

**University of Hong Kong
Faculty of Business and Economics**

Topics in Growth and Development

Fall, 2023

Instructors: Xiaodong Zhu (xdzhu@hku.hk) and Xiaomei Sui (xsui@hku.hk)
Class time: Thursday 9:30am – 12:30pm
Classroom: MC - KK301 (except Nov 16 in MC - MWT3)

Office hours: Thursday 14:30 – 15:30 KK904 (Sep. 7 – Oct. 12)
Thursday 14:30 – 15:30 KK902 (Oct. 26 – Nov. 23)

Course Description

The objective of this course is to introduce frontier research topics and methods in growth and development. This year, the topics will include quantitative models of trade, migration, spatial structural change, technology innovation and diffusion, institutional change, endogenous growth, and industrial policy.

Grading Scheme

- Participation 20%
You are expected to actively engage in class discussions. In each class, we will randomly ask one or two students to discuss briefly the *assigned readings* of the week
- Problem sets 40%
Four problem sets, each of which counts for 10%
 - Problem set #1 due on September 23
 - Problem set #2 due on October 7
 - Problem set #3 due on November 2
 - Problem set #4 due on November 16
- Paper proposal and presentation 40%
Throughout the class, you should keep a list of possible research topics. Towards the end of the term, in early December, you are required to make a 20-minute presentation on a research proposal. The proposal should include your research question, motivation, related literature, and your research plan. You should revise your paper proposal after your presentation, and submit before Dec 16.
- Problem sets and research proposal can be done individually or in a group of up to three students. You are free to team up with different students in different assignments.

Tentative Course Content (Subject to Change)

First half: instructed by Xiaodong Zhu

1. Extreme Value Distributions and Eaton-Kortum Model

- *My notes on Extreme Value Distributions
- *Eaton, Jonathan and Samuel Kortum. 2002. "Technology, Geography, and Trade." *Econometrica* 70 (5) :1741-1779.
- Caliendo, Lorenzo and Fernando Parro. 2015. "Estimates of the Trade and Welfare Effects of NAFTA." *Review of Economic Studies*, 82 (1): 1-44.

2. Trade and Migration

- *Tombe, Trevor and Xiaodong Zhu. 2019. "Trade, Migration, and Productivity: A Quantitative Analysis of China" *American Economic Review* 109 (5) 1843-72.

- *Facchini, Giovanni, Maggie Y. Liu, Anna Magria Mayda, and Minghai Zhouet. 2019. "China's "Great Migration": The impact of the reduction in trade policy uncertainty." *Journal of International Economics* 120: 126-144.
- Adao, Rodrigo, Costas Arkolakis, and Federico Esposito. 2022. "[General Equilibrium Effects in Space: Theory and Measurement](#)." Unpublished working paper.
- Caliendo, Lorenzo, Maximilliano Dvorkin and Fernando Parro. 2019. "Trade and Labor Market Dynamics: General Equilibrium Analysis of the China Trade Shock." *Econometrica*, 87 (3): 741-835.

3. Spatial Structural Changes

- *Hao, Tongtong, Ruiqi Sun, Trevor Tombe, and Xiaodong Zhu. 2020. "The Effects of Migration Policy on Growth, Structural Change, and Regional Inequality in China." *Journal of Monetary Economics*, 113, 112-134.
- *Leight, Jessica. 2021. "Exporting out of Agriculture: The Impact of WTO Accession on Structural Transformation in China." *Review of Economics and Statistics* 103 (2): 364-380.
- Hebllich, Steven, Steven J. Redding, and Hanc-Joachim Voth. 2022. "[Slavery and the British Industrial Revolution](#)." NBER Working Paper No.30451.

4. Trade, Technology Diffusion and Growth

- *Buera, Francisco J. and Ezra Oberfield (2020), "The Global Diffusion of Ideas," *Econometrica* 88, January: 83-114.
- Cai S, Caliendo L, Parro F, and Wei Xiang. 2022. "[Mechanics of Spatial Growth](#)," unpublished working paper

5. Technological and Institutional Innovation and Diffusion

- *Kortum, Sam. 1997. "Research, Patenting, and Technological Change." *Econometrica* 65: 1389-1419.
- *Kelly, Byran, Dimitris Papanikolaou, Amit Seru, Matt Taddy. "Measuring Technological Innovation over the Long Run." *American Economic Review: Insight*
- *Chen, Heng, Bingjing Li, and Xiaodong Zhu: "Bottom-up Institutional Change and Growth: Theory and Evidence from China." Unpublished working paper

Second half: instructed by Xiaomei Sui

6. Innovation, Knowledge Diffusion, Firm Inequality and Secular Trends

This module discusses secular trends in the U.S. and other OECD countries with endogenous growth models. The secular trends include declining entry rate, increasing industrial concentration and market power, lower productivity growth, etc.

- *Ufuk Akcigit and Sina T. Ates. 2021. Ten Facts on Declining Business Dynamism and Lessons from Endogenous Growth Theory. *American Economic Journal: Macroeconomics*, 13(1): 257–98.
- *Ufuk Akcigit and Sina T. Ates. 2022. "What Happened to U.S. Business Dynamism?" (w/ Sina Ates). *Journal of Political Economy*, forthcoming.
- Ernest Liu, Atif Mian, and Amir Sufi. 2022. Low interest rates, market power, and productivity growth. *Econometrica*, 90(1):193–221.
- Philippe Aghion, Antonin Bergeaud, Timo Boppart, Peter J Klenow, and Huiyu Li. 2019. A Theory of Falling Growth and Rising Rents. Working Paper 26448, National Bureau of Economic Research.
- Michael Peters and Conor Walsh. 2021. Population Growth and Firm Dynamics. Working Paper.
- Jane Olmstead-Rumsey. 2020. Market Concentration and the Productivity Slowdown. Working paper.

7. Innovation, Firm Financing, and Financial Frictions

This module studies how firms raise external financing to conduct innovation activities, and how financial frictions matter for aggregate productivity growth by affecting firm financing in innovation.

- *Ates, Sina T., and Felipe E. Saffie. 2021. "Fewer but Better: Sudden Stops, Firm Entry, and Financial Selection." *American Economic Journal: Macroeconomics*, 13 (3): 304-56.
- *Pablo Ottonello and Thomas Winberry. 2023. "Investment, Innovation, and Financial Frictions." Working Paper.
- Murat Alp Celik. 2023. Does the Cream Always Rise to the Top? The Misallocation of Talent in Innovation. *Journal of Monetary Economics*, 133: 105-128.
- Albert Queralto. 2020. A model of slow recoveries from financial crises. *Journal of Monetary Economics*, 114(C):1–25.
- Akcigit, Ufuk, Emin Dinlersoz, Jeremy Greenwood, Veronika Penciakov. 2022. "Synergizing Ventures". *Journal of Economic Dynamics and Control*, 143: 104427.

8. Inventors, Managers, and innovation

This module studies how inventors and managers make innovation decisions, and the implications on aggregate productivity growth.

- *Daron Acemoglu, Ufuk Akcigit, and Murat Alp Celik. 2022. Radical and Incremental Innovation: The Roles of Firms, Managers and Innovators. *American Economic Journal: Macroeconomics*, 14 (3): 199-249.
- *Jones, Benjamin (2009) "The Burden of Knowledge and the Death of the Renaissance Man: Is Innovation Getting Harder." *Review of Economic Studies*, 76(1), pp. 283-317.
- Akcigit, Ufuk and Caicedo, Santiago and Miguelez, Ernest and Stantcheva, Stefanie and Sterzi, Valerio, *Dancing with the Stars: Innovation Through Interactions* (March 2018). NBER Working Paper No. w24466.
- Marta Prato (2022). *The Global Race for Talent: Brain Drain, Knowledge Transfer, and Growth*. Working Paper.
- Jones, Benjamin (2010) "Age and Great Invention." *Review of Economics and Statistics*, 92(1), pp. 1-14.
- Acemoglu, Daron, Philippe Aghion, Claire Lelarge, John Van Reenen and Fabrizio Zilibotti (2007) "Technology, Information and the Decentralization of the Firm." *Quarterly Journal of Economics*, 122(4), pp. 1759-1799.

9. Climate Change and Directed Technological Change

- *Acemoglu, Daron, Philippe Aghion, Leonardo Bursztyn and David Hemous (2012) "The Environment and Directed Technical Change." *American Economic Review*, 102(1), pp. 131-166.
- *Acemoglu, Daron, Ufuk Akcigit, William Kerr and Douglas Hanley (2016) "Transition to Clean Technology." *Journal of Political Economy*, 124(1), pp. 52-104.
- Golosov, Mikhail, John Hassler, Per Krusell, and Aleh Tsyvinski (2014) "Optimal Taxes on Fossil Fuel in General Equilibrium." *Econometrica*, 82(1), pp. 41-88.
- Aghion, Philippe, Antoin Dechezlepretre, David Hemous, Ralf Martin, and John Van Reenen (2003) "Carbon Taxes, Path Dependency and Directed Technical Change: Evidence from the Auto Industry." *Journal of Political Economy*, 124(1), pp. 1-51.
- Newell, Richard, Adam Jaffee and Robert Stavins (1999) "The Induced Innovation Hypothesis and Energy-Saving Technological Change." *Quarterly Journal of Economics*, 114(3), pp. 941-975.
- Nordhaus, William (2008) *A Question of Balance: Weighing the Options on Global Warming Policies*, Yale University Press, New Haven.
- Popp, David (2002) "Induced Innovation and Energy Prices." *American Economic Review*, 92(1), pp. 160-180.

10. Endogenous Growth and Industrial Policies

- *Ufuk Akcigit, Doug Hanley and Nicolas Serrano-Velarde. 2021. "Back to Basics: Basic Research Spillovers, Innovation Policy and Growth," . *Review of Economic Studies*, 88(1): 1–43.
- *Daron Acemoglu and Ufuk Akcigit. 2012. Intellectual Property Rights Policy, Competition and Innovation. *Journal of the European Economic Association*, 10(1):1–42, 02.
- *Earnest Liu and Song Ma. 2023. "Innovation Networks and R&D Allocation". NBER Working Paper.
- Laurent Cavenaile, Murat Alp Celik, and Xu Tian. 2021. The dynamic effects of antitrust policy on growth and welfare. *Journal of Monetary Economics*, 121:42–59.
- Aghion, Philippe, Nicholas Bloom, Richard Blundell, Rachel Griffith and Peter Howitt (2005) "Competition and Innovation: An Inverted-U Relationship." *Quarterly Journal of Economics*, 120(2), pp. 701-728.
- Segal, Ilya, and Michael Whinston (2007) "Antitrust in Innovative Industries." *American Economic Review*, 97(5), pp. 1703-1730.
- Boldrin, Michele and David K. Levine (2008) "Perfectly Competitive Innovation. " *Journal of Monetary Economics*, 55(3), pp. 435-453.