UNIVERSITAT DE BARCELONA
SCHOOL OF ECONOMICS
Summer School

The Economics of Growth: Innovation, Rivalry, and Institutions

July 1-5, 2019

Description

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. Firms continuously strive 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 this course, we will study the foundations of this framework and use the most recent advances in modeling to shed light on old and new questions concerning development and growth. Market imperfections are inherent in this framework and there is a need for institutional corrections. We will integrate government regulations in the framework, which will allows us to think about real-world problems in a novel and more productive way. We will also test certain hypotheses and implications of this framework.

In this course, we will look at three types of innovation by entrepreneurs and firms: (1) development of products and market entry; (2) development of higher quality products than existing ones and market entry with "creative destruction;" and (3) "creative accumulation" within firms, which enhances their productivity and product quality. The main focus of the course is on the third type of innovation, which is more in line with theory and evidence from IO. The sequence of topics is as follows:

Section 1 | Lecturer: Vahagn Jerbashian

1. The preliminaries of endogenous growth theory
2. In-house innovation, patents, licensing, and growth
3. Innovation and rivalry for product market and inputs
4. Competition and innovation: Theory and empirical evidence

Section 2 | Lecturer: Pietro F. Peretto

5. Notable extensions of Peretto-Smulders knowledge-based model
6. Introducing natural resources and richer production structure
7. The multi-sector version of the model
8. Applications and recent extensions: Corporate governance, entry, innovation and growth

This Summer School includes also a workshop where advanced students can present their works and receive feedback.

Recommended Books and References

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; and (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, and these books provide good entry points to a variety of issues. An incomplete list of references that will come up in this course is:

Aghion, P., N. Bloom, R. Blundell, R. Griffith, and P. Howitt (2005). Competition and innovation: An inverted-U relationship. *Quarterly Journal of Economics* 120 (2), 701-728.

Aghion, P. and P. Howitt (1992). A model of growth through creative destruction. *Econometrica* 60 (2), 323-351.

Blundell, R., R. Griffith, and J. M. van Reenen (1999). Market share, market value and innovation in a panel of British manufacturing firms. *Review of Economic Studies* 66 (3), 529-554.

Coffey, B., P. A. McLaughlin, and P. F. Peretto (2016). The cumulative cost of regulations. Duke I&E Research Paper No. 2016-45.

Ferraro, D. and P. F. Peretto (2018). Commodity prices and growth. *Economic Journal* 128, 3242-3265.

Griffith, R., R. Harrison, and H. Simpson (2010). Product market reform and innovation in the EU. *Scandinavian Journal of Economics* 112 (2), 389-415.

Iacopetta, M., Minetti, R. and P. F. Peretto (2018). Financial markets, industry dynamics, and growth. *Economic Journal*, Forthcoming.

Jerbashian, V. (2018). Intellectual Property and Product Market Competition Regulations in a Model with Two R&D Performing Sectors. *Macroeconomic Dynamics*, Forthcoming.

Jerbashian, V. (2016). Knowledge licensing in a model of R&D-driven endogenous growth. *B.E. Journal of Macroeconomics* 16 (2), 555-579.

Peretto, P. F. (1996). Sunk costs, market structure, and growth. *International Economic Review* 37 (4), 895-923.

Peretto, P. F. (1998). Technological change and population growth. *Journal of Economic Growth* 3 (4), 283-311.

Peretto, P. F. (1998). Technological change, market rivalry, and the evolution of the capitalist engine of growth. *Journal of Economic Growth* 3 (1), 53-80.

Peretto, P. F. (1999). Industrial development, technological change, and long-run growth. *Journal of Development Economics* 59 (2), 389-417.

Peretto, P. F. (1999). Cost reduction, entry, and the interdependence of market structure and economic growth. *Journal of Monetary Economics* 43 (1), 173-195.

Peretto, P. F. (2012). Resource abundance, growth and welfare: A Schumpeterian perspective. *Journal of Development Economics* 97 (1), 142-155.

Peretto, P. F. and M. Connolly (2007). The Manhattan metaphor. *Journal of Economic Growth* 12 (4), 329-350.

Peretto, P. F. and S. Smulders (2002). Technological distance, growth and scale effects. *Economic Journal* 112 (481), 603-624.

Peretto, P. F. and S. Valente (2011). Resources, innovation and growth in the global economy. *Journal of Monetary Economics* 58 (4), 387-399.

Romer, P. M. (1990). Endogenous technological change. *Journal of Political Economy* 98 (5), 71-102.

Smulders, S. and T. van de Klundert (1995). Imperfect competition, concentration and growth with firm-specific R&D. *European Economic Review* 39 (1), 139-160.

Van de Klundert, T. and S. Smulders (1997). Growth, competition and welfare. *Scandinavian Journal of Economics* 99 (1), 99-118.