Advanced Macroeconomics
Danyang Xie, HKUST

Syllabus
Danyang Xie, 27 August 2018 (created 20 February 2014)
Advanced Macroeconomics
Course Website: http://advmacro.tiddlyspot.com/
Fall 2018
Instructor: Danyang Xie, danyang.xie@gmail.com
Office Hours: Friday 1:00 pm to 3:00 pm or by appointment
TA: Bowen QU (Contact: bqub@connect.ust.hk; Office Address: Seat 12, Room 4063 LSK;Office Hour:
15:00-17:00, Tuesday)

Course Outline and Reading List
This course covers deterministic and stochastic models of economic growth. These dynamic models are used to
carry out business cycle analysis and to discuss government fiscal and monetary policies. Background in
dynamic optimization is helpful but not required.

All the blue items are the required readings. You need to print them out by yourself.

There is no required textbook. The following books are recommended for general reference:


The following articles are for general discussions:

2. Blanchard Olivier, "What Do We Know about Macroeconomics that Fisher and Wicksell did not?" Quarterly

Evaluation Criterion
The evaluation is based on a final exam (50%), a set of homework (20%), paper presentation (20%, 35 minutes for
each student) and participation in class discussion (10%). The exam will be open-book. Selection Criteria for a
paper to be used for presentation (1. 2015 or more recent; 2. related to the topics covered; 3. a Google citation
above 50.) Please download the article to your cloud drive and send the link to the TA. Section 8 contains some of the
selections my previous students over the years.
Topics and Readings

An Introduction and Math Preparation

- **Major Development in Macroeconomics**
- **Chapter 17**
- **Heuristic Derivation of Hamiltonian Approach**

A. Growth Theory (3 weeks)

A.1 Classics


A.2 Endogenous Growth: One-Sector Model

- **Chapter 18**
- **Backward Shooting: Mathcad Program**
- **Chapter 19**
- **Chapter 20**


A.3 Endogenous Growth: Two-Sector Model


- **Notes on Romer 1990**


A.4. Fiscal Policies in Endogenous Growth Models


A.5. Structural Change and Economic Growth


*Acemoglu's presentation of KRX and his paper on Non-Balanced Growth*

B. Empirics of Growth (1 week)

B.1 Growth Regression and Convergence Debate


*Note on MRW

The derivation of item 20 in the Note on MRW


Note on Bernanke and Gurkaynak

B.2. Growth Accounting


B.3. Finance and Growth


B.4. Law and Development


C. Real Business Cycle Models (2 weeks)

C.1. Classics

Introduction to RBC
Wang Pengfei's Example

C.2. Refinements


Note on King and Rebelo

C 3 Self-Fulfilling Prophecies


Note on Farmer and Guo

Duffy John and Xiao Wei, Instability of sunspot equilibria in real business cycle models under adaptive learning, JME 2007


D. Consumption Behavior (1 week)


Note on Consumption Behavior


E. Asset Pricing (1 week)

Note on Asset Pricing


Note on Equity Premium Puzzle

Note on Habit Formation


F. Time Inconsistency of Government Policies (2 weeks)

F.1. Classics


Note on Time Consistency


Note on Barro and Gordon


F.2 Discrete Time Models


F.3. Continuous Time Models


Note on Lansing JPubE 1999

G. Influential Articles Selected by Students

- Song, Storesletten, and Zilibotti: "Growing like China" AER 2011
- Wachter, Jessica, Can Time-Varying Risk of Rare Disasters Explain Aggregate Stock Market Volatility?
- Mark Gertler and Peter Karadi, "A Model of Unconventional Monetary Policy," JME 2010
- Xavier Gabaix, "Variable Rare Disasters: An Exactly Solved Framework for Ten Puzzles in Macro-Finance," QJE 2009
- Brunnermeier and Sannikov, "A Macroeconomic Model with a Financial Sector", AER 2013
- Daron Acesoglu, Philippe Ashion, Leonardo Bursztyn, and David Hemous "The Environment and Directed Technical Change" NBER 2009
• François Gourio, "Disasters Risk and Business Cycles" NBER Working Paper 2009
• Margaret S. McMillan and Dani Rodrik, "Globalization, structural change and productivity growth" NBER, 2011
• Fatih Guvenen, A Parsimonious Macroeconomic Model for Asset Pricing, Econometrica (Vol. 77, No. 6, November 2009, pp. 1711-1750)
• Balázs Egert, 2016. Public debt, economic growth and nonlinear effects: Myth or reality? Journal of Macroeconomics
• "Land Price Dynamics and Macroeconomic Fluctuations", by professors Zheng LIU, Pengfei WANG and Tao ZHA, Econometrica 2013