



# The Dynamic Forces of Economic Growth: Innovation, Institutions and Human Capital



[ADE 204 - 13204, Rooms 10.2.11 (lectures Tuesday 9-10.30) and 10.1.05 (seminars Friday 10.45-12.15)]

## **Course Objectives**

The enquiry into the origins and nature of the wealth of nations is at the foundations of economics. This course seeks to reveal the present state of knowledge on the causes, factors, sources and mechanisms of economic growth, concentrating more on those which may be considered ultimate rather than proximate. The course will review the fundamental theories of growth, provide material to evaluate the assessment of growth and discuss policy formulation.

## **Course Structure**

The course is designed in two tiers: one which will provide the theoretical fundamentals and empirical evidence to understand the present state of economic growth and a second tier will lead to the presentation of a final project related to the course. Tier 1 will alternate lectures which summarize and extend basic readings with seminars in which students will present briefings on specific tasks assigned with an extensive literature. These tasks will range from summaries of research; presenting and discussing results; identifying problems in modeling and quantifying economic growth; and proposing and defending policy statements and positions. The dynamics of this course will be that of a task force on economic growth. Tier 2 is organized as a sequence of workshops to prepare and improve the final research essay.

## **Prerequisites**

You will be asked to read a very large number of articles, mostly available on the web. You will be expected to read all of the articles assigned and prepare for class discussions. Discussions will be a major part of the course and your final grade. This is a hands-on course and you are expected to assist **ALL** lectures, seminars and discussions. A solid command of written and oral English is essential, previous econometrics courses are indispensable for interpreting results in the assignments, endurance in reading and processing up to a sixty pages of academic literature a day is taken for granted.

## **Seminar formats**

Seminars will take on a variety of formats. During debates students will be divided into teams. Teams will compete against each other. They will present statements related to the assignments and answer questions from the floor alternately. Each team will receive points for their group performance which they will divide among themselves according to the merits of each member. Groups will also be required to produce policy briefings. These will be based on the data collected, analyzed and summarized together with the articles consulted. Each group will be requested to write a policy briefing directed to a world government on the topic assigned. Groups will be asked to present and defend their policy recommendations. As in the case of debates, groups will be assigned points for their performance, which will be reassigned among the members. Other formats will be explained in class.

## **Rules**

There will be **NO make-ups for any of the missed activities** in the course. Failure to appear for seminars, exams or any other form of evaluation will result in a zero for that session.

## **Course outline**

The course is structured in 5 blocks of two weeks. Each block has a sequence of lecture 1 – seminar 1 – lecture 2 – seminar 2. Each session (lecture-blue and seminar-green) requires a previous reading assignment. The total number of pages to be read is indicated in **[brackets]**. The remaining four weeks of sessions are spread out through the course and are to be dedicated to drafting, perfecting and presenting the final course project. See class schedule yellow. Class work and lecture controls will make up 33 to 25%; final essay and presentation 66 to 50% and final exam up to 25 % of your final grade.

## Course schedule

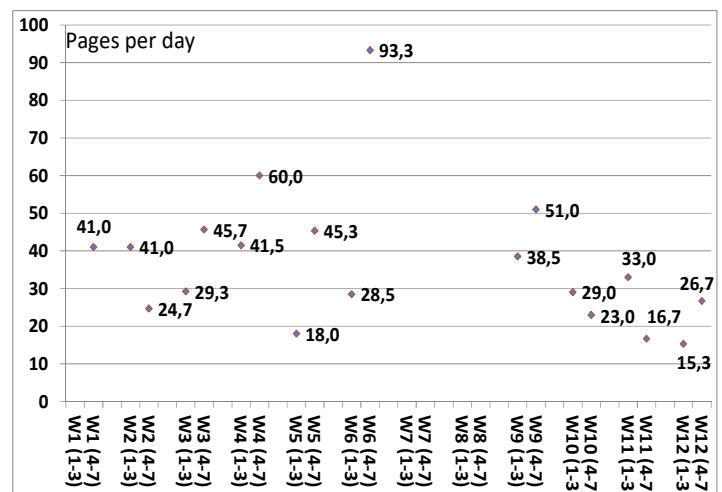
Group 70	Lecture		Seminar	
Week	Day	Tuesday	Day	Friday
<b>Block 1 Introduction to economic growth</b>				
1	Jan 30	Introduction to economic growth	Feb 02	<b>How to write a scientific essay?</b>
2	Feb 06	Growth empirics	Feb 09	Growth and development (reducing poverty)
<b>Block 2 Capital, technology and economic growth</b>				
3	Feb 13	Introduction to capital, technology and economic growth	Feb 16	Models and measurement of technological change
4	Feb 20	Invention, innovation and diffusion	Feb 23	R & D Strategies
<b>Block 3 Human capital and economic growth</b>				
5	Feb 27	Population, human capital and growth	Mar 02	Models and measurement
6	Mar 06	Human capital in the developed and less developed world	Mar 09	Human capital policies and strategies
7	Mar 13	<b>Presentation of essay drafts - cross reading</b>	Mar 16	<b>Presentation of essay drafts - cross reading</b>
8	Mar 20	<b>Final consultations essay</b>	Mar 23	<b>Final consultations essay</b>
<b>Mar 24 to Apr 02 EASTER BREAK</b>				
<b>Block 4 Institutions and economic growth</b>				
9	Apr 03	Introduction to institutions and economic growth	Apr 06	The 'origins of good institutions' debate
10	Apr 10	State and social capital	Apr 13	Institutional barriers and catalysts
<b>Block 5 Distribution, economic growth and inequality</b>				
11	Apr 17	Introduction to distribution, economic growth and inequity	Apr 20	The fallacies of measurement and modelling
12	Apr 24	Poverty and economic growth	Apr 27	Policy and poverty
<b>Sunday, Apr 29 00.00 CET Turn in project essays</b>				
13	May 01	<b>Holiday - no class</b>	May 04	<b>Presentations and discussants</b>
14	May 08	<b>Presentations and discussants</b>	May 11	<b>Presentations and discussants</b>
<b>Monday May 28 15:00 CET Ordinary Exam</b>			<b>Thursday June 28 09:00 CET Make-up Exam</b>	

## Effort & Grades

Week	Day	Reading before pages	Evenly distr. pp/d	Final Project h	weekdays
Week 1	Jan 30	0			W1 (1-3)
	Feb 02	0	41,0		W1 (4-7)
Week 2	Feb 06	285	41,0		W2 (1-3)
	Feb 09	74	24,7		W2 (4-7)
Week 3	Feb 13	117	29,3		W3 (1-3)
	Feb 16	137	45,7		W3 (4-7)
Week 4	Feb 20	166	41,5		W4 (1-3)
	Feb 23	180	60,0		W4 (4-7)
Week 5	Feb 27	72	18,0		W5 (1-3)
	Mar 02	136	45,3		W5 (4-7)
Week 6	Mar 06	114	28,5	4	W6 (1-3)
	Mar 09	280	93,3		W6 (4-7)
Week 7	Mar 13			8	W7 (1-3)
	Mar 16				W7 (4-7)
Week 8	Mar 20			10	W8 (1-3)
	Mar 23				W8 (4-7)
Week 9	Apr 03	154	38,5	8	W9 (1-3)
	Apr 06	153	51,0		W9 (4-7)
Week 10	Apr 10	116	29,0	14	W10 (1-3)
	Apr 13	69	23,0		W10 (4-7)
Week 11	Apr 17	132	33,0	16	W11 (1-3)
	Apr 20	50	16,7		W11 (4-7)
Week 12	Apr 24	61	15,3	4	W12 (1-3)
	Apr 27	80	26,7		W12 (4-7)

	Average before Final Exam > 6	Average before Final Exam < 6
Reports & presentations seminars	33,30%	25%
Final project, presentation and discussion	66,70%	50%
Final exam		25%
<b>Total</b>	<b>100%</b>	<b>100%</b>

## Reading effort



## **Block 1. Introduction to Economic Growth [611]**

- A. First Lecture. An introduction to economic growth. Old and new growth models.
- B. First Seminar. Introduction to how to write a scientific essay.
- C. Obligatory readings Lecture 1 & 2 must be read before second lecture. **Before Tuesday, Jan 30.**
- D. Second Lecture. Growth empirics.
- E. Obligatory readings Seminar 2 must be read before second seminar. **Before Friday, Feb 09.**
- F. Second Seminar. Growth and development (reducing poverty).

### **Week 1 – Tuesday, Jan 30**

#### **Readings Lecture 1. Introduction and old and new models. [156]**

##### **Obligatory [156]**

- [13] Barro, Robert and Xavier Sala-i-Martin (1995). *Economic Growth*. MIT Press. Chapter Introduction. 1-13.
- [31] Cypher, James M. and James L. Dietz (2010). "Classical and neoclassical theories," in *The Process of Economic Development*. Routledge. 3<sup>rd</sup> Edition, ch. 4, 109-139.
- [31] Cypher, James M. and James L. Dietz (2010). "Endogenous growth theories and new strategies for development," in *The Process of Economic Development*. Routledge. 3<sup>rd</sup> Edition, ch. 8, 239-270.
- [26] Aghion, Philippe and Peter Howitt (2009). "Neoclassical Growth Theory," in *The Economics of Growth*. London: MIT Press, 21-46.
- [21] Aghion, Philippe & Peter Howitt (2009). "The AK Model," in *The Economics of Growth*. London: MIT Press, 47-68.
- [15] Aghion, Philippe & P. Howitt (2009). "Product Variety," in *The Economics of Growth*. London: MIT Press, 69-83.
- [19] Aghion, Philippe and Peter Howitt (2009). "The Schumpeterian Model," in *The Economics of Growth*. London: MIT Press, 85-103.

### **Week 2 – Tuesday, Feb 06**

#### **Readings Lecture 2. Growth empirics. [129]**

##### **Obligatory [129]**

- [123] Durlauf, Stephen N., Paul A. Johnson, and Jonathan R.W. Temple (2005). "Growth Econometrics," Ch. 8 in Philippe Aghion and S. Durlauf (eds.) (2005). *Handbook of Economic Growth*. North Holland. 555-677.
- [6] Sala-i-Martin, Xavier (1997). "I Just Ran Two Million Regressions," *American Economic Review* 87 (2), 178-183.

### **Week 2 – Friday, Feb 09**

#### **Readings Seminar 2. Growth and development. [306]**

##### **Obligatory [74]**

- [13] Deaton, Angus (2006). "Measuring Poverty." In A.V. Banerjee, R. Bénabou and D. Mookherjee (eds.), *Understanding Poverty*. New York: Oxford University Press, 3-15.
- [17] Acemoglu, Daron, Simon Johnson and James Robinson (2006). "Understanding Prosperity and Poverty: Geography, Institutions and the Reversal of Fortunes," In A.V. Banerjee, R. Bénabou and D. Mookherjee (eds.), *Understanding Poverty*. New York: Oxford University Press, 19-35.
- [25] Engerman, Stanley L. and Kenneth L. Sokoloff (2006). "Colonialism, Inequality and Long-run Paths of Development." In A.V. Banerjee, R. Bénabou and D. Mookherjee (eds.), *Understanding Poverty*. New York: Oxford University Press, 37-61.
- [10] Piketty, Thomas (2006). "The Kuznets Curve: Yesterday and Tomorrow." In A.V. Banerjee, R. Bénabou and D. Mookherjee (eds.), *Understanding Poverty*. New York: Oxford University Press, 63-72.
- [9] Aghion, Philippe & Beatriz Armendariz de Aghion (2006). "New Growth Approach to Poverty Alleviation," In A.V. Banerjee, R. Bénabou & D. Mookherjee (eds.), *Understanding Poverty*. New York: Oxford University Press, 73-81.

##### **Complementary [232]**

- [31] Allen, R. (2013). Poverty Lines in History, Theory and Current International Practice. Oxford Econ WP 685.
- [100] Crafts, N.; O'Rourke, K. (2013). Twentieth Century Growth. Oxford Econ&SocHist WP 117 (Institutions and Technological Change)
- [35] Henderson, J.V.; Storeygard, A. & Weil, D.A. (2012). Measuring Economic Growth from Outer Space. *American Economic Review* 102(2): 994-1028.
- [44] Young, A. (2012). The African Growth Miracle. *Journal of Political Economy* 120 (4): 696-739.
- [42] Young, A. (1992). "A Tale of Two Cities: Factor Accumulation and Technical Change in Hong Kong and Singapore," NBER Macroeconomics Annual 7, 13-54.

## **Block 2. Capital, Technology and Economic Growth [2193]**

- A. *Obligatory readings Lecture 1 must be read before first lecture. Before Tuesday, Feb 13.*
- B. *First Lecture. An introduction to capital, technology and economic growth.*
- C. *Obligatory readings Seminar 1 must be read before first seminar. Before Friday, Feb 16.*
- D. *First Seminar. Models and measurement of technological change.*
- E. *Obligatory readings Lecture 2 must be read before second lecture. Before Tuesday, Feb 20.*
- F. *Second Lecture. Invention, innovation and diffusion.*
- G. *Obligatory readings Seminar 2 must be read before second seminar. Before Friday, Feb 23.*
- H. *Second Seminar. R & D Strategies.*

### **Week 3 – Tuesday, Feb 13**

**Readings. Lecture 1. Introduction to capital, technology and economic growth. [117]**

#### **Obligatory [117]**

- [23] Weil, David (2005). "Measuring Productivity," Chapter 7 in *Economic Growth*. Pearson, 182-204.
- [34] Weil, David (2005). "The Role of Technology in Growth," Chapter 8 in *Economic Growth*. Pearson, 205-238.
- [31] Weil, David (2005). "The Cutting Edge of Technology," Chapter 9 in *Economic Growth*. Pearson, 239-269.
- [29] Weil, David (2005). "Efficiency," Chapter 10 in *Economic Growth*. Pearson, 270-298.

### **Week 3 – Friday, Feb 16**

**Readings. Seminar 1. Models and measurement. [1235]**

#### **Obligatory [137]**

- [34] Hall, Robert and Charles I. Jones (1999). "Why Do Some Countries Produce So Much More Output per Worker Than Others?" *Quarterly Journal of Economics* 114, 83-116.
- [68] Mokyr, Joel (2005). "Long-Term Economic Growth and the History of Technology," in Philippe Aghion and S. Durlauf (eds.). *Handbook of Economic Growth*. North Holland. Ch. 17, 1113-1180.
- [35] Tsoulouhas, T. (1992). "A New Look at Demographic and Technological Changes". *Explorations in Economic History* 29, 169-203.

#### **Recommended [641]**

- [32] Benhabib, Jess and Mark M. Spiegel (2005). "Human Capital and Technological Diffusion," in Philippe Aghion and S. Durlauf (eds.). *Handbook of Economic Growth*. North Holland. Ch. 13, 935-966.
- [28] Dasgupta, P. and J. Stiglitz (1980). "Industrial Structure and the Nature of Innovative Activity," *The Economic Journal* 90 (358), 266-293.
- [58] DeLong, J. Bradford and Lawrence H. Summers (1991). "Equipment Investment and Economic Growth," *Quarterly Journal of Economics* 106:2 (May), 445-502.
- [30] Easterly, William (2006). "Reliving the 50s: the Big Push, Poverty Traps, and Takeoffs in Economic Development," *Journal of Economic Growth* 11 (4), 289-318
- [74] Greenwood, Jeremy (2005). "Technological Progress and Economic Transformation," in P. Aghion and S. Durlauf (eds.). *Handbook of Economic Growth*. North Holland. Ch. 19, 1225-1273.
- [26] Jones, C. (1995). "R&D-Based Models of Economic Growth," *Journal of Political Economy* 103, 759-784.
- [32] Jones, Charles (1995a). "Time Series Tests of Endogenous Growth Models," *Quarterly Journal of Economics* 110 (2), 495-526.
- [49] Jones, Chad (2005) "Growth and Ideas," in P. Aghion and S. Durlauf (eds.). *Handbook of Economic Growth*. North Holland. Ch. 16, 1063-1111.
- [31] Kortum, Samuel (1997). "Research, Patenting and Technological Change," *Econometrica* 65 (6), 1389-1419.
- [37] Laincz, C. (2005). "Market Structure and Endogenous Productivity Growth: How do R&D Subsidies Affect Market Structure?" *Journal of Economic Dynamics and Control* 29 (1), 187-223.
- [26] Laincz, C.A. and P. Peretto (2006). "Scale Effects in Endogenous Growth Theory: An Error of Aggregation Not Specification," *Journal of Economic Growth*, 11 (3), 263-288.
- [42] Luttmer, Erzo (2007). "Selection, Growth and the Size Distribution of Firms," *Quarterly Journal of Economics* 122 (3), 1103-44.
- [23] Nickell, S. (1996). "Competition and Corporate Performance," *Journal of Political Economy* 104 (4), 724-746.
- [20] Pagano, P. and F. Schivardi. (2003). "Firm Size Distribution and Growth," *Scandinavian Journal of Economics* 105 (2), 255-274.
- [24] Peretto, P. (1999). "Cost Reduction, Entry, and the Interdependence of Market Structure and Economic Growth," *Journal of Monetary Economics* 43 (1), 173-196.
- [46] Porter, M. and S. Stern. (2000). "Measuring the 'Ideas' Production Function: Evidence from International Patent Output," NBER Working Paper #7891.
- [19] Reinganum, J. (1985). "Innovation and Industry Evolution," *Quarterly Journal of Economics* 100 (1), 81-99.

- [21] Segerstrom, P. (1991). "Innovation, Imitation, and Economic Growth," *Journal of Political Economy* 99 (4): 807-827.
- [23] Young, A. (1998). "Growth Without Scale Effects," *Journal of Political Economy* 106 (1), 41-63.
- Complementary [457]**
- [22] Ales, Alberto and Edward Glaeser (1999). "Evidence on growth, increasing returns, and the extent of the market," *Quarterly Journal of Economics* 114 (3), 1025-1046.
- [29] Dinopoulos, E. and P. Thompson. (1999). "Scale Effects in Schumpeterian Models of Economic Growth," *Journal of Evolutionary Economics* 9, 157-185.
- [41] Ha, J. and P. Howitt (2007). "Accounting for Trends in Productivity and R&D: A Schumpeterian Critique of Semi-Endogenous Growth Theory." *Journal of Money, Credit, and Banking* 39 (4), 734-774.
- [16] Howitt, P. (1999). "Steady Endogenous Growth with Population and R&D Inputs Growing," *Journal of Political Economy* 107 (4), 715-730.
- [6] Jones, C. I. (1999). "Growth: With or without Scale Effects?" Mimeo Stanford. Later published in *American Economic Review* 89 (2), 139-144.
- [33] Klette, J. and S. Kortum (2002), "Innovating Firms and Aggregate Innovation," *Journal of Political Economy* 112 (5), 986-1018.
- [24] Murphy, K. M., A. Shleifer and R.W. Vishny (1989). "Industrialization and the Big Push." *Journal of Political Economy* 97 (5), 1003-26
- [24] Parente, Stephen L. and Eduard Prescott (1994). "Barriers to Technology Adoption and Development." *Journal of Political Economy* 102 (2), 298-321.
- [29] Peretto, P. (1996). "Sunk Costs, Market Structure, and Growth," *International Economic Review* 47 (4), 895-923.
- [29] Peretto, P. (1998). "Technological Change and Population Growth," *Journal of Economic Growth* 3, 283-311.
- [23] Peretto, P. (2003). "Fiscal Policy and Long-Run Growth in R&D-Based Models with Endogenous Market Structure," *Journal of Economic Growth* 8 (3), 325-347.
- [34] Peretto, P. and M. Connolly, (2003). "Industry and the Family: Two Engines of Growth," *Journal of Economic Growth*, 8 (1), 115-148
- [22] Peretto, P. and M. Connolly. (2007). "The Manhattan Metaphor," *Journal of Economic Growth* 12 (4), 329-350
- [22] Peretto, P. and S. Smulders. (2002). "Technological Distance, Growth, and Scale Effects," *The Economic Journal* 112 (481), 603-624.
- [21] Thompson, P. (2001), "The Microeconomic Structure of R&D Based Models of Economic Growth." *Journal of Economic Growth* 6 (4), 263-283.
- [59] Weintraub, Gabriel, C. Lanier Benkard and Ben Van Roy (2006), "Markov Perfect Industry Dynamics with Many Firms." NBER Working Paper # 11900.
- [23] Zachariadis, Marios (2003). "R&D, Innovation, and Technological Progress: A Test of the Schumpeterian Framework without Scale Effects," *Canadian Journal of Economics* 36 (3), 566-86.

#### Week 4 – Tuesday, Feb 20

##### **Readings Lecture 2. Invention, innovation and diffusion. [166]**

##### **Obligatory [166]**

- [40] Lamoreaux, Naomi R., Kenneth L. Sokoloff and Dhanoos Sutthiphisal (2011). "The Reorganisation of Inventive Activity in the United States during the Early Twentieth Century." In D. Costa and N. Lamoreaux (eds.), *Understanding Long-Run Economic Growth. Geography, Institutions, and the Knowledge Economy*. NBER and University of Chicago Press. Pp. 235-274.
- [31] Khan, B. Zorina (2011). "Premium Inventions: Patents and Prizes as Incentive Mechanisms in Britain and the United States, 1750-1930," in D.L. Costa and N.R. Lamoreaux (eds.), *Understanding Long-Run Economic Growth. Geography, Institutions, and the Knowledge Economy*. NBER and University of Chicago Press. Pp. 205-234.
- [19] Khan, B. Zorina and Kenneth L. Sokoloff (1993). "'Schemes of Practical Utility': Entrepreneurship and Innovation Among 'Great Inventors' in the United States, 1790-1865," *Journal of Economic History* 53 (2), 289-307.
- [22] Khan, B. Zorina and Kenneth L. Sokoloff (1998). "Patent Institutions, Industrial Organization and Early Technological Change: Britain and the United States, 1790-1850." in M. Berg and K. Bruland (Eds.). *Technological Revolutions in Europe, 1760-1860*. London: Edward Elgar, 292-313.
- [38] Sokoloff, Kenneth L. (1988). "Inventive Activity in Early Industrial America: Evidence from Patent Records, 1790-1846," *Journal of Economic History* 48 (4), 813-50.
- [16] Sokoloff, Kenneth L. and B. Zorina Khan (1990). "The Democratization of Invention During Early Industrialization: Evidence from the United States, 1790-1846," *Journal of Economic History* 50 (2), 363-378.

#### Week 4 – Friday, Feb 23

##### **Obligatory readings Seminar 2. R&D Strategies. [675]**

##### **a. General Purpose Technology.**

##### **Obligatory [208]**

- [26] Bresnahan, Timothy and Trajtenberg, M. (1995). "General Purpose Technologies: Engines of Growth?" *Journal of Econometrics* 65 (1), 83-108.
- [21] Cantner, U. and Vannuccini, S. (2012). "A New View of General Purpose Technologies." Jena WP 54.
- [14] Helpman, Elhanan (1998). "General Purpose Technologies and Economic Growth: Introduction." In E. Helpman (ed.). *General Purpose Technologies and Economic Growth*. Cambridge: MIT Press, 1-13.

- [35] Helpman, E. and Trajtenberg, M. (1998). "A Time to Sow and a Time to Reap: Growth Based on General Purpose Technologies." In E. Helpman (ed.). *General Purpose Technologies and Economic Growth*. Cambridge: MIT Press, 85-119.
- [41] Lipsey, Richard G., Cliff Bekar and Kenneth Carlaw (1998). "What Requires explanation?" In E. Helpman (ed.). *General Purpose Technologies and Economic Growth*. Cambridge: MIT Press, 14-54.
- [44] Jovanovic, Boyan and Peter L Rousseau (2005). "General Purpose Technology," in Philippe Aghion and S. Durlauf (eds.). *Handbook of Economic Growth*. North Holland. Ch. 18, 1181-1224.
- [27] Kretschmer, T. (2012). "Information and Communication Technologies and Productivity Growth: A Survey of the Literature." OECD Digital Economy Papers 195.

**b. Trade and technology transfer. [467]**

**Obligatory [152]**

- [29] Coe, David T. and Elhanan Helpman (1995). "International R&D Spillovers," *European Economic Review* 39 (5), 859-887.
- [26] Coe, David T. Elhanan Helpman, and Alexander W. Hoffmaister (1997). "North-South R&D Spillovers," *Economic Journal* 107 (440), 134-149.
- [34] Eaton, Jonathan and Samuel Kortum (1999). "International Technology Diffusion: Theory and Measurement," *International Economic Review* 40 (3), 537-570
- [14] Edwards, S. (1998). "Openness, Productivity, and Growth: What do we really know?" *Economic Journal* 108 (447), 385-398.
- [29] Harrison, A. (1996). "Openness and growth: a time series, cross-country analysis for developing countries," *Journal of Development Economics* 48 (2), 419-447.
- [20] Keller, W. (2002). "Trade and the Transmission of Technology," *Journal of Economic Growth* 7 (1), 5-24.

**Recommended [260]**

- [24] Connolly, M. (2003). "The Dual Nature of Trade: Measuring its Impact on Imitation and Growth," *Journal of Development Economics* 72 (1), 31-55
- [28] Feenstra, R. (1996). "Trade and Uneven Growth," *Journal of Development Economics* 49 (1), 229-256.
- [39] Head, K.; Mayer, T. (2013). "What separates us? Sources of resistance to globalization." CEPR DP 9614.
- [23] Keller, W. (2002). "Geographic Localization of International Technology Diffusion," *American Economic Review* 92 (1), 120-142.
- [75] Keller, W. (2009). "International trade, foreign direct investment, and technology spillovers." NBER WP 15442.
- [43] Strulik, H. (2012). "Knowledge and growth in the very long run." DP CEGE 145
- [28] Ventura, J. (1997). "Growth and Interdependence," *Quarterly Journal of Economics* 112 (1), 57-84.

**Complementary [55]**

- [21] Baldwin, Richard E. and Rikard Forslid (2000). "Trade Liberalization and Endogenous Growth: A q-theory Approach," *Journal of International Economics* 50 (1), 497-517.
- [34] Rivera-Batiz, Luis A. and P. Romer (1991). "International Trade with Endogenous Technical Change," NBER Working Paper # 3594 later published as *European Economic Review* 35 (4), 971-1004.

**Block 3. Human Capital and Economic Growth [2059]**

- A. Obligatory readings Lecture 1 must be read before first lecture. **Before Tuesday, Feb 27.**
- B. First Lecture. Population, human capital and growth. Externalities and State intervention. Health and education.
- C. Obligatory readings Seminar 1 must be read before first seminar. **Before Friday, Mar 02.**
- D. First Seminar. Models and measurement
- E. Obligatory readings Lecture 2 must be read before second lecture. **Before Tuesday, Mar 06.**
- F. Second Lecture. Human Capital in the Developed World and the less developed world. Impact of human capital accumulation on economic inequality. The US leadership and catching-up.
- G. Obligatory readings Seminar 2 must be read before second seminar. **Before Friday Mar 09.**
- H. Second Seminar. Policy and Strategies

**Week 5 – Tuesday, Feb 27**

**Readings Lecture 1. Human capital and economic growth. [219]**

**Obligatory [72]**

- [26] Weil, David (2005). "Human Capital," *Economic Growth*. Pearson. Chapter 6, 153-180.
- [33] Goldin, Claudia and Larry Katz (2008). "The Human Capital Century," in *The Race between Education and Technology*. Belknap, 11-43.

[13] Case, Anne (2006). "The primacy of education." In A. Banerjee, R. Benabou, and D. Mookherjee (eds). *Understanding Poverty*. Oxford University Press. Chapter 18, 269-284.

### **Recommended [31]**

[1] [Story by Theodore Schulz & World Population Counter](#)

[30] Cypher, James M. and James L. Dietz (2010). "Population, education, and human capital" in *The Process of Economic Development*. Routledge. 3<sup>rd</sup> Edition, ch. 12, 391-421.

### **Complementary [116]**

[19] Arrow, Kenneth J. (1962). "The Economic Implications of Learning by Doing," *Review of Economic Studies* 29 (3), 155-173.

[25] Griliches, Zvi (1979). "Issues in Assessing the Contribution of Research and Development to Productivity Growth," *Bell Journal of Economics* 10 (1), 92-116.

[13] Hansen, W.L. (1963) Total and Private Rates of Return to Investments in Schooling. *Journal of Political Economy* 71 (2): 128-40.

[22] Mincer, Jacob (1958). "Investment in Human Capital and Personal Income Distribution," *Journal of Political Economy* 66 (4), 281-302.

[7] Nelson, Richard and Edmund Phelps (1966). "Investment in Humans, Technological Diffusion and Economic Growth," *American Economic Review* 56 (1-2), 69-75.

[18] Schultz, Theodore (1961). "Investment in Human Capital." *American Economic Review*, 51 (1), 1-17.

[12] Schultz, Theodore (1960). "Capital Formation by Education," *Journal of Political Economy* 68 (6), 55-183.

## **Week 5 – Friday, Mar 02**

### **Readings Seminar 1. Modeling and measuring of education and growth. [1008]**

#### **Obligatory [136]**

[62] Hanushek, Eric and Ludger Woessmann (2008). "The Role of Cognitive Skills in Economic Development," *Journal of Economic Literature* 46 (3), 607-668.

[31] Pritchett, Lant (2006). "Does learning to add up add up? The returns to schooling in aggregate data," in E. Hanushek and F. Welch, (Eds.), *Handbook of the Economics of Education*, Elsevier, (chapter 11), 635-695.

[19] Psacharopoulos, George (1994). "Returns to Investment in Education: a Global Update," *World Development* 22 (9), 1325-1343.

[24] Psacharopoulos, G.; Patrinos, H.A. (2004). "Returns to investment education: a further update." *Education Economics* 12 (2): 111-34.

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- [36] Parish, William and Robert Willis (1993), "Daughters, Education, and Family Budgets: Taiwan Experiences" *Journal of Human Resources* 28 (4), 863-898.

### **Week 6 – Tuesday, Mar 06**

#### **Readings Lecture 2. Human capital century USA. [273]**

##### **Obligatory [114]**

- [43] Goldin, Claudia and Larry Katz (2008). "Inequality across the 20<sup>th</sup> Century," in *The Race between Education and Technology*. Belknap, 44-88.
- [37] Goldin, Claudia and Larry Katz (2008). "Skill-Biased Technological Change," in *The Race between Education and Technology*. Belknap, 89-125.
- [34] Goldin, Claudia and Larry Katz (2008). "Origins of the Virtues," in *The Race between Education and Technology*. Belknap, 129-162.

##### **Recommended [159]**

- [31] Goldin, Claudia and Larry Katz (2008). "Economic Foundations of the High School Movement," in *The Race between Education and Technology*. Belknap, 163-193.
- [53] Goldin, Claudia and Larry Katz (2008). "America's Graduation from High School," in *The Race between Education and Technology*. Belknap, 194-246.
- [38] Goldin, Claudia and Larry Katz (2008). "Mass Higher Education in the 20<sup>th</sup> Century," in *The Race between Education and Technology*. Belknap, 247-284.
- [37] Goldin, Claudia and Larry Katz (2008). "The Race between Education and Technology," in *The Race between Education and Technology*. Belknap, 287-323.
- Goldin, Claudia and Larry Katz (2008). "References," in *The Race between Education and Technology*. Belknap, 443-470.

### **Week 6 – Friday, Mar 09**

#### **Readings Seminar 2. Policy and strategy.[559]**

##### ***a) Educational interventions in the developing world [291]***

##### **Obligatory [195]**

- [39] Castelló-Climent, A.; Doménech, R. (2012). "Human capital and Income Inequality. Some Facts and some puzzles." Mimeo.
- [12] Abdul Latif Jameel Poverty Action Lab MIT Department of Economics (2009). "[Fighting Poverty: What Works? Showing Up is a First Step. Addressing Provider Absence in Education and Health](#)"
- [16] Banerjee, A. & E. Duflo (2005). "Addressing Absence," *Journal of Economic Perspectives* 20(1), 117-32.
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### **Recommended [95]**

- [19] Duflo, Esther (2001). "Schooling and Labor Market Consequences of School Construction in Indonesia: Evidence from an Unusual Policy Experiment," *American Economic Review* 91, 795-813.
- [24] Taylor, E.S. & Tyler, J.S. (2012): "The Effect of Evaluation on Teacher Performance." *American Economic Review*, 102(7): 3628-51.
- [37] Duflo, E.; Rema, H. & Ryan, S.P. (2012). "Incentives Work: Getting Teachers to Come to School." *American Economic Review* 102(4): 1241-78.
- [15] UNDP (2001). "Unleashing Human Creativity: National Strategies," ch. 4 in *Human Development Report 2001*, 79-93.

### **Complementary [40]**

- [14] Sen, Amartya (1990) "More than 100 Million Women Missing," *The New York Review of Books* Dec 20,
- [2] Sen, Amartya (1994) "Population: Delusion and Reality," *The New York Review of Books* Dec 22, 62-71.
- [24] UNDP (2001) "Global initiatives to create technologies for human development," ch. 5 in *Human Development Report 2001*, 94-117.

### **b) Early life investments [268]**

#### **Obligatory [268]**

- [25] Berlinski, S., S. Galiani and M. Manacorda (2008) "Giving children a better start: Preschool attendance and school-age proles," *Journal of Public Economics* 92(5-6), 1416-1440.
- [16] Berlinski, S., S. Galiani and P. Gertler (2009) "The effect of preprimary education on primary school performance," *Journal of Public Economics* 93(1-2), 219-234.
- [115] Cunha, F., J. J. Heckman, L. Lochner and D. V. Masterov (2006), "Interpreting the Evidence on Life Cycle Skill Formation," in E. Hanushek and F. Welch, (Eds.), *Handbook of the Economics of Education*, Elsevier, ch. 12, 697-812.
- [26] Currie, J. (2001). "Early Childhood Education Programs," *Journal of Economic Perspectives* 15(2), 213-238.
- [52] Maluccio, J., J. Hoddinott, J. Behrman, R. Martorell, A. Quisumbing and A. Stein (2006). "The Impact of Improving Nutrition During Early Childhood on Education among Guatemalan Adults." Middlebury College Economics WP 06-14.
- [34] Nisbett, R. (2009). *Intelligence and How to Get It: Why Schools and Cultures Count*, chapter "Mind the Gap". W.W. Norton & Co.

**Week 7 – Presentation of Essay Drafts. Crossreading. Tuesday, Mar 28, Friday, Mar 31.**

**Week 8 – Workshops and tutorials Final Essay. Tuesday, Apr 04, Friday, Apr 07.**

**Easter Break, Mar 24 to Apr 02**

### **Block 4. Institutions and Economic Growth [3277]**

- A. Obligatory readings Lecture 1 must be read before first lecture. **Before Tuesday, Apr 03.**
- B. First Lecture. An introduction to institutions and economic growth.
- C. Obligatory readings Seminar 1 must be read before first seminar. **Before Friday, Apr 06.**
- D. First Seminar. The 'origins of good institutions' debate.
- E. Obligatory readings Lecture 2 must be read before second lecture. **Before Friday, Apr 10.**
- F. Second Lecture. State and social capital.
- G. Obligatory readings Seminar 2 must be read before second seminar. **Before Friday, Apr 13.**
- H. Second Seminar. Institutional barriers and catalysts.

**Week 9 – Tuesday, Apr 03**

**Readings Lecture 1. Introduction to institutions and economic growth. [204]**

#### **Obligatory [154]**

- [66] North, Douglass C. (1981). *Structure and Change in Economic History*. Part I Theory: "The Issues," "An Introduction to the Structure of Economics," "A Neoclassical Theory of the State," "A Framework for Analyzing Economic Organization in History," "Ideology and the Free Rider Problem," and "Structure and Change in Economic History". New York: Norton. 3-68 & references.
- [88] Acemoglu, Daron, Simon Johnson and James A. Robinson (2005). "Institutions as the fundamental cause of long-run growth." In Philippe Aghion and Stephen Durlauf (eds.). *Handbook of Economic Growth*, 385-471.

#### **Complementary [50]**

[36] Cypher, James M. & James L. Dietz (2010). "The state as a potential agent of transformation: from neoliberalism to embedded autonomy." *The Process of Economic Development*. Routledge. 3<sup>rd</sup> Edition. ch. 7, 203-238.

[The Governance Map of the World Bank](#)

UNDP (2002). *World Development Report*. [Governance Indicators 1](#), [Governance Indicators 2](#); [Governance Indicators 3](#)

[14] Burki, Shahid Javed and Guillermo Perry (1998) "Institutions Matter for Development," ch. 1 in *Beyond the Washington Consensus: Institutions Matter* Washington: The World Bank, 11-24.

["Market Failure and State Intervention"](#), Stern's summary of arguments

## Week 9 – Friday, Apr 06.

### **Readings Seminar 1. The origins of good institutions. [1115]**

#### **Obligatory [153]**

[33] North, D. C., & Weingast, B. R. (1989). Constitutions and commitment: the evolution of institutions governing public choice in seventeenth-century England. *Journal of Economic History*, 49(4), 803-832.

[64] Acemoglu, Daron, James A. Robinson and Simon Johnson (2002). "Reversal of Fortune: Geography and Institutions in the Making of the Modern World," *Quarterly Journal of Economics*, 117 (4), 1231-1294.

[54] Engerman, Stanley and Kenneth Sokoloff (1994). "Factor Endowments, Institutions and Differential Paths of Development Among New World Economies: A View from Economic Historians of the United States" NBER Working Paper # hp66.

[35] Rodrik, D., A. Subramanian and F. Trebbi (2004). "Institutions Rule: The Primacy of Institutions Over Geography and Integration in Economic Development" *Journal of Economic Growth*, 9(2), 131-165.

#### **Recommended [610]**

[19] Ang, J.B. (2013). "Institutions and the long-run impact of early development." *Journal of Development Economics* 105: 1-18.

[20] Docquier, F. (2013). "Identifying the Effect Institutions on Economic Growth." IRES DP 30.

[49] Dell, Melissa (2010), "The Persistent Effects of Peru's Mining *Mita*," *Econometrica* 78 (6), 1863–1903. WP 2008

[33] Esteban, J.; Mayoral, L. & Ray, D. (2012). "Ethnicity and Conflict: An Empirical Study." *American Economic Review* 102(4): 1310-42.

[28] Fenske, J. (2013). "Does Land Abundance Explain African Institutions?" *Economic Journal* 123 (573): 1363–1390.

[33] Glaeser, E. L., R. LaPorta, F. Lopez de Silanes, A. Shleifer (2004). "Do Institutions Cause Growth?" *Journal of Economic Growth* 9 (3), 271-303.

[13] Jennings, C. (2013). "Institutions and prosperity." SIRE DP 61.

[46] Keller, W.; Shiue, C.H. (2013). "The Link Between Fundamentals and Proximate Factors in Economic Development." (Impact of Institutions on Growth). NBER WP 18808.

[48] La Porta, Rafael, Florencio Lopez-de-Silanes, and Andrei Shleifer (2008). "The Economic Consequences of Legal Origins," *Journal of Economic Literature* 46, 285–332.

[24] McArthur, J. and J. Sachs, (2001). "Institutions and Geography: Comment on Acemoglu, Johnson and Robinson (2000)," NBER Working Papers 8114.

[38] McCord, G.C.; Sachs, J.D. (2013). "Development, Structure and Transformation: Some Evidence on Comparative Economic Growth." NBER WP 19512

[41] Nunn, Nathan (2009). "The Importance of History for Economic Development," NBER Working Paper # 14899.

[18] Nunn, Nathan (2007). "Historical Legacies: A Model Linking Africa's Past to its Current Underdevelopment," *Journal of Development Economics* 83, 157–175.

[56] Putterman, Louis and David Weil (2010) "Post-1500 Population Flows and the Long Run Determinants of Economic Growth and Inequality", *Quarterly Journal of Economics* 125 (4), 1627-1682.

[13] Sachs, Jeffrey D. (2003). "Institutions Don't Rule: Direct Effects of Geography on Per Capita Income," NBER Working Paper # 9490.

[46] Spolaore, E. & Wacziarg, R. (2013). "How Deep Are the Roots of Economic Development?" *Journal of Economic Literature* 51(2): 325-69.

[24] Torres, N.; Afonso, Ó.; Soares, I. (2013). "A Survey of Literature on the Resource Curse: Critical Analysis of the Main Explanations, Empirical Tests and Resource Proxies." CEF.UP WP 2.

[61] Wacziarg, Romain and Enrico Spolaore (2009). "The Diffusion of Development," *Quarterly Journal of Economics* 124 (2), 469-529.

#### **Complementary [352]**

[23] Acemoglu, Daron, James A. Robinson and Simon Johnson (2001). "The Colonial Origins of Comparative Economic Development: An Empirical Investigation," *American Economic Review* 91 (5), 1369-1401.

[34] Acemoglu, Daron, Simon Johnson, and James A. Robinson (2005). "The Rise of Europe: Atlantic Trade, Institutional Change and Economic Growth." *American Economic Review* 95 (3), 546-579.

[25] Albouy, David (2008). "The Colonial Origins of Comparative Development: A Reinvestigation of the Settler Mortality Data," NBER Working Paper # 14130.

[44] Alesina, Alberto, Paola Giuliano, and Nathan Nunn (2011). "The Origins of Gender Roles: Women and the Plough", also see [discussion](#)

[24] Banerjee, David and Lakshmi Iyer (2005). "History Institutions and Economic Performance: The Legacy of Colonial Land Tenure Systems in India," *American Economic Review* 95 (4), 1190-1213.

- [23] Bockstette, Valerie, Areendam Chanda, and Louis Putterman (2002). "States and Markets: the Advantage of an Early Start," *Journal of Economic Growth* 7 (4), 347-369.
- [33] Comin, Diego, William Easterly, and Erick Gong (2010). "Was the Wealth of Nations Determined in 1000 B.C.?" *American Economic Journal: Macroeconomics* 2, 65-97
- [18] Feyrer, James D., and Bruce Sacerdote (2009). "Colonialism and Modern Income: Islands as Natural Experiments," *Review of Economics and Statistics* 91 (2), 245-262
- [38] Iyer, Lakshmi (2004). "The Long-Term Impact of Colonial Rule: Evidence from India." Harvard Bus. School WP.
- [38] Nunn, N. (2008). "The Long-Term Effects of Africa's Slave Trades," *Quarterly Journal Economics* 123 (1), 139-176.
- [52] Nunn, Nathan, and Leonard Wantchekon (2009). "The Trans-Atlantic Slave Trade and the Evolution of Mistrust in Africa: An Empirical Analysis," NBER Working Paper # 14783.

## Week 10 –Tuesday, Apr 10

### Readings Lecture 2. State and social capital. [730]

#### **Obligatory [116]**

- [22] Abramovitz, M. (1986). "Catching Up, Forging Ahead, & Falling Behind," *J. of Economic History* 46 (2), 385-406.
- [15] Pritchett, Lant (1997). "Divergence, Big time," *Journal of Economic Perspectives* 11 (3), 3-17.
- [19] Easterlin, Richard (1981). "Why Isn't the Whole World Developed?" *Journal of Economic History* 41 (1), 1-19.
- [5] Easterly, William (2008). "Institutions, Top Down or Bottom Up?" *American Economic Review* 98 (2), 95-99.
- [55] Pande, Rohini and Christopher Udry (2007). "Institutions and Development: A View from Below," in R. Blundell, W. Newey and T. Persson (eds.). *Proceedings of the 9th World Congress of the Econometric Society 2005 London*. Cambridge University Press, 349 - 403.

#### **Recommended [343]**

- [39] Alesina, A.; Reich, B. (2013). "Nation Building." NBER WP 18839.
- [14] Baumol, William (1986). "Productivity Growth, Convergence, and Welfare: What the Long-Run Data Show" *American Economic Review* 76 (5), 1072-1085.
- [5] Creasey, E.; Rahman, A.S. & Smith, K.A. (2012). "Nation Building and Economic Growth." *American Economic Review* 102(3): 278-82.
- [17] DeLong, J. Bradford (1988). "Productivity Growth, Convergence, and Welfare: Comment," *American Economic Review* 78 (5), 1138-1154.
- [35] Mankiw, N. Gregory, Edmund Phelps and Paul Romer (1995). "The Growth of Nations," *Brookings Papers on Economic Activity* 1995 (1), 275-310.
- [30] North, Douglass C. and Barry Weingast (1989). "Constitutions and Commitment, the Evolution of the Institutional Governing of Public Choice in Seventeenth Century England," *Journal of Economic History* 49 (4), 803-832.
- [59] Persson, Torsten and Guido Tabellini (2006). "Democratic Capital: The Nexus of Political and Economic Change," NBER Working Paper # 12175.
- [78] Rodrik, Dani (1994). "Getting Interventions Right: How South Korea and Taiwan Grew Rich," *NBER Working Paper # 4965*.
- [22] Bosworth, Barry and Susan M. Collins (2008), "Accounting for Growth: Comparing China and India." *Journal of Economic Perspectives* 22 (1), 45-66.
- [26] Ndulu, Benno J., and Stephen A. O'Connell (1999). "Governance and Growth in Sub-Saharan Africa," *Journal of Economic Perspectives* 13 (3), 41-66.
- [18] Yanovsky, K.; Shulgin, S. (2012). "Institutions, Democracy and Growth in the Very Long Run." *Acta Oeconomica*.

#### **Complementary [271]**

- [33] Clark, Gregory (1987). "Why Isn't the Whole World Developed?: Lessons from the Cotton Mills," *Journal of Economic History*, 47 (1), 141-74.
- [27] Wolcott, Susan and Gregory Clark (1999). "Why Nation's Fail: Managerial Decisions and Performance in Indian Cotton Textiles, 1890-1938." *Journal of Economic History* 59 (2), 397-423.
- [49] Zeitz, Peter (2010). "Do Local Institutions Affect All Foreign Direct Investors in the Same Way? Evidence from the Interwar Chinese Textile Industry. Mimeo Ph.D. Thesis. Stanford University.
- [26] Clark, Gregory (1996). "The Political Foundations of Modern Economic Growth: England, 1540-1800," *Journal of Interdisciplinary History* 26 (4), 563-588.
- [29] Clark, Gregory (1998). "Commons Sense: Property Rights, Efficiency and Institutional Change," *Journal of Economic History* 58 (1), 73-102.
- [32] Greif, Avner, Paul Milgrom and Barry Weingast (1994). "Coordination, Commitment and Enforcement: The Case of the Merchant Guild," *Journal of Political Economy* 102 (4), 745-776.
- [17] Clark, Gregory (2007). "A Review of Avner Greif's *Institutions and the Path to the Modern Economy*," *Journal of Economic Literature* 45 (3), 725 -741.
- [26] Kantor, Shawn (1991). "Razorbacks, Ticky Cows, and the Closing of the Georgia Open Range: The Dynamics of Institutional Change Uncovered," *Journal of Economic History* 51 (4), 861-886.
- [32] Nunn, Nathan (2007). "Relation-Specificity, Incomplete Contracts, and the Pattern of Trade," *Quarterly Journal of Economics*, 122 (2), 569-600.

**Lecturas Seminario 2. Barreras y catalizadores institucionales. [1271]**

**a. Bienes y males públicos [563]**

**Obligatorias [130]**

[18] Besley, Timothy and Maitreesh Ghatak (2006). "Public Goods and Economic Development," in A. Banerjee, R. Benabou, and D. Mookherjee (eds.). *Understanding Poverty*. Oxford University Press, 285-302.

[27] Bardhan, P. (1997). "Corruption and Development: A Review of the Issues," *Journal of Economic Literature* 35 (3), 1320-46.

[24] Svensson, J. (2005). "Eight Questions about Corruption," *Journal of Economic Perspectives* 19(3), 19-42.

[16] Collier, P. (1999). On the economic consequences of civil war. *Oxford economic papers*, 51(1), 168-83

[19] Abadie, A., & Gardeazabal, J. (2001). The economic costs of conflict: a case study of the Basque country. *American Economic Review*, 93 (1), 113-132.

[36] Cárdenas, M. (2007). Economic growth in Colombia: a reversal of fortune?

**Recommended [234]**

[44] Banerjee, Abhijit (1997) "A Theory of Misgovernance" *Quarterly Journal of Economics* 112(4), 1289-1332.

[7] Laffont, Jean-Jaques (2006). "*Corruption and Development*" in A. Banerjee, R. Benabou, and D. Mookherjee (eds). *Understanding Poverty*. Oxford University Press. 161-167

[8] Fisman, R. (2001) "Estimating the value of political connections," *American Economic Review*. 91 (4), 1095-1102.

[32] Mauro, P. (1995). "Corruption and Growth." *The Quarterly Journal of Economics*, 110 (3), 681-712.

[143] Rodrik, Dani (2007). *One Economics, Many Recipes: Globalization, Institutions, and Economic Growth*. Part B & C. Princeton University Press. Ch. 4 Industrial Policy of the 21<sup>st</sup> century; Ch. 5 Institutions for High-Quality Growth; Ch. 6 Getting Institutions Right; Ch. 7 Governance of Economic Globalization; Ch. 8 The Global Governance of Trade as if Development Really Mattered; Ch. 9 Globalization for Whom. 99-242.

**Complementary [199]**

[28] Banerjee, Abhijit and Rohini Somanathan (2006). "The Political Economy of Public goods: Some evidence from India," *Journal of Development Economics* 82 (2), 287-314.

[38] Bertrand, M., S. Djankov, R. Hanna, and S. Mullainathan (2007) "Obtaining a Driving License in India: An Experimental Approach to Studying Corruption," *Quarterly Journal of Economics* 122(4):1639-1676.

[39] Fisman, Raymond and Edward Miguel (2006). "Cultures of Corruption: Evidence from Diplomatic Parking Tickets," NBER Working Paper # 12312.

[29] Fisman, Raymond and Edward Miguel (2007). "Corruption, Norms and Legal Enforcement: Evidence from Diplomatic Parking Tickets," *Journal of Political Economy* 115 (6), 1020-1048.

[15] Mookherjee, D. and I. Png (1995). "Corruptible Law Enforcers: How Should They Be Compensated?" *Economic Journal* 105 (428), 145-159.

[50] Olken, Ben (2007) "Monitoring Corruption: Evidence from a Field Experiment in Indonesia," *Journal of Political Economy* 115 (2), 200-249.

**b. Finance, credit and microcredit [726]**

**Recommended [483]**

[14] Armendariz, Beatriz and Jonathan Morduch (2004). "Microfinance: Where do we stand?" in Charles Goodhart (ed). *Financial Development and Economic Growth: Explaining the Links*. Basingstoke, Hampshire, UK: Palgrave Macmillan. Chapter 5, 135-148.

[7] Banerjee, Abhijit and Esther Duflo. (2004) "What do Banks (not) do?", MIT Manuscript.

[37] Karlan, Dean & N. Goldberg (2007). "The Impact of Microfinance: A Review of Methodological Issues," in *Impact Evaluation for Microfinance*. World Bank- Poverty Reduction and Economic Management.

[36] Claessens, Stijn and Luc Laeven (2003). "Financial Development, Property Rights, and Growth." *Journal of Finance* 58 (6), 2401-2436.

de Soto, Hernando (2000). *El misterio del capital: ¿Por qué el capitalismo triunfa en occidente y fracasa en el resto del mundo?* Península, Barcelona.

[28] Fisman, Raymond and Inessa Love (2004). "Financial Development and Growth in the Short and Long Run." NBER Working Paper # 10236.

[30] Gertler, Mark (1988). "Financial Structure and Aggregate Economic Activity: An Overview," *Journal of Money, Credit and Banking* 20 (3), 559-588.

[31] Greenwood, Jeremy and Boyan Jovanovic (1990). "Financial Development, Growth, and the Distribution of Income," *Journal of Political Economy* 98 (5), 1076-1107.

[12] Hagen, J. von; Zhang, H. (2014): Financial development, international capital flows, and aggregate output. *Journal of Development Economics* 106: 66-77.

[30] King, Robert G. and Ross Levine (1993). "Finance, Entrepreneurship, and Growth: Theory and Evidence," *Journal of Monetary Economics* 32 (3), 513-542.

- [70] Levine, Ross (2005). "Finance and Growth: Theory, Evidence, and Mechanisms." In Philippe Aghion and Stephen Durlauf (eds). *Handbook of Economic Growth*. Ch. 12, 865-934.
- [47] Levine, Ross, Norman Loayza and T. Beck (2000). "Financial Intermediation and Growth: Causality And Causes," *Journal of Monetary Economics* 46 (1), 31-77.
- [21] Levine, Ross and Sara Zervos (1998), "Stock Markets, Banks, and Economic Growth," *American Economic Review* 88 (3), 537-558.
- [46] Morduch, Jonathan (1999), "The Microfinance Promise," *Journal of Economic Literature*, 37 (4), 1569-1614. [27] Rajan, Raghuram G. and Luigi Zingales (1998). "Financial Dependence and Growth." *American Economic Review* 88 (3), 559-86.
- [66] Ray, Debraj (1998). *Development Economics*. Princeton University Press. Ch. 14 Credit, 529-89 & 701-705.
- [8] Townsend, Robert M. (2006). "Credit, Intermediation, and Poverty Reduction," in A. Banerjee, R. Benabou, and D. Mookherjee (eds) (2006). *Understanding Poverty*. Oxford University Press. Ch. 23, 357-364.

#### **Complementary [243]**

- [28] Aghion, P., M. Dewatripont and P. Rey (1999). "Competition, Financial Discipline and Growth," *Review of Economic Studies* 66 (4), 825-852.
- [15] Bencivenga, Valerie R. and Bruce D. Smith (1991). "Financial Intermediation and Endogenous Growth," *Review of Economic Studies* 58 (2), 195-209.
- [22] Fisman, Raymond and Inessa Love (2003). "Trade Credit, Financial Intermediary Development, and Industry Growth." *Journal of Finance* 58 (1), 353-374.
- [34] Hall, Robert and Charles Jones (1999). "Why Do Some Countries Produce more Output per Worker than Others?" *Quarterly Journal of Economics* 114, 83-116
- [26] Modigliani, Franco and Shi Larry Cao (2004). "The Chinese Saving Puzzle and the Life-Cycle Hypothesis," *Journal of Economic Literature* 42 (1), 145-170
- [28] Wurgler, Jeffrey (2000). "Financial Markets and the Allocation of Capital." *Journal of Financial Economics* 58 (1-2), 187-214.
- [32] Karlan, Dean and Jonathan Zinman (2010), "Expanding Credit Access: Using Randomized Supply Decisions to Estimate the Impacts," *Review of Financial Studies* 23 (1), 433-464.
- [58] Karlan, Dean and Jonathan Zinman (2006), "Observing Unobservables: Identifying Information Asymmetries with a Consumer Credit Field Experiment," Dartmouth Manuscript.

### **Block 5. Distribution, Economic Growth and Inequality [1791]**

- A. *Obligatory readings Lecture 1 must be read before first lecture. Before Tuesday, Apr 17.*
- B. *First Lecture. Introduction to distribution, economic growth and inequality*
- C. *Obligatory readings Seminar 1 must be read before first seminar. Before Friday, Apr 20.*
- D. *First Seminar. The fallacies of measurement and modeling*
- E. *Obligatory readings Lecture 2 must be read before second lecture. Before Tuesday, Apr 24.*
- F. *Second Lecture. Poverty and economic growth*
- G. *Obligatory readings Seminar 2 must be read before second seminar. Before Friday, Apr 27.*
- H. *Second Seminar. Policy and poverty.*

#### **Week 11 – Tuesday, Apr 17**

##### **Readings Lecture 1. Distribution, economic growth and inequality. [483]**

##### **Obligatory [102]**

- [22] Easterly, William (2007). "Inequality Does Cause Underdevelopment," *Journal of Development Economics* 84 (2), 755-776.
- [12] Milanovic, Branko (2011). „A short history of global inequality: The past two centuries," *Explorations in Economic History* 48 (4), 494-506.
- [22] Persson, Torsten and Guido Tabellini (1994). "Is Inequality Harmful for Growth?" *American Economic Review* 84 (3), 600-621.
- [46] Sala-i-Martin, Xavier (2006). "The World Distribution of Income: Falling Poverty and Convergence, Period," *Quarterly Journal of Economics*, 121, 351-97.

##### **Recommended [338]**

- [31] Beck, S.; Kamionka, T. (2012). "Who benefits from Growth?" WP CREST 18
- [35] Bourguignon, F (2004): Poverty Growth Inequality Triangle. WP ICRIER 15185.
- [39] Castelló-Climent, A.; Doménech, R. (2012). "Human capital and Income Inequality. Some Facts and some puzzles." Mimeo.
- [32] Kierzenkowski, R.; Koske, I. (2012). "Less Income Inequality and More Growth – Are they Compatible? Part 8. The Drivers of Labour Income Inequality – A Literature Review", OECD Economics Department Working Papers, No. 931, OECD Publishing. <http://dx.doi.org/10.1787/5k9b1s1hlzkk-en>
- [18] Jones, Charles (1997). "On the Evolution of the World Income Distribution." *Journal of Economic Perspectives* 11 (3), 19-36.

- [30] Milanovic, B. (2012). "Global Income inequality by numbers: in history and now. An overview." World Bank Policy Research WP 6259.
- [28] Milanovic, Branko (2009). „Global inequality and global inequality extraction ratio: The story of the last two centuries. MPRA WP # 16535.
- [105] Prados de la Escosura, L. (2013). "World Human Development: 1870-2007." UC3M WP.
- [20] Ravallion, M. (2012). "Why Don't We See Poverty Convergence?" *American Economic Review*, 102(1): 504-23.

#### **Complementary [43]**

- [18] Bourguignon, François and Christian Morrison (2002), "Inequality among World Citizens: 1820-1992," *American Economic Review* 92 (4), 727-744.
- [15] Waldenström, Daniel, Jesper Roine and Jonas Vlachos (2009). "The Long-Run Determinants of Inequality: What Can We Learn from Top Income Data?" Mimeo later published in *Journal of Public Economics* 93(7-8), 974-988.
- [10] Yingqiang Zhang, Tor Eriksson (2010). "Inequality of opportunity and income inequality in nine Chinese provinces, 1989-2006," *China Economic Review* 21 (4), 607-616.

### **Week 11 – Friday, Apr 20**

#### **Readings Seminar 1. Measurement and modeling. [256]**

##### **Obligatory [230]**

- [15] Banerjee, Abhijit and Esther Duflo (2000). "A Reassessment of the Relationship Between Inequality and Growth: Comment." MIT mimeo.
- [33] Banerjee, Abhijit and Esther Duflo (2003). "Inequality and Growth: What Can the Data Say?" *Journal of Economic Growth*. 8 (3), 267-299.
- [70] Bengtsson, Erik and Daniel Waldenström (2016). "Capital shares and income inequality: Evidence from the long run," EHES WP 92.
- [19] Forbes, Kristin (2000). "A Reassessment of the Relationship Between Inequality and Growth." *American Economic Review* 90 (4), 869-887.
- [24] Halter, Daniel, Manuel Oechslin and Josef Zweimüller (2014). "Inequality and growth: the neglected time dimension," *Journal of Economic Growth*, 19, 81-104.
- [32] Kierzenkowski, R.; Koske, I. (2012). "Less Income Inequality and More Growth – Are they Compatible? Part 8. The Drivers of Labour Income Inequality – A Literature Review", OECD Economics Department Working Papers, No. 931, OECD Publishing. <http://dx.doi.org/10.1787/5k9b1s1hlzkk-en>
- [16] Marrero, G.A.; Rodríguez, J.G. (2013). "Inequality of opportunity and growth." *Journal of Development Economics* 104: 107-122.
- [21] Wisman, Jon D. (2015). What drives inequality? Mimeo American University, Washington D.C.

##### **Complementary [26]**

- [26] Alesina, Alberto and Dani Rodrik (1994). "Distributive Politics and Economic Growth." *Quarterly Journal of Economics* 109 (2), 465-490.

### **Week 12 – Tuesday, Apr 24**

#### **Readings Lecture 2. Poverty and economic growth. [394]**

##### **Obligatory [74]**

- [13] Basu, K. (2006). "Globalization, poverty, and inequality: What is the relationship? What can be done?" *World Development* 34 (8), 1361-1373.
- [61] Ray, Debraj (1998). *Development Economics*. Princeton University Press. Ch. 8 Poverty and Undernutrition, Ch 13.4 Poverty, nutrition and labor markets, 249-294 & 489-504.

##### **Recommended [45]**

- [17] Acemoglu, D., S. Johnson and J. Robinson (2006). "Understanding Prosperity and Poverty: Geography, Institutions, and the Reversal of Fortune." In A. Banerjee, A., R. Benabou, and D. Mookherjee (eds.). *Understanding Poverty*. Oxford University Press. 19-35.
- [28] Banerjee, Abhijit and Ester Duflo (2007), "The Economic Lives of the Poor," *Journal of Economic Perspectives* 21 (1), 141-168.

##### **Complementary [275]**

- [18] Allen, Robert C. (2009). "Engels' pause: Technical change, capital accumulation, and inequality in the British Industrial Revolution." *Explorations in Economic History* 46 (4), 418-435.
- [24] Cutler, David, Angus Deaton and Adriana Lleras-Muney (2006) "The Determinants of Mortality" *Journal of Economics Perspectives* 20 (3), 97-120.
- [19] Easterly, William (2001). "The Middle Class Consensus and Economic Development." *Journal of Economic Growth* 6 (4), 317-335.
- [20] Gottschalk, Peter (1997). "Inequality, Income Growth, and Mobility: The Basic Facts," *Journal of Economic Perspectives* 11 (2), 21-40.
- [25] Kremer, Michael (1993). "The O-Ring Theory of Development," *Quarterly Journal of Economics*, 108(3): 551-75.
- [37] Lindert, Peter (2004). *Growing Public: Social Spending and Economic Growth since the Eighteenth Century*, 3-38, 227-263
- [34] Quah, Danny (1997). "Empirics for Growth and Distribution. Stratification, Polarization and Convergence Clubs," *Journal of Economic Growth* 2 (1), 27-60.

[98] Hornstein, Andreas and Per Krusell (2005). "The Effects of Technical Change on Labor Market Inequalities," in Philippe Aghion and S. Durlauf (eds.). *Handbook of Economic Growth*. North Holland. Ch. 20, 1277-1370.

## Week 12 – Friday, Apr 27

### **Readings Seminar 2. Policy and poverty. [658]**

#### **a. Poverty traps and dynamics [362]**

##### **Obligatory [362]**

- [26] Azariadis, C. and A. Drazen (1990). "Threshold Externalities in Economic Development. *Quarterly Journal of Economics*, 105 (2), 501-26.
- [37] Easterly, W. and R. Levine (2003). "Tropics, germs and crops: how endowments influence economic development," *Journal of Monetary Economics*, 50 (1), 3-39.
- [30] Easterly, William (2006). "Reliving the 50s: the Big Push, Poverty Traps, and Takeoffs in Economic Development," *Journal of Economic Growth* 11 (4), 289-318
- [59] Gallup, J., J. Sachs and A. Mellinger (1999). *Geography and Economic Development*. CID Working Paper # 1.
- [53] Lewis, W.A. (1954). "Economic Development with Unlimited Supplies of Labour." *The Manchester School*, 22 (2), 139-91.
- [20] Masters, W. and M., McMillan (2001). "Climate and Scale in Economic Growth." *Journal of Economic Growth*, 6(3), 167-86.
- [22] Carter, M. and C. Barrett (2006). "The Economics of Poverty Traps and Persistent Poverty: An asset-based approach," *Journal of Development Studies*, 42 (2), 178 - 199.
- [28] Lybbert, T., C. Barrett, S. Desta and D.L. Coppock (2004). "Stochastic Wealth Dynamics and Risk Management among a Poor Population," *Economic Journal* 114 (498), 750-777.
- [18] Jalan, J. and M. Ravallion (2000) "Is transient poverty different? Evidence for rural China," *Journal of Development Studies* 36 (6), 82-99.
- [24] Baulch, B. and J. Hoddinott (2000) "Economic Mobility and Poverty Dynamics in Developing Countries," *Journal of Development Studies* 36 (6), 1-24.
- [26] Buera, F. (2007). "Persistency of Poverty, Financial Frictions, and Entrepreneurship," Unpublished paper, Northwestern University.
- [20] Carter, R. and J. May (2001) "One Kind of Freedom: Poverty Dynamics in Post-apartheid South Africa" *World Development*, 29 (12), 1987-2006.

#### **b. Growth strategies [296]**

##### **Obligatory [125]**

- [26] Alesina, Alberto and Dani Rodrik (1994). "Distributive Politics and Economic Growth." *Quarterly Journal of Economics* 109 (2), 465-490.
- [19] Allegre, Guillaume and Xavier Timbeau (2014). "The critique of capital in the twenty first century in search of the macroeconomic foundations of inequality." <hal-00992367>
- [48] Rodrik, D. (2005). "Growth Strategies," in P. Aghion and S. Durlauf (eds.)(2005). *Handbook of Economic Growth*. North Holland. Ch. 14, 967-1014.
- [32] Hausmann, R., L. Pritchett and D. Rodrik (2004) "Growth Accelerations," NBER Working Papers 10566.

##### **Recommended [80]**

- [22] Boucekkine, R. & Pintus, P.A. (2012). "History's a curse: leapfrogging, growth breaks and growth reversals under international borrowing without commitment." *Journal of Economic Growth* 17 (1): 27-47.
- [30] Duflo, E. (2012). "Women Empowerment and Economic Development." *Journal of Economic Literature* 50(4): 1051-79.
- [45] Easterly, W. (2005). "National Policies and Economic Growth: A Reappraisal," in P. Aghion and S. Durlauf (eds.)(2005). *Handbook of Economic Growth*. North Holland. Ch. 15, 1015-1059.
- [25] Easterly, W., M. Kremer, L. Pritchett, and L. Summers (1993). "Good policy or good luck?: Country growth performance and temporary shocks," NBER Working Paper # 4474 later published in *Journal of Monetary Economics*, 32( 3), 459-483.
- [10] Mukand, S. W. and D. Rodrik (2005) "In Search of the Holy Grail: Policy Convergence, Experimentation, and Economic Performance," *American Economic Review*, 95 (1), 374-383.

##### **Complementary [91]**

- [31] Dornbusch, R. and S. Edwards (1989) "Macroeconomic populism," NBER Working Paper # 2986 later published in *Journal of Development Economics*, 32 (2), 247-277.
- Haber, Stephen (1989). *Industry and Underdevelopment: The Industrialization of Mexico, 1890-1940*. Chs. 2,3

- [31] Hausmann, R., and D. Rodrik (2003) "Economic development as self-discovery," *Journal of Development Economics*, 72 (2), 603-633.  
[29] Clark, Gregory (2009). "Manufacturing Growth: What is the path to prosperity in Africa?" Mimeo UC Davis.

### c. Finance as engine of growth [111]

#### **Obligatory [111]**

- [47] Levine, R., Loayza, N., & Beck, T. (2000). Financial intermediation and growth: Causality and causes. *Journal of Monetary Economics*, 46(1), 31-77,  
[23] Beck, T., Demirgüç-Kunt, A., & Levine, R. (2007). Finance, inequality and the poor. *Journal of Economic Growth*, 12(1), 27-49  
[18] Ranciere, R., Tornell, A., & Westermann, F. (2006). Decomposing the effects of financial liberalization: Crises vs. growth. *Journal of Banking & Finance*, 30(12), 3331-48  
[23] Beck, T., Demirgüç-Kunt, A., & Levine, R. (2003). Law and finance: why does legal origin matter?. *Journal of Comparative Economics*, 31(4), 653-675

**Sunday, Apr 29, 00.00 CET Turn in Final Essays**

**Week 13 & 14 – Friday, May 04, Tuesday, May 08 and Friday, May 11 - Essay Presentations**

**Monday, May 28 15:00 – FINAL EXAM**

**Thursday, June 28 09:00 – FINAL MAKE-UP EXAM**

#### **Other Textbooks:**

- Acemoglu, Daron (2008). *Introduction to Modern Economic Growth*. Princeton UP.  
Acemoglu, Daron and James Robinson (2012). *Why Nations Fail. The Origins of Power, Prosperity and Poverty*. New York: Crown Business.  
Aghion, Philippe and Stephen Durlauf (eds.)(2005). [\*Handbook of Economic Growth\*](#). North Holland.  
Cohen, Jessica and William Easterly (Eds.) (2009). *What Works in Development? Thinking Big and Thinking Small*. Washington DC: Brookings Institution Press  
Helpman, Elhanan (2005). *Mystery of Economic Growth*. Harvard University Press. S 330.35 HEL.  
Perkins, Dwight H., Steven Radelet and David L. Lindauer (2006). *Economics of Development*. Norton, 6<sup>th</sup> Ed.  
Ray, Debraj (1998). *Development Economics*. Princeton University Press. is the best undergraduate textbook in development. D 330.34 RAY  
Rodrik, Dani (2003). *In Search of Prosperity: Analytical Narratives on Economic Growth*. Princeton University Press. D 330.34 (063) SEA  
Todaro, Michael P. and Stephen C. Smith (2011). *Economic Development*. Pearson. 11<sup>th</sup> Ed.