

Syllabus
Advanced Topics in Economic Growth:
Perspectives of New Structural Economics
FALL 2019

Professor Yong Wang
(last update: August 22, 2019)

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Class Time and Venue: 3:10pm to 6pm, Tuesday, Classroom 305, Teaching Building #3.

Office Hours: 4pm to 5pm on Monday or by appointment (please contact Ms. Shaona Ma at shaonama@nsd.pku.edu.cn)

Description of the Course

This PhD course serves two main purposes. One is to provide a rigorous theoretical training on New Structural Economics in the area of Economic Growth and Macroeconomics (one of the mandatory courses in Field A). The second is to help students to get started with academic research in this area. The course is divided into two parts. In the first part, the instructor will cover a few pertinent research papers. In the second part (after the mid-term exam), students shall prepare their research plan, present assigned papers and write referee reports. A complete research paper must be submitted by March 1st, 2020. This course is most suitable for econ PhD students who have already taken the first-year PhD courses on micro, macro and econometrics.

Students are encouraged to participate in the weekly economic growth working group organized by Prof. Yong Wang and Prof. Justin Yifu Lin every Monday from 6:30pm to 8pm at Seminar room 359S at the Yingjie Exchange Center at Peking University, as well as the weekly NSE seminar series on Friday afternoons.

Grading and Requirement:

1. Paper Presentation and Referee Report (5%×2)

Requirement and Format:

Each student will present two times. For each presentation, students should prepare two versions of slides. One is for a long presentation (50 minutes) and the other is for a short presentation (20 minutes). At least one slide should be critical comments and suggestions from the perspective of New Structural Economics. Students are randomly selected to present a pre-assigned paper on spot each time. The selected students should turn in a referee report on the presented paper within three days after the presentation.

2. Problem Sets¹ (4% × 4)

Requirement and Format:

(1) You have to finish three mandatory problem sets and one optional ones, the latter of which must be chosen from several problem sets.

(2) For each optional problem set, you could work with one more student and hand in a joint copy of solutions.

(3) You must type out your solutions neatly.

(4) Feel free to make additional assumptions when you think they are necessary for solving the optional problem sets.

3. Midterm Exam (30%, November 19, 2019)

Requirement and Format: closed-book exam; based on the course materials covered in class

4. Research Proposal (40%, deadline for the written proposal: March 1st, 2020)

Requirement and Format:

(1) Each student should turn in a two-page research proposal within one week after the mid-term exam (due on November 26). It must address a growth topic highly related to this course, specify the main ideas, and be neatly typed in Chinese or English.; within 30 pages (double space), .

(2) On December 24, you must first make a formal and in-class brief presentation on your proposal topic and your plan for the written proposal.

¹The problem sets are mostly based on the instructor's ongoing research, but sometimes adapted from the research papers of others. Failure to obtain grade B or above in two or more problem sets will result in grade F automatically.

(3) You are strongly encouraged to develop your proposal based on one of the research-oriented problem sets. It must be neatly typed in Chinese or English. It should be a well-formatted complete paper.

5. Participation in Class Discussions (4 %)

6. No late homework will be accepted without prior verifiable justifications.

Schedules²

Lecture One: Endowment-Driven Structural Change.

Key References:

- Jiandong Ju, Justin Yifu Lin, and Yong Wang. 2015. "Endowment Structures, Industrial Dynamics, and Economic Growth", *Journal of Monetary Economics*: 244-263
- Justin Yifu Lin and Yong Wang. 2019. "Remodeling Structural Change", in Celestin Monge and Justin Yifu Lin, eds., *Oxford Handbook of Structural Transformation*, Oxford University Press.
- Yong Wang and Xuemin Tang. 2019. "Human Capital, Industrial Dynamics and Skill Premium", unpublished working paper

Lecture Two: Vertical Structure, Institutional Reforms and China's Macro Development.

Key References:

- Xi Li, Xuewen Liu, and Yong Wang, 2016. "A Model of China's State Capitalism", working paper
- Shi-Yuan Pan, Yong Wang and Qi Zhang. "A Political Economy Model of Reforms under Vertical Structure", working in progress
- Xin Wang, Yong Wang and Wei Xiang. "Trade Liberalization, Vertical Structure and Firm Markups", working in progress
- Yong Wang, 2013, "Fiscal Decentralization, Endogenous Policies, and Foreign Direct Investment: Theory and Evidence from China and India", *Journal of Development Economics* 103: 107-123
- Yong Wang, 2018. A Research Note on Innovation Under Vertical Structure. Unpublished Note.
- *Wang, Yong, 2015, "A Model of Sequential Reforms and Economic Convergence: The Case of China", *China Economic Review* 32: 1-26
- Wang, Yong. 2012. A Research Note on Time-Consistent Liberalization. Unpublished.

Lecture Three: Labor Market Frictions

Key References:

- Yong Wang and Siyu Chen. 2019. "Industrial Dynamics, Skill Mismatch and Structural Unemployment", unpublished working paper.
- Zhe Li and Yong Wang. "Mismatch and Industrial Upgrading", working in progress.

Lecture Four: Trade and Industrial Upgrading

Key References:

- Yong Wang, 2014, "Industrial Dynamics, International Trade, and Economic Growth," working paper (Chinese Version Published on *China Economic Quarterly*, 2018)
- Weisheng Zhang, 2019. "Sequential Production, Industrial Upgrading and International Trade", term paper

²The ordering of the lectures is subject to change, depending on the actual progress of teaching.

- Yong Wang and Ran Zhang, 2016. "The Rise of the Service Sector in an Open Economy", unpublished working paper

Lecture Five: Factor Endowment and Technology

Key References:

- Wang, Yong. 2014. "Market Structure, Factor Endowment, and Technology Adoption", unpublished working paper
- Michele Boldrin, Yong Wang and Lijun Zhu. 2019. "The Cyclical Behaviors of Factor Shares", working in progress
- Yong Wang, Zhongchen Fan, and Xinze Li, 2019. "Endowment Structure, Technological Innovation, and Industrial Upgrading", working in progress (in Chinese)

Lecture Six: Middle-Income Traps

Key References:

- Wang, Yong and Shang-Jin Wei, 2019. "The Sandwich Effect: Challenges for Middle-Income Countries", working paper
- Ping Wang and Yong Wang, 2019, "Human Capital Institutions and Middle-Income Trap", working in progress
- Lin, Justin Yifu and Yong Wang, 2019. "Structural Change, Industrial Upgrading and Middle-Income Trap", Journal of Industry, Competition and Trade, Special issue on Development Policies, edited by Dani Rodrik, forthcoming

Lecture Seven: Endowment Structure, Structural Change and Income Distribution

Key References:

- Yong Wang and Zhongkai Shen, 2018. "Factor Endowment, Income Distribution and Industrial Upgrading", working paper (Chinese Version Published on China Economic Quarterly, 2018)
- Yong Wang, 2019. "A Model of Structural Change and Rural Income Distribution", China Agricultural Economic Review, forthcoming
- Yong Wang, 2009. "Endogenous Coalition, Income Distribution and Economic Growth" (Chinese version published on World Economic Forum, 2004)

Lecture Eight: Endowment Structure, Industrial Policies and Industrial Upgrading

Key References:

- Ju Jiandong, Justin Yifu Lin, Yong Wang. 2011. "Marshallian Externality, Industrial Upgrading, and Industrial Policies", World Bank Policy Research Working Paper
- Lin, Justin Yifu and Yong Wang, 2019. "Structural Change, Industrial Upgrading and Middle-Income Trap", Journal of Industry, Competition and Trade, Special issue on Development Policies, edited by Dani Rodrik, forthcoming
- Justin Yifu Lin, Yong Wang and Yi Wen. "Infrastructure Investment and Industrial Upgrading", working in progress

Lecture Nine: Endowment Structure, Heterogeneous Firms, and Industrial Dynamics

Key References:

- Erzo G. Luttmer and Yong Wang. "A Model of Firm Dynamics and Industrial Dynamics", working in progress
- Ping Wang, Yong Wang and Lijun Zhu. "Spinoff and Economic Growth", working in progress
- Yong Wang and Lan Zhu, 2019. "Rise of Labor Costs and Upgrading of Manufacturing Firms: An Empirical Analysis of New Structural Economics Based on the Manufacturing Survey Data in Guangdong Province" (in Chinese), INSE working paper.

Lecture Ten: Other Related Research

Key References:

- Wang, Yong, Jenny Xu, and Xiaodong Zhu. 2014. "Structural Change and Real Exchange Rate Dynamics: Theory and Applications to China and US", working paper
- Wen-Tai Hsu, Yu Sun, and Yong Wang, " Land Misallocation and Structural Transformation", working in progress.
- Jinhui Bai and Yong Wang. 2016. "A Model of Optimal Bank Size Distribution", unpublished research note
- Wang, Yong. 2017. "Vertical Structure and SOE Reforms", International Economic Review (in Chinese)

1. Structural Change

Surveys:

- Herrendorf, Berthold, Richard Rogerson and Akos Valentinyi, 2014, "Growth and Structural Transformation" Handbook of Economic Growth.
- Matsuyama, Kiminori, 2008, "Structural Change," in L. Blume and S. Durlauf, eds., the New Palgrave Dictionary of Economics, 2nd Edition, Palgrave Macmillan.
- Justin Yifu Lin and Yong Wang. 2019. "Remodeling Structural Change", in Celestin Monge and Justin Yifu Lin, eds., Oxford Handbook of Structural Transformation, Oxford University Press.

Topics and Papers:

A. Basics of Structural Change

- *Kongsamut, Piyabha, Rebelo, Sergio and Danyang Xie. 2001. "Beyond Balanced Growth." Review of Economic Studies 68: 869-882
- *Ngai, L. Rachel, and Christopher A. Passarides. 2007. "Structural Change in a Multi-Sector Model of Growth." American Economic Review 97 (January): 429-443
- *Herrendorf, Berthold, Richard Rogerson and Akos Valentinyi, 2013, "Two Perspectives on Preferences and Structural Transformation", American Economic Review, 103(7): 2752-89.

B. Structural Change and Labor Market

- *Ngai, L. Rachel, and Christopher A. Passarides. 2008. "Trends in Hours and Economic Growth", Review of Economic Dynamics, volume 11(April): 239–256
- *Richard Rogerson, 2008. "Structural Transformation and the Deterioration of European Labor Market Outcomes," Journal of Political Economy, 116(2): 235-259.
- Yong Wang and Siyu Chen. 2019. " Human Capital, Industrial Dynamics and Skill Premium", unpublished working paper
- Yao, Wen and Xiaodong Zhu. 2018. "Structural Change and Aggregate Employment Fluctuations in China and the US." working paper

C. Structural Change and Aggregate Productivities

- *Caselli, Francesco, and John Coleman. 2001. "The U.S. Structural Transformation and Regional Convergence: A Reinterpretation." Journal of Political Economy 109 (June): 584-617.
- *Duarte, Margarida and Diego Restuccia, 2010. "The Role of Structural Transformation in Aggregate Productivity", Quarterly Journal of Economics
- Restuccia, Diego, Dennis Tao Yang, and Xiaodong Zhu. 2008. "Agriculture and Aggregate Productivity: A Cross-Country Quantitative Analysis." Journal of Monetary Economics 55 (2): 234-250.
- Lagakos, David, and Michael Waugh. 2013. "Selection, Agriculture, and Cross-Country Production Differences." American Economic Review 103 (2): 948-80.
- Gollin, Douglas, David Lagakos, and Michael Waugh. 2013. "The Agriculture Productivity Gap." Quarterly Journal of Economics 129 (2): 939-993.

D. Structural Change and Capital Intensities [Approach of **New Structural Economics**]

³Subject to Updates.

- Lin, Justin Yifu, 2011. "New Structural Economics: A Framework for Rethinking Development," World Bank Research Observer, 26 (2) : 193-221. [Based on the Kuznets Lecture at Yale in 2011]
- *Jiandong Ju, Justin Yifu Lin, and Yong Wang. 2015. "Endowment Structures, Industrial Dynamics, and Economic Growth", Journal of Monetary Economics: 244-263
- Yong Wang and Xuemin Tang. 2019. "Human Capital, Industrial Dynamics and Skill Premium", unpublished working paper
- *Daron Acemoglu, and Veronica Guerrieri. 2008. "Capital Deepening and Nonbalanced Economic Growth." Journal of Political Economy 116 (June): 467-498.

E. Structural Change and Income Effect

- Foellmi and Zweimuller, 2008. "Structural Change, Engel's Consumption Cycles and Kaldor's Facts of Economic Growth", Journal of Monetary Economics, 55: 1317-1328.
- Boppart, Timo. 2014. "Structural Change and the Kaldor Facts in a Growth Model with Relative Price Effects and Non-Gorman Preferences", Econometrica, 2014
- Laitner, John. 2000. "Structural Change and Economic Growth." Review of Economic Studies 67(July): 545-561
- Comin, Diego, Danial Lashkari, and Marti Mestieri. 2018 "Structural Change with Long-run Income and Price Effects." Unpublished Working Paper.

F. Structural Change and Service

- *Buera, Francisco J. and Joseph P. Kaboski. 2012 . "The Rise of the Service Economy", American Economic Review
- Lee and Wolpin, 2006. "Intersectoral Labor Mobility and the Growth of the Service Sector," Econometrica 47: 1-46.
- Autor, David H., and David Dorn. 2013. "The Growth of Low-Skill Service Jobs and the Polarization of the US Labor Market." American Economic Review, 103(5): 1553-97.
- Young, Alwyn. 2014. "Structural Transformation, the Mismeasurement of Productivity Growth, and the Cost Disease of Services." American Economic Review, 104(11): 3635-67.
- Lin, Justin Yifu and Yong Wang, 2019. "Structural Change, Industrial Upgrading and Middle-Income Trap", Journal of Industry, Competition and Trade, Special issue on Development Policies, edited by Dani Rodrik.
- Buera, Francesco, Joseph Kaboski and Richard Rogerson, 2018. "Skill-biased Structural Change", unpublished working paper
- Yong Wang and Ran Zhang, 2016. "The Rise of the Service Sector in an Open Economy", unpublished working paper

G. Structural Change and Balanced Trade

- *Mastuyama, Kiminori. 2009. "Structural Change in an Interdependent World: A Global View of Manufacturing Decline," Journal of the European Economic Association, 7 (April-May): 478-486.
- Uy, Timothy, Kei-Mu Yi and Jing Zhang. 2013. "Structural Transformation in an Open Economy." Journal of Monetary Economics

H. Structural Change, Unbalanced Trade, and Balassa-Samuelson Implications

- Kehoe, Tim, Kim J. Ruhl and Joseph B. Steinberg, 2017. "Global Imbalances and Structural Change in the United States", *Journal of Political Economy*.
- Wang, Yong, Jenny Xu, and Xiaodong Zhu. 2014. "Structural Change, Trade Balance, and Real Exchange Rate: Theory and Applications to China and US", working paper
- Ravikumar, B., Ana Maria Santacreu and Michael J. Sposi, 2018. "Capital Accumulation and Dynamic Gains from Trade." working paper

I. Others.

- Buera, Francisco J. and Joseph P. Kaboski. 2012. "Scale and the Origins of Structural Change", *Journal of Economic Theory* 147: 684-712
- Ilyina, Anna and Roberto Samaniego. 2012. "Structural Change and Financing Constraints". *Journal of Monetary Economics* 59(2), March 2012, 166-179.
- *Imbs, Jean, and Romain Wacziarg. 2003. "Stages of Diversification" *American Economic Review*, 93(1): 63-86.
- Bustos, Paula, Bruno Caprettini and Jacopo Ponticelli. 2016. "Agricultural Productivity and Structural Transformation: Evidence from Brazil." *American Economic Review*, 106(6): 1320-65.
- Wen-Tai Hsu, Yu Sun, and Yong Wang "Land Misallocation and Structural Transformation", working in progress.
- Sposi, Michael. 2018. "Evolving Comparative Advantage, Sectoral Linkages, and Structural Change." *Journal of Monetary Economics*.

2. International Trade and Economic Growth

Surveys:

- Ventura, Jaume, 2005, "A Global View of Economic Growth", Chapter 22, *Handbook of Economic Growth*.
- Stephen Redding, 2011. "Theories of Heterogeneous Firms and Trade," *Annual Review of Economics*, 3, 77-105.

Topics and Papers

A. Innovation, Imitation, Trade, and Convergence

- *Krugman, Paul. 1979. "A Model of Innovation, Technology Transfer, and the World Distribution of Income." *Journal of Political Economy* 87(April): 253-266
- *Helpman, Elhanan. 1993. "Innovation, Imitation, and Intellectual Property Rights." *Econometrica*, November 1993, 61(6), pp. 1247-1280.
- Young, Alwyn. 1991, "Learning by Doing and the Dynamic Effects of International Trade." *Quarterly Journal of Economics*, 106 (1991): 369-406.
- Rivera-Batiz, Luis A., and Paul M. Romer. 1991. "Economic Integration and Endogenous Growth." *Quarterly Journal of Economics*, 106 (May): 531-55.
- Krugman, P. and A. Venables, 1995. "Globalization and Inequality of Nations," *Quarterly Journal of Economics*, 110, 857-80

- Mastuyama, 2013, "Endogenous Ranking and Equilibrium Lorenz Curve Across (ex ante) Identical Countries," *Econometrica*, 81: 2009-2031.
- Jan Eeckhout and Boyan Jovanovic, 2012, "Occupational Choice and Development", *Journal of Economic Theory* 147: 657–683
- Wang, Yong and Shang-Jin Wei, 2014. "Trade and Non-convergence of Middle-Income Countries", working paper

B. Dynamic HO Trade, Factor Accumulation, and Growth

- *Acemoglu D. and J. Ventura, (2002) "The World Income Distribution," *The Quarterly Journal of Economics*, 117.
- * Ventura, Jaume. 1997. "Growth and Interdependence." *Quarterly Journal of Economics*, February: 57-84
- Bajona, Claustre and Timothy J. Kehoe. 2010. "Trade, Growth, and Convergence in a Dynamic Heckscher-Ohlin Model", *Review of Economic Dynamics*, 13 (July): 487-513
- Atkeson, Andrew and Patrik. J. Kehoe, (2000). "Paths of Development for Early- and Late Bloomers in a Dynamic Heckscher-Ohlin Model," *Federal Reserve Bank of Minneapolis Staff Report* 256.
- Nancy L. Stokey. 1996. "Free Trade, Factor Returns, and Factor Accumulation", *Journal of Economic Growth*, 1: 421-447
- Stokey, Nancy L. 1991. "The Volume and Composition of Trade Between Rich and Poor Countries." *Review of Economic Studies*, 58 (1991): 63-80.
- *Jin, Keyu. 2012. "Industrial Structure and Financial Capital Flows", *American Economic Review* 102(5): 2111-2146.
- *Yong Wang, 2014, "Industrial Dynamics, International Trade, and Economic Growth," working paper
- Lorenzo Caliendo, 2011, "On the Dynamics of the Heckscher-Ohlin Theory" Yale University Working paper

C. Heterogeneous Firms and Static Trade

- *Jonathan Eaton and Samuel Kortum. 2002. "Technology, Geography, and Trade." *Econometrica*, 70: 1741-1780.
- *Alvarez, Fernando and Lucas, Robert Jr., 2007. "General equilibrium analysis of the Eaton-Kortum model of international trade," *Journal of Monetary Economics*, Elsevier, vol. 54(6): 1726-1768, September.
- Andrew Bernard, Jonathan Eaton, J. Bradford Jensen, and Sameul Kortum, 2003, "Plants and Productivity in International Trade", *American Economic Review*, 93(4), 2003, 1268-1290.
- *Andrew Bernard, Bradford Jensen, Stephen Redding, and Peter Schott, 2007. "Comparative Advantage and Heterogeneous Firms", *Review of Economic Studies*, 73(1): 31-66.
- *Melitz., Marc J. "The Impact of Trade on Intra-Industry Reallocations and Aggregate Industry Productivity." *Econometrica*, 71 (2003): 1695-1725.
- Melitz, Marc J., and Gianmarco I.P. Ottaviano. 2008. "Market Size, Trade, and Productivity." *Review of Economic Studies*, 75 (January): 295-316.
- Edmond, Chris and Virgiliu Midrigan, and Daniel Xu, 2015. "Competition, Markups, and the Gains from International Trade", *American Economic Review*

D. Idea Flows, Dynamic Trade, and Growth

- Fernando Alvarez, Francisco Buera, and Robert E. Lucas Jr., 2011. "Idea Flows, Economic Growth, and Trade," University of Chicago, working paper
- Buera, Francisco and E. Oberfield. 2015, "The Global Diffusion of Ideas," NBER #21844.
- Jesse Perla, Christopher Tonetti, and Michael Waugh, 2012, "Equilibrium Technology Diffusion, Trade, and Growth", NYU, working paper
- Jonathan Eaton, Sam Kortum, Brent Neiman, and John Romalis. 2016. "Trade and the Global Recession", American Economic Review Vol. 106(11): 3401-3438
- Andrew Atkeson and Ariel Burstein, 2010, "Innovation, Firm Dynamics, and International Trade," Journal of Political Economy, Vol. 118, No. 3 (June), pp. 433-484
- Alvarez, Fernando. 2017. "Capital Accumulation and International Trade", University of Chicago working paper

3 . Heterogeneous Firms, Firm and Industry Dynamics, Economic Growth Surveys:

- Luttmer, Erzo G.J. 2010, "Models of Growth and Firm Heterogeneity," Annual Reviews of Economics, Vol. 2, 547-576
- Hugo A. Hopenhayn. 2014, "Firms, Misallocation, and Aggregate Productivity: A Review", Annual Review of Economics, Vol. 6: 735-770

Topics and Papers:

A. Aggregate Growth and Firm Heterogeneity

- *Luttmer, Erzo G.J. 2007. "Selection, Growth, and the Size Distribution of Firms". Quarterly Journal of Economics. 122 (August): 1103-44.
- *Luttmer, Erzo G.J., 2011, "On the Mechanics of Firm Growth," The Review of Economic Studies, Vol. 78, No. 3, 1042-1068
- Perla, Jesse and Christopher Tonetti, 2013, " Equilibrium Imitation and Growth", Journal of Political Economy,
- Ben Moll, and Robert E. Lucas, Jr., 2013, "Knowledge Growth and the Allocation of Time", Journal of Political Economy
- Jess Benhabib, Jesse Perla, and Christopher Tonetti, 2014. "The Growth Dynamics of Innovation, Diffusion, and the Technology Frontier", working paper
- *Boyan Jovanovic, 2013, "Misallocation and Growth" American Economic Review, forthcoming.
- Charles I. Jones, 2005. "The Shape of Production Functions and the Direction of Technical Change," Quarterly Journal of Economics 120(2): 517-549
- Cabral and Mata, 2003, "On the Evolution of the Firm Size Distribution: Facts and Theory," American Economic Review, 93(4):1075-1090.
- Arkolakis, 2016, "A Unied Theory of Firm Selection and Growth", forthcoming, Quarterly Journal of Economics
- Coşar, A. Kerem, Nezih Guner and James Tybout, 2016. "Firm Dynamics, Job Turnover, and Wage Distributions in an Open Economy." American Economic Review, 106(3): 625-63.

B. Innovation, Product Cycles, Firm Dynamics, and Industry Dynamics

- Grossman, Gene M., and Elhanan Helpman. 1991. "Quality Ladders and Product Cycles." *Quarterly Journal of Economics*, 106 (1991): 617-650
- Hopenhayn, Hugo A, 1992. "Entry, Exit, and Firm Dynamics in Long Run Equilibrium," *Econometrica*, vol. 60(5), pages 1127-50, September.
- Boyan Jovanovic and Saul Lach, 1989. "Entry, Exit, and Diffusion with Learning by Doing", *The American Economic Review*, Vol. 79, No. 4: 690-699
- Boyan Jovanovic and Glenn M. MacDonald, 1994, "The Life Cycle of a Competitive Industry", *Journal of Political Economy* 102 (2): 322-347
- *Rossi-Hansberg, Esteban and Mark Wright. 2007. "Establishment Size Dynamics in the Aggregate Economy" *American Economic Review* Volume 97, Number 5, pp. 1639-1666(28)
- Atkinson, Andrew and Kehoe, Patrick J. "Modeling and Measuring Organization Capital", *Journal of Political Economy*, 2005, 113(5): 1026-1053
- Stokey, Nancy L. 1988. "Learning by Doing and the Introduction of New Goods." *Journal of Political Economy*, 96: 701-717.
- * Wang, Yong. 2014. "Market Structure, Factor Endowment, and Technology Adoption", working paper
- V. V. Chari and Hugo Hopenhayn, 1991. "Vintage Human Capital, Growth, and the Diffusion of New Technology", *Journal of Political Economy*, Vol. 99(6): 1142-1165
- Boldrin, Michele and David Levine, 2002. "Factor Saving Innovation", *Journal of Economic Theory* 105: 18-41.
- Samaneigo, Roberto, 2010. "Entry, Exit and Investment-Specific Technical Change", *American Economic Review* 100(1): 164-192.
- *Klette and Kortum, 2004, "Innovating Firms and Aggregate Innovation", *Journal of Political Economy*, 112(5): 986-1018.
- Ufuk Akcigit, Murat Alp Celik and Jeremy Greenwood. 2016, "Buy, Keep or Sell: Economic Growth and the Market for Ideas", *Econometrica* 84(3): 943-984.
- Ufuk Akcigit, Harun Alp and Michael Peters, 2018. "Lack of Selection and Limits to Delegation: Firm Dynamics in Developing Countries", NBER Working Paper #21905
- Daron Acemoglu, Gino Gancia , and Fabrizio Zilibotti, 2011. "Competing Engines of Growth: Innovation and Standardization", *Journal of Economic Theory*
- Erzo G. Luttmer and Yong Wang. " A Model of Firm Dynamics and Industrial Dynamics", working in progress [TBC]
- Zhikun Lu and Yong Wang. "Stochastic Growth and Industrial Dynamics", in progress

C. Aggregate TFP and Micro Allocative Efficiency

- *Diego Restuccia and Richard Rogerson, 2008, "Policy Distortions and Aggregate Productivity with Heterogeneous Establishments", *Review of Economic Dynamics* 11: 707-720
- *Hsieh, Chang-Tai. and Peter Klenow, 2009. "Misallocation and Manufacturing TFP in China and India." *Quarterly Journal of Economics*. 124 (4): 1403-48.
- Bartelsman, Eric, John Haltiwanger, and Stefano Scarpetta. 2013. "Cross-Country Differences in Productivity: The Role of Allocation and Selection" *American Economic Review*, 103(1): 305-34.

- Midrigan, Virgiliu and Daniel Xu. 2014. "Finance and Misallocation: Evidence from Plant-level Data" *American Economic Review*
- Hsieh, Hurst, Jones and Klenow, 2013, "The Allocation of Talent and U.S. Economic Growth", *Econometrica*.

D. Spatial Models of Industries and Growth

- Caliendo, Parro, Rossi-Hansberg and Sarte, "The Impact of Regional and Sectoral Productivity Changes on the U.S. Economy", *Review of Economic Studies*, forthcoming
- Desmet and Rossi-Hansberg, 2014. "Spatial Development", *American Economic Review*, 104:4, 1211-1243
- Desmet and Rossi-Hansberg, 2009, "Spatial Growth and Industry Age," *Journal of Economic Theory*, 144(6):2477–2502.
- Lucas and Rossi-Hansberg, 2002, "On the Internal Structure of Cities," *Econometrica*, 70(4):1445-1476.
- Rossi-Hansberg and Wright, 2007, "Urban Structure and Growth," *Review of Economic Studies*, 74(2), 597-624.
- Duranton and Puga, 2001, "Nursery Cities: Urban Diversity, Process Innovation, and the Life Cycle of Products," *American Economic Review*, 91(5):1454-1477.

E. Industry Upgrading and Labor Market Mismatch

- Shimer, Robert. 2007. "Mismatch." *American Economic Review*, 97(4): 1074-1101.
- Sahin, A., J. Song, G. Topa, and G.L. Violante, 2012. "Mismatch Unemployment," *AER*, forthcoming.
- McLaughlin, Kenneth and Mark Bilal, 2001. "Interindustry Mobility and the Cyclical Upgrading of Labor," *Journal of Labor Economics*, 19, 94-135.
- Myungkyu Shim and Hee-Seung Yang, 2014. "Interindustry Wage Differentials, Technology Adoption, and Job Polarization", working paper
- Zhe Li and Yong Wang. "Mismatch and Industrial Upgrading", working in progress.
- Yong Wang and Siyu Chen. "Industrial Dynamics, Mismatch and Unemployment", working in progress.

F. Industry Upgrading, Economic Growth, and Optimal Financial Institutions

- Stein, Jeremy. 2002. "Information Production and Capital Allocation: Decentralized versus Hierarchical Firms." *Journal of Finance* LVII, no. 5: 1891-1921
- Bengt Holmström and Jean Tirole, 1998, "Private and Public Supply of Liquidity", *Journal of Political Economy*, Vol. 106(1):1-40
- Bengt Holmstrom; Jean Tirole. 2007. "Financial Intermediation, Loanable Funds, and the Real Sector." *The Quarterly Journal of Economics*, Vol. 112
- Valerie R. Bencivenga and Bruce D. Smith. 1991. "Financial Intermediation and Endogenous Growth", *Review of Economic Studies*.
- Brunnermeier, Markus K, and Yuliy Sannikov. 2014. "A Macroeconomic Model With A Financial Sector". *American Economic Review* 104(2): 379-421.

- T. Beck, R. Levine, 2002. "Industry Growth and Capital Allocation: Does having a Market- or Bank-Based System Matter?", *Journal of Financial Economics*.
- Miao, Jianjun, 2005. "Optimal Capital Structure and Industry Dynamics", *Journal of Finance* 6: 2621-2659.
- Buera, F., J. Kaboski and Y. Shin, 2012, "Finance and Development: A Tale of Two Sectors," *American Economic Review*
- Bleck, Alexander and Xuewen Liu, 2018. "Bank Credit Expansion and Credit Misallocation" *Journal of Monetary Economics* 94: 27-40.
- Greenwood, Jeremy, Juan Sanchez and Cheng Wang (2010), "Financing Development: The Role of Information Costs," *American Economic Review* 100: 1875-1891.
- Jinhui Bai and Yong Wang. 2016. "A Model of Optimal Bank Size Distribution", unpublished research note

G. Growth, Factor Income Shares, and Income Distribution

Survey: Vincenzo Quadrini and Jose-Victor Rios-Rull, 2014. "Inequality in Macroeconomics" *NH Handbook of Income Distribution*, volume 2B A.B. Atkinson and F.J. Bourguignon (Eds.) Chapter 15

- Gene Grossman, Elhanan Helpman, Ezra Oberfield, and Thomas Sampson, 2017. "Balanced Growth Despite Uzawa", *American Economic Review* 107.
- Helpman, Elhanan, Oleg Itskhoki, Marc-Andreas Muendler, and Stephen J. Redding. 2016. "Trade and Inequality: From Theory to Estimation." *Rev. Econ. Studies*.
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