

Topics in Macroeconomics: Firms and Cities in the Aggregate Economy

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Economics 522, Spring 2008 (2nd Half)

Syllabus

Overview: This is a graduate course in the second year macroeconomics field. We will be concerned with aggregate implications of intermediate organization of economic activity. In particular, the implications of theories of organizations and firm dynamics on aggregate outcomes, including labor markets as well as output growth. We will focus on both the restrictions that intermediate organization imposes on aggregate models and the restrictions that aggregate facts impose on microeconomic theories of firms and organizations. Another one of this type of intermediate organizations is cities. We will study the role of cities, and again their relationship with macroeconomic variables.

Organization: The class meets on Mondays and Wednesdays from 1:00 to 2:30. My office hours are on Thursdays from 3:00 to 5:00 at my office in Fisher 309. You can also contact me by E-mail at erossi@princeton.edu. I will post a syllabus with links to many of the papers in the reading list at:

https://blackboard.princeton.edu/pucourse/ECO522_S2008

Grading: Your course grade will be based on a 45 minute presentation of two papers in the syllabus and a written project due on May 14. Your choice of papers should be consistent with your interests. The written project should be on an original research idea, hopefully related to the two papers presented, but necessarily related to the course topics. Descriptions or reviews of the literature are acceptable but not as ambitious. In any case, your idea should be expressed in the context of the relevant literature. Only one idea per project, please! You can also choose a topic of the first part of the course (Krusell) as we will grade both parts together.

Readings:

1. Firm Dynamics and the size distribution of firms

1.1. Theory

1.1.1. Industry Equilibrium, Firm Dynamics, and Entry and Exit

- Chatterjee and Rossi-Hansberg, 2007, "[Spin-offs and the Market for Ideas](#)," mimeo.
- Hopenhayn and Vereshchagina, 2004, "[Risk Taking by Entrepreneurs](#)," mimeo.
- Hopenhayn, 1992, "[Entry, Exit, and Firm Dynamics in Long Run Equilibrium](#)," *Econometrica*, 60(2): 1127-1150.
- Jovanovic, 1982, "[Selection and the Evolution of Industry](#)," *Econometrica*, 50(3): 649-670.
- Klette and Kortum, 2004, "[Innovating Firms and Aggregate Innovation](#)", *Journal of Political Economy*, 112(5): 986-1018.
- Lucas, 1978, "[On the Size Distribution of Business Firms](#)," *Bell Journal of Economics*, RAND, 9(2): 508-523
- Luttmer, 2007, "[Selection, Growth, and the Size Distribution of Firms](#)," *Quarterly Journal of Economics*, 122(3): 1103-1144.
- Rossi-Hansberg and Wright, 2007, "[Firm Size Dynamics in the Aggregate Economy](#)," *American Economic Review*, 97(5), 1639-1666.
- Simon and Bonini, 1958, "[The Size Distribution of Business Firms](#)," *American Economic Review*, 98(4): 607–617.

1.1.2. Firm Size and Age Dynamics

- Cooley and Quadini, 2001, "[Financial Markets and Firm Dynamics](#)", *American Economic Review*, 91(5):1286-1310.
- Jovanovic and Rob, 1987, "[Demand-Driven Innovation and Spatial Competition over Time](#)," *Review of Economic Studies*, 54(1):63-72.
- Jovanovic, 1979. "[Firm-specific Capital and Turnover](#)," *Journal of Political Economy*, 87(6):1246-60.

1.1.3. Financial Frictions and Incomplete Contracts

- Albuquerque and Hopenhayn, 2004, "[Optimal Lending Contracts and Firm Dynamics](#)," *Review of Economic Studies*, 71(2):285-315.
- Clementi and Hopenhayn, 2006, "[A Theory of Financing Constraints and Firm Dynamics](#)," *Quarterly Journal of Economics*, 121(1), 229-265.

1.1.4. Firms and Aggregate Fluctuations

- Cooley, Quadrini and Marimon, 2004, "[Aggregate Consequences of Limited Contract Enforceability](#)," *Journal of Political Economy*, 111(4), 817-847.
- Eisfeldt and Rampini, 2006, "[Capital Reallocation and Liquidity](#)," *Journal of Monetary Economics*, 53, 369–399.
- Gabaix, 2005, "[The Granular Origins of Aggregate Fluctuations](#)," mimeo.
- Jones, 2005, "[The Shape of Production Functions and the Direction of Technical Change](#)," *Quarterly Journal of Economics*, 120 (2), 517-549.
- Jovanovic and Stolyarov, 2000, "[Optimal Adoption of Complementary Technologies](#)," *American Economic Review*, 90(1): 15-29.
- Rampini, 2004, "[Entrepreneurial Activity, Risk, and the Business Cycle](#)." *Journal of Monetary Economics*, 51:555-573.

1.1.5. Investment and Adjustment Costs

- Abel and Eberly, "[Q Theory Without Adjustment Costs & Cash Flow Effects Without Financing Constraints](#)," mimeo.
- Li and Weinberg, 2003, "[Firm-Specific Learning and the Investment Behavior of Large and Small Firms](#)," *International Economic Review*, 44(2): 599-625
- Eisfeldt and Rampini, 2007, "[New or Used? Investment with Credit Constraints](#)," *Journal of Monetary Economics*, 54, 2656–2681.
- Hall, 2004, "[Measuring Factor Adjustment Costs](#)," *Quarterly Journal of Economics*, 119:899-927.
- Thomas, 2002, "[Is Lumpy Investment Relevant for the Business Cycle?](#)," *Journal of Political Economy*, 110(3):508-534.
- Bachmann, Caballero and Engel, 2006, "[Lumpy Investment in Dynamic General Equilibrium](#)," mimeo.

1.1.6. Firms and Policy

- Restuccia and Rogerson, 2007, “[Policy Distortions and Aggregate Productivity with Heterogeneous Plants](#),” mimeo.
- Hopenhayn and Rogerson, 1993, “[Job Turnover and Policy Evaluation: A General Equilibrium Analysis](#),” *Journal of Political Economy*, 101(5): 915-38.

1.1.7. Vintage Capital

- Chari and Hopenhayn, 1991, “[Vintage Human Capital, Growth, and the Diffusion of New Technology](#),” *Journal of Political Economy*, 99:1142-1165.
- Jovanovic, 1998, “[Vintage Capital and Inequality](#),” *Review of Economic Dynamics*, 1(2):497-530.

1.2. Evidence

1.2.1. Size Distribution of Firms

- Axtell, 2001, “[Zipf Distribution of US Firm Sizes](#)”, *Science*, 293:1818-1820.
- Sutton, 1997, “[Gibrat's Legacy](#),” *Journal of Economic Literature*, 35(1):40-59.

1.2.2. Cohort Effects in the Size Distribution of Firms

- Cabral and Mata, 2003, “[On the Evolution of the Firm Size Distribution: Facts and Theory](#),” *American Economic Review*, 93(4):1075-1090.

1.2.3. Misallocation

- Klenow and Hsieh, 2007, “[Misallocation and Manufacturing TFP in China and India](#),” mimeo.

1.2.4. Adjustment Costs

- Cooper and Haltiwanger, 2006, “[On the Nature of Capital Adjustment Costs](#),” *Review of Economic Studies* 73 (3), 611–633.

1.2.5. Firm Growth and Entry and Exit Rates

- Dunne, Roberts and Samuelson, 1989. “[The Growth and Failure of U.S. Manufacturing Plants](#),” *Quarterly Journal of Economics*, 104(4):671-98.

- Dunne, Roberts, Samuelson, 1989, "[Plant Turnover and Gross Employment Flows in the U.S. Manufacturing Sector](#)," *Journal of Labor Economics*, 7 (1):48-71.
- Foster, Haltiwanger and Kirzan, 2001, "[Aggregate Productivity Growth: Lessons from Microeconomic Evidence](#)." in E. Dean, M. Harper and C. Hulten (eds.), *New Directions in Productivity Analysis*, University of Chicago Press, 303-363.
- Mansfield, 1962, "[Entry, Gibrat's Law, Innovation, and the Growth of Firms](#)," *American Economic Review*, 52(5):1023-51.
- Bernard, Redding and Schott, 2007, "[Multi-Product Firms and Product Switching](#)," mimeo.

2. Technological change, labor markets and firm structure

2.1. Theory

2.1.1. Skill Biased Technological Change

- Acemoglu, 1998, "[Why Do New Technologies Complement Skills? Directed Technical Change and Wage Inequality](#)," *Quarterly Journal of Economics*, 113:1055-1089.
- Acemoglu, 2002, "[Technical Change, Inequality, and the Labor Market](#)," *Journal of Economic Literature*, 40(1):7-72.
- Acemoglu, 2003, "[Patterns of Skill Premia](#)," *Review of Economic Studies*, 70(2):199-230.
- Krusell, Ohanian, Rios-Rull and Violante, 2000, "[Capital-Skill Complementarity and Inequality: A Macroeconomic Analysis](#)," *Econometrica*, 68(5):1029-1054.

2.1.2. Organizational Structure

- Calvo and Wellisz, 1978, "[Supervision, Loss of Control, and the Optimum Size of the Firm](#)," *Journal of Political Economy*, 86(5):943-952.
- Calvo and Wellisz, 1979, "[Hierarchy, Ability, and Income Distribution](#)," *Journal of Political Economy*, 87(5):991-1010.
- Garicano, 2000, "[Hierarchies and the Organization of Knowledge in Production](#)," *Journal of Political Economy*, 108(5):874-904.
- Geanakoplos and Milgrom, 1991, "[A Theory of Hierarchies Based on Limited Managerial Attention](#)," *Journal of the Japanese and International Economy*, 5(3):205-225.

- Grossman and Hart, 1986, "[The Costs and Benefits of Ownership: A Theory of Vertical and Lateral Integration](#)," *Journal of Political Economy*, 94(4):691-719.
- Grossman and Helpman, 2002, "[Integration Versus Outsourcing In Industry Equilibrium](#)," *The Quarterly Journal of Economics*, 117(1): 85-120.
- Radner, 1992, "[Hierarchy: The Economics of Managing](#)," *Journal of Economic Literature* 30:1382-1415.
- Rajan and Zingales, 2001, "[The Firm as a Dedicated Hierarchy: A Theory of the Origins and Growth of Firms](#)," *Quarterly Journal of Economics*, 116:805-851.
- Dewatripont, 2006, "[Presidential Address Costly Communication and Incentives](#)," *Journal of the European Economic Association*, 4(2-3), 253-268.

2.1.3. Organizational Structure, Entrepreneurship and Aggregate Implications

- Cagetti and De Nardi, 2006, "[Entrepreneurship, Frictions, and Wealth](#)," *Journal of Political Economy*, 114(5), 835-870.
- Garicano and Rossi-Hansberg, 2004, "[Inequality and the Organization of Knowledge](#)," *American Economic Review P&P*, 94(2):197-202.
- Garicano, and Rossi-Hansberg, 2006, "[Organization and Inequality in a Knowledge Economy](#)," *Quarterly Journal of Economics*, 121:4, 1383-1435.
- Holmes and Mitchell, 2007, "[A Theory of Factor Allocation and Plant Size](#)," forthcoming in *RAND*.
- Kremer and Maskin, 1996, "[Wage Inequality and Segregation by Skill](#)," mimeo.
- Rosen, 1982, "[Authority, Control and the Distribution of Earnings](#)," *Bell Journal of Economics*, 13(2):311-323.
- Saint-Paul, Gilles, 2007, "[Knowledge hierarchies in the labor market](#)," *Journal of Economic Theory*, 127(1), 104-126
- Saint-Paul, 2001, "[On the Distribution of Income and Worker Assignment under Intrafirm Spillovers, with an Application to Ideas and Networks](#)," *Journal of Political Economy*, 109(1):1-37.
- Sattinger, 1993, "[Assignment Models of the Distribution of Earnings](#)," *Journal of Economic Literature*, 31: 831-880.
- Teulings and Gautier, 2004, "[The Right Man for the Job](#)," *Review of Economic Studies*, 71(2):553-580.

- Teulings, 1995, "[The Wage Distribution in a Model of the Assignment of Skills to Jobs.](#)" *Journal of Political Economy*, 103(2):280-315.
- Eeckhout and Jovanovic, 2002, "[Knowledge Spillovers and Inequality,](#)" *American Economic Review*, 92(5):1290-1307.
- Bech Holte, 2007, "[Taxation, Career Concerns and CEO Pay,](#)" mimeo.

2.1.4. Organizational Structure and Growth

- Jovanovic and Nyarko, 1996. "[Learning by Doing and the Choice of Technology,](#)" *Econometrica*, 64(6), 1299-1310.
- Jovanovic and Rob, 1990. "[Long Waves and Short Waves: Growth through Intensive and Extensive Search,](#)" *Econometrica*, 58(6), 1391-1409.
- Jovanovic and Rob, 1989. "[The Growth and Diffusion of Knowledge,](#)" *Review of Economic Studies*, 56(4), 569-582.
- Garicano, and Rossi-Hansberg, 2007, "[Organizing Growth,](#)" mimeo.
- Legros, Newman and Proto, 2006, "[Smithian Growth through Creative Organization,](#)" mimeo.
- Grossman and Helpman, 1991, "[Quality Ladders in the Theory of Growth,](#)" *Review of Economic Studies*, 59(1), 43-61.

2.2. Evidence

2.2.1. Technological Change and Organizational Structure

- Autor, Katz and Krueger, 1998, "[Computing Inequality: Have Computers Changed the Labor Market?,](#)" *Quarterly Journal of Economics*, 113:1169-1213.
- Bresnahan, Brynjolfsson, and Hitt, 2002, "[Information Technology, Workplace Organization, and the Demand for Skilled Labor: Firm-Level Evidence,](#)" *Quarterly Journal of Economics*, 117(1):339-376.
- Brynjolfsson and Hitt, 2003, "[Computing Productivity: Firm-Level Evidence,](#)" *The Review of Economics and Statistics*, 85(4):793-808.
- Rajan and Wulf, 2003, "[The Flattening Firm: Evidence from Panel Data on the Changing Nature of Corporate Hierarchies,](#)" mimeo.
- Gabaix and Landier, 2007, "[Why Has CEO Pay Increased So Much?,](#)" forthcoming in the *Quarterly Journal of Economics*.

- Bloom and Van Reenen, 2007, “[Measuring and Explaining Management Practices Across Firms and Countries](#),” 72(4), 1351-1408.

2.2.2. Technological Change and the Wage Distribution.

- Caroli and Van Reenen, 2001, “[Skill Biased Organizational Change? Evidence from a Panel of British and French Establishments](#),” *Quarterly Journal of Economics*, 116(4):1449-1492.
- Galor and Moav, 2000, “[Ability-Biased Technological Transition, Wage Inequality, and Economic Growth](#),” *Quarterly Journal of Economics*, 115:469-326.
- Katz and Murphy, 1992, “[Changes in Relative Wages, 1963-87: Supply and Demand Factors](#),” *Quarterly Journal of Economics*, 107:35-78.
- Huggett, Ventura and Yaron, 2007, “[Sources of Lifetime Inequality](#),” mimeo.

3. Cities, Scale effects and Growth

3.1. Theory

3.1.1. Growth

- Jones, 1999, “[Growth: With and Without Scale Effects](#),” *American Economic Review P&P*, 89(2):139-144.
- Lucas, 1988, “[On the Mechanics of Economic Development](#),” *Journal of Monetary Economics*, 22(1):3-42.
- Romer, 1990, “[Endogenous Technological Change](#),” *Journal of Political Economy*, 98:S71-S102.

3.1.2. Urban Growth

- Black and Henderson, 1999, “[A Theory of Urban Growth](#),” *Journal of Political Economy*, 107(2):252-284.
- Duranton, 2007, “[Urban Evolutions: The Fast, the Slow, and the Still](#),” *American Economic Review*, 97(1), 197-221
- Eaton and Eckstein, 1997, “[Cities and Growth: Theory and Evidence from France and Japan](#),” *Regional Science and Urban Economics*, 27:443-474.

- Gabaix, 1999, "[Zipf's Law and the Growth of Cities](#)," *American Economic Review P&P*, 89(2):129-132.
- Rossi-Hansberg and Wright, 2007, "[Urban Structure and Growth](#)," *Review of Economic Studies*, 74(2), 597-624.

3.1.3. City Creation and Structure

- Duranton and Puga, 2001, "[Nursery Cities: Urban Diversity, Process Innovation, and the Life Cycle of Products](#)," *American Economic Review*, 91(5):1454-1477.
- Henderson, 1974, "[The Sizes and Types of Cities](#)," *American Economic Review*, 64:640-656.
- Krugman, 1991, "[Increasing Returns and Economic Geography](#)," *Journal of Political Economy*, 99(3):483-499.
- Lucas and Rossi-Hansberg, 2002, "[On the Internal Structure of Cities](#)," *Econometrica*, 70(4):1445-1476.
- Lucas, 2001, "[Externalities and Cities](#)," *Review of Economic Dynamics*, 4(2):245-274.
- Helsley and Strange, 1990, "[Matching and Agglomeration Economics in a System of Cities](#)," *Regional Science and Urban Economics*, 20:189-212.
- Teulings and Gautier, 2003, "[Search and the City](#)," mimeo.

3.1.4. The Size Distribution of Cities

- Jan Eeckhout, 2004, "[Gibrat's Law for \(All\) Cities](#)," *American Economic Review*, 94(5), 1429-1451.
- Gabaix and Ioannides, 2003, "[The Evolution of City Size Distributions](#)." In Henderson and Thisse (eds.) *Handbook of Economic Geography*, North-Holland, Amsterdam.
- Gabaix, 1999, "[Zipf's Law for Cities: An Explanation](#)," *Quarterly Journal of Economics*, 114(3):739-767.

3.2. Evidence

3.2.1. The Size Distribution of Cities

- Au and Henderson, 2006, "[Are Chinese Cities Too Small?](#)" *Review of Economic Studies*, 73(3), 549-576.

- Dobkins and Ioannides, 2000, “[Spatial Interactions Among U.S. Cities: 1900-1990](#),” *Regional Science and Urban Economics*, 31(6):701-731.
- Ioannides, Y. M. and H. G. Overman, 2001, “[Zipf's Law for Cities: An Empirical Examination](#),” *Regional Science and Urban Economics*, 33(2):127-137
- Rosenthal and Strange, 2003, “[Evidence on the Nature and Sources of Agglomeration Economies](#),” *Handbook of Urban and Regional Economics*, Henderson and J.-F. Thisse, eds.
- Soo, 2005, “[Zipf's Law for cities: a cross-country investigation](#),” *Regional Science and Urban Economics*, 35(3), 239-263.

3.2.2. The Geographic Distribution of Economic Activity

- Davis and Weinstein, 2002, “[Bones, Bombs, and Break Points: The Geography of Economic Activity](#),” *American Economic Review*, 92(5), 1269-1289.
- Desmet and Rossi-Hansberg, 2007, “[Spatial Growth and Industry Age](#),” mimeo.