

University of Toronto
Department of Economics
Eco 360Y Economic Growth and Technological Change
OUTLINE for Fall/Winter 2010/2011 [Modified, September, 2010]
M. J. Hare [Larkin Building, Trinity College, Room 336]

A. Course Description

This is a course in applied economic theory related to the economic growth of industrial nations with particular emphasis on the United States, Japan and Canada. Eco 360Y is not an economic history course. The pre-requisites are Eco 200Y, Eco 202Y and Eco 220Y [or their equivalents]. The pre-requisites are enforced.

In the first term, the course emphasizes the conditions for efficient resource allocation in a market economy, together with the serious challenge of Schumpeter. In addition, the course analyzes the evolution of the capitalist system under the theories of Marx and Schumpeter: both of whom argued that capitalism would fail – although through very different means. Finally, the Long Wave Kondratieff theory of the business cycle is evaluated according to the theories of Van Duijn and Mensch.

The second term has three components. Initially, the path-breaking analysis of Solow [1956] is examined. This analysis presented a shock to the economic world, which is still being addressed, fifty years later. The center of attention here is on the importance of improved productivity growth. In this first part, the importance of technological change [innovation] is principally addressed, primarily since 1950 for the United States, Japan and Canada. It is shown that the role of innovation, in the long run, is the dominant source of higher rates of labour productivity and associated higher per capita standards of living. Research into the sources of economic growth and the economics of technological change is analyzed in detail. In the second part of Term 2, the post-war economic growth of Japan is reviewed together with the rising international trade deficit between the United States and Japan and the reasons for economic convergence by Japan between 1955 and 1989. The question which arose by some American economists, during the late 1980s, was: “Does the United States have to change its system of capitalism to successfully compete with Japan?”

In the final part of Term 2, recent studies on economic growth and the continued importance of productivity growth are reviewed. This includes an analysis of the sharp increase in American productivity in 1995 and the double Canadian deficit with the United States during the last fifteen years. Canada has a productivity gap and a related standard of living gap, which has been growing, with the United States. Finally, new work is cited and reviewed.

The course has been judged to be of importance for Commerce and Finance students and for students who are enrolled in a programme [specialist or major] in Economics. In the end, the instructor's opinion on whether capitalism will succeed or fail in the long run is presented.

More specifically, this course will present an analysis of, at least, the following issues:

1. a review of Pareto efficient [general equilibrium] resource allocation conditions in production, exchange and international trade in the 2/2/2/2 model;
2. an evaluation, and critique, of the theories of evolution and fall of capitalism according to Marx and Schumpeter;
3. an evaluation of the Long Wave Fifty/Sixty Year Kondratieff cycle;
4. the vital importance of productivity growth and technological change starting with the 1956 analysis of Bob Solow;
5. the key sources of economic growth and a review of economic growth accounting systems for the United States, Canada and Japan;
6. the economics of technological change, including the social rate of return on R&D;
7. Japan's infant industry/strategic targeting approach to industrialization;
8. the rationale for international trade imbalances between the United States and Japan;
9. a review of selected critics of the American economic system versus Japan's system;
10. the principal causes of the economic slowdown since 1973 in industrial countries;
11. a reassessment of Japanese and American economic growth since 1990;
12. the current Canadian productivity dilemma and comparative standard of living problems;
13. contemporary issues on economic growth, productivity, technological change and standards of living including the new analysis in *The Power of Productivity* by William Lewis.

Key contributors include Schumpeter, Krugman, Sweezy, Mensch, Van Duijn, Solow, Denison, Mansfield, Bergsten, Ito, Prestowitz, Thurow, Lipsey, William Lewis,

Baumol, Roger Martin, and a large cast of other economists.

B. Compulsory Readings

There is no text suitable for this course. In lieu of a text, compulsory readings are contained in an Extract Package [one for each term] from Scholar House Publications [100 Harbord Street]. The copy right charge, regulated by the Canadian Government, is at least 10 cents per page. Students who buy the new edition of the Extracts from an independent source are violating Canadian law.

C. Allocation of Marks

1. First Term: 25%
Term Test 1 Date: Tuesday, December 7, 2010 [two hours in class time]
 Test 1 covers Topic 1 to Topic 5 in the First Term.
2. Second Term: 25%
Term Test 2 Date: Tuesday, March 15, 2011 [two hours in class time]
 Test 2 covers Topic 6 to Topic 10 in the Second Term.
3. Three Hour Final Exam [Four equal parts] 50%

NOTES:

1. A detailed reading list for each term will be available: the readings are included in the Extracts for each term and will be posted on the Web Site.
2. There will be a Web Site for information purposes only.
3. The instructor does NOT respond to e-mail requests and communications.
4. Instructor's office hours will be held each week at a time to be announced. Special aid centre hours by the teaching assistant will be available before each test.
5. For each test, and for the final exam, one essay question [one part] will be made available before the test/exam is written. The questions will be taken from the Readings and from the lecture material. For one part, short answer questions, mainly from the readings, will be developed for both the tests and for the final exam.
6. The emphasis in this course is on in-depth economic *analysis*: NOT on the description of the models and theories and NOT on the memorization of points and facts.
7. The final day to drop this course, without academic penalty, is February 21, 2011.

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Eco 360Y: Economic Growth and Technological Change
Academic Year: Winter 2010/2011
Lecture Outline
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FIRST TERM: Fall, 2010 [Revised: September, 2010]

- 1.0 Economic Growth and Productivity Change: An Introduction [September 14 and 21, 2010]**
- 2.0 General Equilibrium [Pareto] Analysis with International Trade and Innovation in the standard 2-2-2-2 Model [September 28 and October 5]**
- 3.0 The Downfall of Capitalism Via Karl Marx: An Interpretation by Sweezy [October 12 and 19]**
- 4.0 The Evolution of Capitalism and its Pending Failure Through the Eyes of Joseph Schumpeter: [October 26 and November 2 and 9]**
- 5.0 The Long Wave Kondratieff Cycle: An Analysis [November 16 and 23]**

TEST ONE: SECTION 1 TO SECTION 5

Tentative Date: Tuesday December 7, 2010 [two hours: in class time in a separate test room or rooms to be designated].]

SECOND TERM: Winter, 2011

- 6.0 Sources of Modern Economic Growth from Solow Onwards November 30, 2010 and January 11, 2011]**
- 7.0 The Economics of Technological Change [January 18 and 25]**
- 8.0 The Japanese Economic Growth “Miracle” [February 1]**
- 9.0 The American and Japanese Economic Interface [February 8 and 15]**
- 10.0 Economic Slowdown: Issues and Analysis [March 1 and 8]**
- 11.0 The Canadian Productivity Issue [March 22]**
- 12.0 New Dimensions to the Games of Economic Growth and Productivity Games [March 29]**

TEST TWO: SECTION 6 TO SECTION 10

Tentative Schedule: Tuesday, March 15, 2011 [Two hours: in class time in rooms to be designated.]