

ECG 739
Economic Growth & Development

Class day and time: Tu&Th 10:15-11:30 Nelson Hall Room 3218

Instructor: Prof. John Seater

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Office Hours: Tu & Th 3:00pm-4:30pm, usually to 5:00pm (no promises), and if necessary by appointment

Course Description

This course examines macroeconomic aspects of economic growth and development. Microeconomic aspects of growth and development are covered in the companion course, ECG740. The two courses together constitute a field sequence in Economic Development. This course also can be paired with ECG784 or ECG785 to make a field sequence in macroeconomics.

The semester is devoted to endogenous growth models and their application to economic development. Topics to be covered are **properties and extensions of the classical growth theories; one-sector and two-sector endogenous growth models; variety-expansion and quality-ladder theories of research and development; scale effects; trade and growth; diffusion of technology; transition from underdeveloped to developed economy.** The text for the course is Economic Growth, 2nd Edition by Robert J. Barro and Xavier Sala-i-Martin. We also will discuss several journal articles and working papers. By the end of the semester, you should be familiar with the basic issues in macroeconomic growth and development, and you should be prepared to read more advanced literature on your own.

Conduct of the Course

The course will be conducted as a workshop. The students will be responsible for all the presentations after the first two or three weeks. The course schedule that follows is divided into sections, denoted by dotted lines running part way across the page. In the class *before* we get to a new section, each student must *distribute to all other students and to me brief notes* on all the readings in the section we are about to start. The notes should consist of

- (1) a **brief (3 pages or so) summary of the readings**, including a list of the **five most important equations** in each reading with an explanation of why you think they are the most important equations,
- (2) a discussion of **how the readings relate to the other readings** in the same course section and also to the readings we already have covered in the course (what is the same, what is different),
- (3) **your brief evaluation of each reading** (what is important, what are the limitations, possible improvements or extensions), and
- (4) a **list of any questions** you may have.

These notes are intended to stimulate discussion when the material is presented. Each person will have his own views of what the material means, why it is important, what is wrong with it, and so on, and we want to have everyone thinking about these issues by the time we start discussing the material. Typed notes are preferable, but *legible* handwritten notes are sufficient.

I will present the first section of material to give everyone time to get their first assignment in order; after

that, the students will present most of the material. Readings will be assigned to specific students at least two weeks before we are scheduled to discuss them in class. Assignment is mostly done by the students volunteering for the readings they would like to present, although I will make sure that everyone is assigned a variety of readings (theory, evidence, easy, hard, etc.) over the semester. The designated student will be responsible for presenting a coherent explanation of the assigned material, how it fits into the rest of the material we have studied, and so on. At the beginning of each presentation, *the student making the presentation must distribute to the rest of the class copies of his lecture notes*. Again, typed notes are preferable but *legible* handwritten notes are sufficient. Distributing the presentation notes makes it easier for everyone else to concentrate on what is being said and to engage in useful discussion.

Assignments are short enough that they can be covered in no more than one class session. In several cases, they are considerably shorter than that, and on those days we will have more than one presentation. In making presentations, keep in mind that everyone already has read the material. Consequently, it is unnecessary to cover details of derivations except when doing so is required for understanding something important. The points to emphasize are the ideas motivating the reading, the contribution to our understanding, implications for public policy, and possibilities for future research. In short, you should present a summary that interprets and discusses the material, not a detailed derivation of results. In general, skip the derivations except when the derivation itself is the interesting contribution.

Discussions are to be treated as opportunities to help each other learn and should be conducted in a cooperative rather than competitive manner. If you think another student has said something wrong, be sure to say so; it is only by discussing our differences that we will progress as much as possible. Present your questions and criticisms, however, in a polite and collegial manner.

The purpose of this workshop approach to teaching the course is to have you learn a body of material really well and learn to discuss it at a professional level. This approach progresses more slowly than the traditional lecture format and does not permit coverage of as much material, but it encourages you to obtain a fuller understanding and more complete mastery of the material that we do cover. Breadth is sacrificed for depth. I have used this approach many times, and it has worked well. Be aware that it does take considerably more work on your part than the usual approach where the professor does all the lecturing. The benefit is that you will master the methods involved.

Grading

What a dull subject. Your grade will depend on the quality of the presentations you give in class, the notes on the readings that you distribute, and your general class participation.

There is only one exam in the course, a final exam consisting of a pot luck dinner at my house. Everyone already has an A on the exam, which has a weight of 0% in your course grade.

[B&S refers to Barro and Sala-i-Martin's book, *Economic Growth, 2nd Edition*. Material in parentheses () is to be read but not summarized or discussed in class. It concerns issues or contributions you should know about but do not need to master for this course.]

<u>Topic</u>	<u>Readings</u>	<u>Presenter</u>
From exogenous to endogenous growth. Basic AK model	B&S I, 1	Seater
One-sector models	B&S 4	Seater
Two-sector models	B&S 5.1-5.2.1 plus Appendix 5A	Seater
----- Two-sector models: transition dynamics	Bond, Wang, Yip: JET 1996, pp.149-164	Ji??
Uzawa-Lucas model	B&S 5.2.2-5.2.3	
(Reversed factor intensities) Conditions for growth	B&S 5.2.4-5.3	
----- R&D: Review of Variety models	B&S 6.1.1-6.3	Seater
----- R&D: Quality ladder models	B&S 7.1-7.3 B&S 7.4-7.6	
----- Scale Effects: Evidence	Backus, Kehoe, & Kehoe: JET 1992	
Second-Generation Models of Endogenous Growth	Jones: JPE 1995 (Young: JPE 1998) Howitt: JPE 1999 Peretto: JEG 1998 Connolly & Peretto: JEG 2007	
	Huang: ??	Huang
Semi-Endogenous vs. Endogenous Growth	Laincz & Peretto: JEG 2006 Ha & Howitt: JMCB 2007 Madsen: EcLett 2007	
----- Trade & Growth: Theory	Rivera-Batiz & Romer: QJE 1991 Ventura: QJE 1997	

	Acemoglu & Ventura: QJE 2002	
	Seater: Typescript 2007	Seater
	Yenokyan: Typescript 2007	Yenokyan
	Ji: ??	Ji
Trade & Growth: Evidence	Alcala & Ciccone: QJE 2004	
	Wacziarg & Welch: NBER 2003	
	Dollar & Kraay: Economic Journal 2004	

Policy Issues	(Denaux: RDevEcon 2007)	
	Peretto: JET 2007	
	Dawson & Seater: Typescript 2008	Seater

Diffusion of Technology	B&S 8	
	Coe & Helpman: EER 1995	
	Coe, Helpman, & Hoffmaister: Typescript 2008	

Development	(Pritchett: JEP 1997)	
	(Easterlin: JEP 2000)	
	(Parente & Prescott: 1999)	
	B&S 9.2-9.2.2	
	Goodfriend & McDermott: AER 1995	
	(Young: QJE 1995)	
	Klenow & Rodriguez-Clare: QJE 1999	
	Hansen & Prescott: AER 2002	
	Peretto & Seater: Typescript 2008	Seater
	Galor & Weil: AER 2000	
	Bar & Leukhina: Typescript 2008	

Reading List

- Acemoglu, K.D., and J. Ventura. "The World Income Distribution." *Quarterly Journal of Economics* 117, May 2002, pp. 659-694.
- Alcala, F., and A. Ciccone. "Trade and Productivity." *Quarterly Journal of Economics* 119, May 2004, pp. 613-646.
- Backus, D.K., P.J. Kehoe, and T.J. Kehoe. "In Search of Scale Effects in Trade and Growth." *Journal of Economic Theory* 58, 1992, pp. 377-409.
- Bar, M. and O. Leukhina. "Demographic Transition and Industrial Revolution: A Macroeconomic Investigation." Typescript January 2008.
- Bond, E.W., P. Wang, and C.K. Yip. "A General Two-Sector Model of Endogenous Growth with Human and Physical Capital: Balanced Growth and Transitional Dynamics." *Journal of Economic Theory* 68, 1996.
- Coe, D.T., and E. Helpman. "International R&D Spillovers." *European Economic Review* 39, May 1992, pp. 859-887.
- Coe, D.T., E. Helpman, and A.W. Hoffmaister. "International R&D Spillovers and Institutions." Working paper 14069, National Bureau of Economic Research, June 2008.
- Dawson, J.W., and J. J. Seater. "Federal Regulation and Aggregate Economic Growth." Typescript, July 2008.
- Denaux, Z. "Endogenous Growth, Taxes and Government Spending: Theory and Evidence." *Review of Development Economics* 11, February 2007, pp. 124-138.
- Dollar, D., and A. Kraay. "Trade, Growth, and Poverty." *Economic Journal* 114, February 2004, pp. 22-49.
- Easterlin, R.A. "The Worldwide Standard of Living since 1800." *Journal of Economic Perspectives* 14, Winter 2000, pp. 7-26.
- Galor, O., and D. Weil. "Population, Technology, and Growth: From the Malthusian Regime to the Demographic Transition and Beyond." *American Economic Review* 90, September 2000, pp. 806-828.
- Goodfriend, M., and J. McDermott. "Early Development." *American Economic Review* 85, March 1995, pp. 116-133.
- Ha, J., and P. Howitt, "Accounting for Trends in Productivity and R&D: A Schumpeterian Critique of Semi-Endogenous Growth Theory." *Journal of Money, Credit, and Banking* 39, June 2007, pp. 733-774.
- Hall, R.E., and C.I. Jones. "Why Do Some Countries Produce So Much More Output per Worker than Others?" *Quarterly Journal of Economics* 114, February 1999, pp. 83-116.
- Hansen, G.D., and E.C. Prescott. "Malthus to Solow." *American Economic Review* 92, September 2002, pp. 1205-1217.
- Howitt, P. "Steady Endogenous Growth with Population and R & D Inputs Growing." *Journal of Political Economy* 107, August 1999, pp. 715-730.
- Jones, C.I. "R&D-Based Models of Economic Growth." *Journal of Political Economy* 103, August 1995, pp.

759-784.

- Klenow, P.J., and A. Rodriguez-Clare. "The Neoclassical Revival in Growth Economics: Has It Gone Too Far?." *Macroeconomics Annual* 12, 1997, National Bureau of Economic Research, pp. 73-103.
- Laincz, C.A., and P. Peretto. "Scale Effects in Endogenous Growth Theory: An Error of Aggregation, Not Specification." *Journal of Economic Growth* 11, September 2006, pp. 263-288.
- Madsen, J. "Are There Diminishing Returns to R&D?" *Economics Letters* 95, May 2007, pp. 161-166.
- Parente, S.L., and E.C. Prescott. *Barriers to Riches*. Third Walras-Pareto Lecture, University of Lausanne, October 1999.
- Peretto, P. "Technological Change and Population Growth." *Journal of Economic Growth* 3, December 1998, pp. 283-311.
- Peretto, P. "Corporate Taxes, Growth and Welfare in a Schumpeterian Economy." *Journal of Economic Theory*, November 2007, pp. 353-382.
- Peretto, P., and M. Connolly, "The Manhattan Metaphor." *Journal of Economic Growth* 12, December 2007, pp. 329-350.
- Peretto, P., and J. Seater. "Factor-Eliminating Technical Change" Typescript 2008.
- Pritchett, L. "Divergence, Big Time." *Journal of Economic Perspectives* 11, Summer 1997, pp. 3-17.
- Rivera-Batiz, L.A., and P.M. Romer. "Economic Integration and Endogenous Growth." *Quarterly Journal of Economics* 106, May 1991, pp.531-555.
- Seater, J. "Trade, Growth, and Technology Transfer." Typescript 2008.
- Ventura, J. "Growth and Interdependence." *Quarterly Journal of Economics* 112, February 1997, pp.57-84.
- Wacziarg, R., and K.H. Welch. "Trade Liberalization and Growth: New Evidence." Working paper 10152, National Bureau of Economic Research, December 2003.
- Young, A., "The Tyranny of Numbers: Confronting the Statistical Realities of the East Asian Growth Experience." *Quarterly Journal of Economics* 110, August 1995, pp. 641-680.
- Young, A. "Growth without Scale Effects." *Journal of Political Economy* 106, February 1998, pp. 41-63.