

The Schumpeterian approach to economic growth

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Almost a century Joseph A. Schumpeter argued that the capitalist system is an engine of growth driven by technological change and that this is the outcome of market rivalry, that is, the continuous striving of firms to improve and defend their market position at the expense of other firms. Modern growth theory provides a unified, consistent framework for modeling this process. Within the time limits of a short course, we will study the analytical foundations of this framework and use the most recent advances in modeling to shed light on old and new questions concerning development and growth. Because of its emphasis on market imperfections, and the consequent need for institutional corrections, modern growth theory integrates the market and the government in a framework that allows us to think about real-world problems in a novel and more productive way.

A course that covers the topic outlined above faces the challenge of sifting through an enormous literature, most of it recent. The ideal reading list consists of two parts. The first covers older material and gives an overview of the state of the art from the standard neoclassical viewpoint. An excellent reference here is Barro and Sala-i-Martin (2004, MIT Press), *Economic Growth*. A very good textbook that covers a lot of early results in endogenous innovation is Aghion and Howitt (1998, MIT Press), *Endogenous Growth Theory*. Another excellent book is Grossman and Helpman (1991, MIT Press), *Innovation and Growth in the Global Economy*. Although much older, this book is still a must read for those interested in the implications of modern growth theory for international economics. Some more recent resources are: (1) *Handbook of Economic Growth* (Vol 1, 2005, and Vol 2, 2014, North Holland) edited by P. Aghion and S. Durlauf; (2) *The Economics of Growth* (2009, MIT University Press) by P. Aghion and P. Howitt; (3) *Introduction to Modern Economic Growth* (2009, Princeton University Press) by D. Acemoglu; (4) *Unified Growth Theory* (2011, Princeton University Press) by O. Galor. This is a field that moves very fast and covers a lot of different topics. It would take several pages to list all the references that will come up in our discussions and so I will mention them in class as we go along. These books provide good entry points to a variety of issues.

This course departs from the “creative destruction” approach of Aghion and Howitt and develops a “creative accumulation” one, which is more in line with theory and evidence from IO. The sequence of topics is as follows. Due to time constraints we might not be able to cover 4-6 in much detail.

1. The basic Peretto-Smulders knowledge-based model with some notable extensions.
2. Introducing natural resources.
3. The multi-sector version of the model.
4. Growth on a finite planet.
5. Renewable resources.
6. Sustainability.