Economic Growth
440.634

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Thursday 6:00 - 8:45 PM
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Office hours: After the class or by appointment
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Prerequisites:
440.601 Microeconomic Theory and Policy; 440.602 Macroeconomic Theory and Policy; and
440.606 Econometrics.

Objective:
What causes a country to grow and develop industries? Why does growth experience differ in
different nations? The current course examines contemporary theories of economic growth and
empirically applies them to panels of present day developing and industrialized countries, and to
the historical evolution of individual countries and groups of countries. Topics include inter alia
neoclassical growth models, population and growth, the economics of ideas, endogenous growth
models, institutions and growth, and political systems and growth.

Textbooks:
There are two required textbooks for the course. These are:

1. “Introduction to Economic Growth” by Charles I. Jones (EG in abbreviation)
2. “Determinants of Economic Growth” by Robert J. Barro

Students may access their required readings (articles mentioned in the syllabus), including JSTOR
articles, at Reserves’ site at:
[Users will be prompted for the course password: MAH634.]

Exams
There will be one midterm and one final. None of the exams will be cumulative. However, material from
the previous exam will be useful for the latter. You will be graded not only based on the answers to the
questions on the exam but also on how you derived them. This will allow me to give partial credits when
possible. Your grade will be based on:

50% Midterm exam
50% Final exam
Grades will be mostly based on exams. Class participation is encouraged throughout the course. HWs will be assigned but will not be graded and solutions to the HWs will be handed out and discussed in the next class.

Disabilities:
Students with any documented physical or learning disabilities in need of special accommodation should let me know in advance so that arrangements can be made.

Course Outline

Introduction
- History of Economic Growth
- Mathematics
- Harrod-Domar Model

EG Chapter 1, Appendix and Lecture Notes.
In this session, we will introduce the scope and nature of development in general and growth in particular. We will introduce some mathematical tools essential to grasp the theory behind economic growth. At the end of the class, we will apply the mathematical tools to understand one of the first models of economic growth.

Neoclassical Growth Theory (I)
- Solow Growth Model
- Convergence Hypothesis
- Total Factor Productivity Growth

EG Chapter 2.
We will discuss the neoclassical growth models of Solow-Swan. Results of Solow-Swan model will be contrasted to that of Harrod-Domar model. After detailed description of the theory, empirical evidence will be presented.

Neoclassical Growth Theory (II)
- Empirical evidence for and against Solow Growth Model
- A Modified Solow Growth Model

EG Chapter 3 and Lecture Notes.
We will begin with how empirical evidence can go for and against the neo-classical growth theory. Then a new theory will be presented by incorporating human capital in the Solow growth model. The lecture will present a slightly different model from that of the book. But either of them will suffice for understanding the basic analytics of the model.

New Growth Theory (I)
- The role of ideas, innovations
- Increasing returns to scale in growth model

EG Chapters 4 and 5.1.
In this session, we will introduce new growth theories that were initiated by Paul Romer. Unlike previous models, these new growth models introduce increasing returns to scale to illustrate non-convergence among nations.

**New Growth Theory (II)**
- The role of imperfect competition
- Growth and development

*EG Chapters 5.2 and 6.*
We will continue with new growth theories. This session will introduce micro-foundation behind increasing returns to scale.

**Empirical Evidence (I)**
- Growth regressions
- Australian Growth: A California Perspective

*Chapter 1 of “Determinants of Economic Growth” by Robert J. Barro*
**Article: Australian Growth: A California Perspective**
In the first part of this lecture, we consider what determines economic growth empirically. Secondly, we look at some case studies how country experiences differ from one another.

**Empirical Evidence (II)**
- East Asian Development: An Overview
- Hong Kong and Singapore

**Article: A Tale of Two Cities: Factor Accumulation and Technical Change in Hong Kong and Singapore**
Lecture notes
The spectacular growth of East Asia has been the most significant event in economic growth in the post-war era. In this lecture, empirical tools and economic models are utilized to analyze the specific case of East Asia.

**Overlapping Generations Model**
- Introducing two generations
- Diamond Model
- Social Security

**Article: Website of Daron Acemoglu**
Previous models assumed an agent to live forever. In reality, people live for a finite amount of time. This model considers two generations co-existing simultaneously — one young who are working and another old who are retired and renting their savings to capital market.

**Heterogeneity (I)**
- Introducing heterogeneity
- Inequality and development (Galor-Zeira Model)

**Article: Income Distribution and Macroeconomics**
**Article: Inequality and Economic Development: An Overview**
Lecture notes
Previous growth models assumed a representative agent. In reality, people differ with respect to endowments they possess. The first part presents how heterogeneity can affect the long-run development of a nation with respect to human capital accumulation.

Heterogeneity (II)
- Distributive Politics and economic growth (Alesina-Rodrik Model)
- Economic and political development

Article: Distributive Politics and Economic Growth
Lecture notes and Chapter 2 of “Determinants of Economic Growth” by Robert J. Barro
We will present a theory of how existing political system can affect economic growth and then illustrate cross-country empirical evidence.

Institutions and Development
- Defining institutions
- Colonial origins of institutions and the impact on growth
- The case of Botswana

Article: The Colonial Origins of Comparative Development: An Empirical Investigation
Article: An African Success Story: Botswana
What is the role of institutions in the process of development? We look at the cross-country evidence of whether the quality of institutions at all depended upon colonial origins or not. Next, we look at an important case study of Botswana.