ECON 490 - Economic Growth

Why are some countries rich and others poor?

University of Illinois at Urbana-Champaign College of Liberal Arts & Sciences Department of Economics

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Course Description: The main goal of this course is to answer the following question: *why are some countries so much richer than others?* We search for reasonable explanations by dividing the course in three main parts. At first, we want to understand the role of *accumulation of factors of production* – mainly, physical and human capital – on different levels of wealth across nations. Then, we look at the ability of countries in either produce or copy new technologies, and how efficiently they can use them together with the factors of production to enhance their *productivity*. Lastly, we focus on how political, cultural, and geographical differences across societies may explain variations in the modern economic development of nations.

Given that we understand the importance of the factors above for economic growth, we discuss the historical development of world economies and its connection with the demographic transition, structural transformation, industrial revolution and oceanic exploration.

- **Reading:** There is no required textbook. However, the classes will be based on the following texts whose reading is strongly recommended. Most of the growth models discussed during the course are very well presented in the textbook by Charles Jones and Dietrich Vollrath. The textbook by David Weil is filled with excellent data analysis and is very helpful to understand the fundamental causes of growth.
 - Introduction to Economic Growth by Charles Jones and Dietrich Vollrath. (3rd Edition). W. W. Norton & Company Publisher. 2013. (JV)
 - Economic Growth by David Weil (3rd Edition). Addison-Wesley Pearson Publishers. 2013. (W)

Additional references:

- Introduction to Modern Economic Growth by Daron Acemoglu. Princeton University Press. 2008. (A);
- Handbook of Economic Growth by Philippe Aghion and Steven Durlauf. North Holland. 2005, 2013. (AD)
- The Growth of Nations by N. Gregory Mankiw in *Brookings Papers on Economic Activity*, volume 1995, number 1. (M)
- It's Not Factor Accumulation: Stylized Facts and Growth Models by William Easterly and Ross Levine in *The World Bank Economic Review*, volume 15, number 2. 2001. (EL)
- Guns, Germs, and Steel: The Fates of Human Societies by Jared Diamond. New York: W.W. Norton. 1997. (D)
- Why Nations Fail: The Origins of Power, Prosperity, and Poverty by Daron Acemoglu and James Robinson . New York: Crown. 2012. (AR)
- The Lever of Riches: Technological Creativity and Economic Progress by Joel Mokyr. Oxford University Press, 1992. (JM)
- A Farewell to Alms: A Brief Economic History of the World by Gregory Clark. Princeton University Press, 2009. (GC)
- The Economics of Growth by Philippe Aghion and Peter Howitt. MIT press, 2008. (AH)
- **Grading:** The final grade will be composed by participation points (20%), five projects (20%), 2 mid-terms (20%) and the final exam (20%). During the exam there are to be no books, papers other than the exam itself, cell-phones or other items that connect to the internet. Students found to be using unapproved items are in violation of the Academic Integrity policy of the University and will be subject to disciplinary action. The following cutoffs will be used for the letter grades:

Participation: Active participation both in class and through online assignments is a building block in this course. Participation points must be earned by answering short quizzes before classes in the course website and by attendance.

- Attendance will be taken in most of the classes. Present students earn 2 points and late students earn 1 point. By the end of the semester students will fit in one of the following categories and earn the associated points: Good (10 points) > 70%, Regular (7 points) > 50%, Irregular (4 points) > 30%.
- 2. The average score in the short quizzes composes the other 10 participation points. There will be 19 short quizzes to be answered (4 lowest short quizzes grades will be dropped).
- 3. Extra credit can be earned through outstanding participation. Good questions and answers both in class and online (Moodle Forum) are likely to earn extra credit.
- **Projects:** They consist of two parts. The first part refers to a quiz about a specific texts.¹ Part 2 is related to data management and analysis which must be turned in online through the course website. Two lowest parts are dropped. Below you can find the due dates and texts associated with the projects:

Project 1 (01/28) : Daron Acemoglu (2008, Chapter 1).
Project 2 (02/20) : Gregory Mankiw (1995).
Project 3 (03/13) : Easterly and Levine (2001).
Project 4 (04/24) : Gregory Clark (2009).
Project 5 (05/01) : Acemoglu, Johnson and Robinson (2005, sections 1-4).

Missed exams: The students must present a letter from the Dean Office justifying their absence, otherwise the student will have zero on the missed exam.

In the event that a student misses one of the two mid-term exams and presents the letter from the Dean Office, the score from the final exam will be used on the missed exam. There are no make-up exams. In the event that a student misses a second in-term exam, the instructor reserves the right to give the student a zero on that exam.

Final Exam: TBA. It will cover all the material.

All the course material including past exams will be available for students at Moodle².

¹All the texts can be accessed for free when logged in the campus network, or through the library website. ²https://learn.illinois.edu

Tentative Schedule:

What do we want to know? And what do we need to know? In the first weeks we will talk about the facts that make our fundamental question to rise and the other questions that rise when we try to answer it. Furthermore, we go over mathematical and econometric issues that will appear during the course.

Week 1 – Jan 14:

- The Fundamental Question (W. Ch.1, A. Ch.1, JV. Ch.1, D. Prologue, M.)
- No Class on Wednesday

Week 2 – Jan 21:

- No Class on Monday
- Some Technical Issues (W. Ch.2, JM. Ch.1)
- **More inputs, more output:** In the following weeks we go deep on the Solow model a workhorse in the field of economic growth. The main goal is to understand how different rates of capital accumulation explain differences in income across economies.

Week 3 – Jan 28:

- No Class
- Monday @ Noon: Project 1

Week 4– *Feb o4*:

- No Class on Monday
- Production Function (W. Ch. 3, JV. Ch. 2)

Week 5 – Feb 11:

- The Basic Solow Model (W. Ch. 3, JV. Ch. 2)
- Convergence in the Solow Model (W. Ch. 3, JV. Ch. 3)

<u>Week 6 – Feb 18:</u>

- Solow model with Technological Progress (JV. Ch. 3)
- Wednesday @ Noon: Project 2
- The Empirics of Solow Model (JV. Ch.3, A. Ch.3, M.)

Week 7 – Feb 25:

- Extended Solow Model: Human Capital (W. Ch. 6)
- Wednesday: Review in class. Midterm 1 (Evening)

There's a way to do it better – find it!: By now, we have some measure of the importance of technology to economic growth, then we spend the next weeks discussing what is technology, how can we produce it and how does it flow around the world.

Week 8 – Mar 04:

- Technology and Ideas (JV. Ch 4, W. Ch.7)
- Romer Model of Technology Creation (JV. Ch 5)

Week 9 – Mar 11:

- Technology Diffusion (JV. Ch 5, W. Ch.8 & Ch.9)
- Wednesday @ Noon: Project 3
- Efficiency (W. Ch.10)

<u>Week 10 – Mar 18:</u>

- Spring Break
- They are not causes for growth! They are growth!: We have a good idea how to promote economic growth so far... but why nations don't follow the recipe? The next step in the course in to understand what causes countries to have different levels of factor accumulation and productivity.

Week 11 – Mar 25:

- The Fundamental Causes
- Geography, Climate and Natural Resources (W. Ch.15, A. Ch.4)

Week 12 – Apr 01:

- Culture (W. Ch. 14, A. Ch.4)
- Government (W. Ch.12, A. Ch.4)

Week 13 – Apr 08:

- Monday Review in class. Midterm 2 (Evening)
- A Brand New World
- Let there be growth: Now that we understand the main mechanisms of growth, we can discuss why the world presents sustained growth rates today, differently from 500 hundred year ago.

Week 14 – *Apr* 15:

- Demographic Transition (W. Ch.4)
- The Transition to Sustained Growth (JV. Ch.8)

The rise and fall of nations: Why East Asia performed impressive growth rates after World War II? Why industrial revolution happened in England? Is prosperity persistent? Why Mexico and Peru do not host rich civilizations anymore? How can the shape of continents explain the wealth of nations?

Week 15 – Apr 22:

- Why England?
- Wednesday @ Noon: Project 4
- The Reversal of Fortune (A. Ch.4, AD V.1A Ch. 6)

Week 16 – Apr 29:

- Origins of Comparative Economic Development (D)
- Wednesday @ Noon: Project 5
- Review

Final Exam Conflict Policy: From the University's final exam policy:

- Any student having more than two consecutive final examinations is entitled to rescheduling as follows if he or she takes the following action no later than the last day of classes:
 - The student must investigate whether a conflict examination is being held at another time for any of the examinations involved.
 - If a conflict examination has been scheduled for any of the courses, the student must take one or more of these conflict examinations. If conflict examinations are offered for more than one course, the student must take the conflict for the course that has the largest number of students.
 - If no conflict examinations have been scheduled, the student must contact the instructor of the course having the largest number of students. The contact must be made no later than the last day of classes, and that instructor must provide a makeup examination.
 - Normally in a semester several combined-sections, conflict, and noncombined examinations are given at the same time. As a guide to resolving conflicts, an order of priority has been established within each examination period, and a student should resolve a conflict using the published examination schedules and the following priority guidelines.
 - National and state professional examinations (e.g., CPA, actuarial science, Architecture Registration Examination) take priority over campus final

examinations. An instructor must offer a conflict examination to a student scheduled to take a national or state professional examination and a campus final examination at the same time.

- A noncombined course examination has precedence over any combined-sections or conflict examination.
- A department offering a combined-sections final examination must provide a conflict examination if required to accommodate student conflicts.

The University's final exam policy is available at: http://studentcode.illinois. edu/article3_part2_3-201.html

Emergency Response Recommendations: The university maintains guidelines for emergency responses. A list of recommendations when to evacuate and when to find shelter are available at: http://illinois.edu/cms/2251/general_emergency_response_ recommendations_8_16_13_final.docx

Floor plans for specific buildings are available at: http://police.illinois.edu/ emergencyplanning/floorplans/

- Statement on Accommodations: To obtain disability-related academic adjustments and/or auxiliary aids, students with disabilities must contact the course instructor and the Disability Resources Educational Services (DRES) as soon as possible. To contact DRES you may visit 1207 S. Oak Street, Champaign, call 333-4603 (V/TTY), or email a message to disability@uiuc.edu.
- **Academic Integrity:** "The University has the responsibility for maintaining academic integrity so as to protect the quality of education and research on our campus and to protect those who depend upon our integrity.

Expectations of Students. It is the responsibility of each student to refrain from infractions of academic integrity, from conduct that may lead to suspicion of such infractions, and from conduct that aids others in such infractions. Students have been given notice of this Part by virtue of its publication. Regardless of whether a student has actually read this Part, a student is charged with knowledge of it. Ignorance is not a defense."

The University's full academic integrity policy is available at: http://studentcode. illinois.edu/article1_part4_1-401.html