento and Diego Restuccia (2017), "Misallocation, Establishment Size, and Productivity," American Economic Journal: Macroeconomics, Volume 9 (3), July, pp. 267-303.
- Bento, Pedro, and Diego Restuccia (2020). "On Average Establishment Size across Sectors and Countries," Journal of Monetary Economics, forthcoming.
- Hopenhayn, Hugo. "Firm Size and Development, Economía, 2016, 17 (1), 2749.

- Ezra Oberfield (2013), "Productivity and misallocation during a crisis: Evidence from the Chilean crisis of 1982," Review of Economic Dynamics 16 (1): 100-119.
- Ufuk Akcigit, Harun Alp, and Michael Peters (2015), "Lack of Selection and Limits to Delegation: Firm Dynamics in Developing Countries," manuscript, Yale University.
- David, Joel and Venky Venkateswaran (2019), "The Sources of Capital Misallocation," American Economic Review.
- Ulyssea, Gabriel. "Firms, Informality, and Development: Theory and Evidence from Brazil," American Economic Review, 108(8), August (2018), 2015-2047.

6. Misallocation in Agriculture

- Tasso Adamopoulos and Diego Restuccia (2014), "The Size Distribution of Farms and International Productivity Differences," American Economic Review, 104(6): pp. 1667-97.
- Tasso Adamopoulos and Diego Restuccia (2020), "Land Reform and Productivity: A Quantitative Analysis with Micro Data," American Economic Journal: Macroeconomics, Volume 12, Issue 3, July 2020, pp. 1-39.
- Diego Restuccia and Raul Santaeulalia-Llopis (2017), "Land Misallocation and Productivity," manuscript, University of Toronto.
- Tasso Adamopoulos, Loren Brandt, Jessica Leight, and Diego Restuccia (2019), "Misallocation, Selection and Productivity: A Quantitative Analysis with Panel Data from China," manuscript, University of Toronto.
- Chen, Chaoran. "Untitled Land, Occupational Choice and Agricultural Productivity," American Economic Journal: Macroeconomics, 9.4 (2017): 91-121.
- Alain de Janvry, Kyle Emerick, Marco Gonzalez-Navarro, and Elizabeth Sadoulet (2015), "Delinking Land Rights from Land Use: Certification and Migration in Mexico," American Economic Review 105 (10): 3125-49.
- Aragon, Fernando, Diego Restuccia, and Juan Pablo Rud (2019). "Are Small Farms Really more Productive than Large Farms?" NBER working paper.

7. Innovation and Macroeconomics

- Jones, Chad. "Sources of US Economic Growth in a World of Ideas," American Economic Review, March 2002, 92(1), 220-239.
- Acemoglu, Daron, Ufuk Akcigit, Harun Alp, Nicholas Bloom, and William Kerr. "Innovation, Reallocation, and Growth," American Economic Review, forthcoming.
- Garcia-Macia, Daniel, Pete Klenow, and Chang-Tai Hsieh (2019). "How Destructive is Innovation?" Econometrica.
- Klette, Tor and Sam Kortum. "Innovating Firms and Aggregate Innovation," Journal of Political Economy, October 2004, 112(5), 986-1018.

- Atkeson, Andrew and Ariel Burstein. "Aggregate Implications of Innovation Policy," manuscript, UCLA, 2018.
- Aghion, Philippe, Antonin Bergeaud, Timo Boppart, Pete Klenow, and Huiyu Li. "Missing Growth from Creative Destruction," American Economic Review, 2019
- Aghion, Philippe, Antonin Bergeaud, Timo Boppart, Pete Klenow, and Huiyu Li. "A Theory of Falling Growth and Rising Rents," Federal Reserve Bank of San Francisco, 2019

8. Technological Progress and Difussion

- Jovanovic, Boyan, and Peter Rousseau. "General Purpose Technologies," Handbook of Economic Growth, Volume 1B, Chapter 18, 1182-1224.
- Acemoglu, Daron, and Pascual Restrepo. "Artificial Intelligence, Automation, and Work," manuscript, 2018.
- Acemoglu, Daron, and Pascual Restrepo (2019). "Robots and jobs: Evidence from US labor markets," Journal of Political Economy.
- Greenwood, Jeremy, and Ananth Seshadri. "Technological Progress and Economic Transformation," Handbook of Economic Growth, Volume 1B, Chapter 19, 1225-1273.
- Aghion, Philippe, Benjamin Jones, and Chad Jones. "Artificial Intelligence and Economic Growth," NBER, 2019.
- Caselli, Francesco, and Alan Manning (2019). "Robot arithmetic: new technology and wages." American Economic Review: Insights 1, no. 1: 1-12.
- Stokey (2020) "Technology diffusion," Review of Economic Dynamics, forthcoming

9. Technology Adoption: Facts and Theory

- Comin, Diego, and Bart Hobijn. "Cross-country technology adoption: making the theories face the facts." Journal of monetary Economics 51.1 (2004): 39-83.
- Parente, Stephen L., and Edward C. Prescott. "Barriers to technology adoption and development." Journal of Political Economy (1994): 298-321.
- Comin, Diego, and Bart Hobijn. "An exploration of technology diffusion." The American Economic Review 100.5 (2010): 2031-2059.
- Comin, Diego, and Mart Mestieri (2018). "If technology has arrived everywhere, why has income diverged?" American Economic Journal: Macroeconomics 10, no. 3: 137-78.
- Ayrest, Stephen (2020), "Distorted Technology Adoption," manuscript, University of Toronto.

10. Productivity Slowdown in Advanced Economies

- Jones, Chad (2017). "The Productivity Growth Slowdown in Advanced Economies," ECB Forum on Central Banking, June.
- Bloom, Nick, et al (2019) "Are Ideas Getting Harder to Find?" manuscript.
- Crafts, Nicholas (2018). "The productivity slowdown: is it the new normal?" Oxford Review of Economic Policy, Volume 34, Number 3, pp. 443460.
- Gordon, Robert J. The rise and fall of American growth: The US standard of living since the civil war. Vol. 70. Princeton University Press, 2017.