

Economics of Population  
Fall 2006  
Economics 672  
Course Syllabus

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BusAd E204  
MW11:30-12:45

Office hours MW 2:00-3:00

The Economics of Population is concerned with important and pervasive demographic processes, their causes and their consequences. We will begin with a broad overview of demographic change and its relationship to economic growth drawing on historical experience. Next the course will focus on the macroeconomic consequences of population trends both in low- and high-income countries. Then, we will consider the application of economic models to demographic events, e.g., childbearing, mortality, marriage, divorce, and living arrangements. The course will conclude with research on immigration. Grades will be based on the following elements:

- Mid-term examination
- Class paper due November 27 and presented at class mini-conference on the morning of December 2
- Student-led discussion of a reading to be selected by the student.
- Final examination on material covered after the mid-term examination.

The weighting for grades will be determined by the class on the first day, but the following weights are suggested.

Weights for grading:	Final	_30%
	Mid-term	_30%
	Paper/presentation	_30%
	Class participation	_10%

Economics of Population – Schedule ( <b>subject to change</b> )			
	Dates	Monday	Wednesday
1	8/21 & 23	No Class	I. Introduction and overview
2	8/28 & 30	II. Demographic transition and demographic fundamentals: Mortality I	Mortality II
3	9/4 & 6	Holiday: Labor Day	Fertility
4	9/11 & 13	Immigration	Age Structure
5	9/18 & 20	A digression on lifecycle planning	III. Population and Macroeconomics
6	9/25 & 27		
7	10/2 & 4		
8	10/9 & 11		
9	10/16 & 18		
10	10/23 & 25		
11	10/30 & 11/1		Mid-term Examination (subject to revision)
12	11/6 & 8	IV. Economics of the Family	
13	11/13 & 15		
14	11/20 & 22		
15	11/27 & 29		
	12/2	8:30 am Mini-Seminar, Miller Room, Saunders 515	
16	12/4 & 6	V. Special Topics	
17	12/11	Final Exam 11:30 am	

**Economics 672**  
**Economics of Population**  
**Reading List (subject to revision)**

Reading list is subject to revision. Required readings are indicated by \* or ♣ (may be presented by a student).

**I. Overview**

Background reading: \*The Future of Population in Asia (East-West Center 2002) (Can be picked up at the Economics Department office.)

**II. Demographic transition and demographic fundamentals**

The objective of this section is to provide an historical overview of broad demographic change and to learn some of the standard tools and methods used to study population.

**A. Mortality (two lectures)**

1. Measurement: \*(Palmore and Gardner 1994: 9-18, 30-61)

2. Determinants:

Mortality Determinants: \*Cutler et al. (2006); \*Fogel (1997); \*Almond (2006)

How long will we live: (Lee 2001; Olshansky, Carnes et al. 2001; Oeppen and Vaupel 2002)

Evolution of aging: (Lee 2003b; Robson and Kaplan 2003)

**B. Fertility (one lecture; more later)**

1. Measurement: \*(Palmore and Gardner 1994: 30-79, 91-108)

2. Determinants:

Framework: (Montgomery 1987)

Supply of children: (Bongaarts and Menken 1983)

Demand for children: (Lee and Bulatao 1983; Schultz 1997)

Value of children: (Mueller 1976)

Child mortality: (Ben-Porath 1976; Say 1991)

Population policy: (Molyneaux and Gertler 2000; Tsui 2001)

**C. Immigration (one lecture; fiscal impacts later)**

Overview: \*Martin and Widgren (2002), \*Martin and Midgley (2003).

Labor market: Borjas (2003), Card (2005)

**D. Age Structure, Population Projections, and Steady-state**

An illustration of the cohort component method and the Leslie matrix:

<http://www.montana.edu/~wwwbi/staff/creel/bio480/leslie.html>

A simple program for projecting a closed population:

<http://data.princeton.edu/eco572/project.html>

Population projections, methods: (Lee 1998; U.S. National Research Council 2000) The NRC book is available for free in an on-line version:

[http://books.nap.edu/html/beyond\\_six\\_billion/](http://books.nap.edu/html/beyond_six_billion/)

Population projections, data: (United Nations 2000) Summary information and description available online at <http://unpopulation.org>

### **Additional Reading and Information Sources:**

Mathematics of population: (Keyfitz 1968)

Demographic methods: (Shryock, Siegel et al. 1976)

Mortality data: The National Center for Health Statistics is responsible for collecting data on vital statistics (births, deaths, divorces, marriages) in the United States. Their website provides detailed data on the US case and publications that explain methodology.

<http://www.cdc.gov/nchs/>. Life tables for a many countries can be found at

<http://www.lifetable.de/>. Historical data for many OECD countries:

<http://www.mortality.org/>.

Recent UN report on marriage and fertility in low-fertility countries: (United Nations Population Division 2003) can be downloaded from the Population Division web site

<http://unpopulation.org>

### **Special Lecture: A Digression on Lifecycle Planning**

This lecture uses the tools of demography and population to discuss lifecycle planning for individuals. We will use estimates of consumption and earning age profiles to construct estimates of saving and wealth age profiles.

## **III. Population and Macroeconomics**

### **A. Historical Perspectives on Population and Development: Population Size and Growth, Resource Constraints, and Induced Innovation**

1. The Malthusian Perspective: \*Lee (1973).

2. Induced innovation: Hayami and Ruttan (1987); \*Hayami (2001); Boserup (1965; 1981).

3. The Neo-classical perspective: Solow (1956); Mankiw, Romer, and Weil (1992); ? Hansen and Prescott (2002), Galor and Moav (2006).

### **B. Contemporary Perspectives on Population and the Macroeconomy**

1. Fundamentals (two lectures): Introducing age/generations into economics

\*Samuelson (1958); Diamond (1965); Willis (1988); Lee (1994; 2000 ).

\*(Lee 2003a).

2. Demographic Dividends: ? Bloom and Williamson (1998); Kelley and Schmidt (2001); Mason and Lee (2001); \*Cutler et al. (1990).

3. The Second Dividend: \*Mason (1987); Mason (1988); Modigliani (1954); Tobin (1967); Lee, Mason, and Miller (2000; 2003).
4. Empirical Studies of Saving: ?Kelley and Schmidt (1996); Williamson and Higgins (2001); ? Deaton and Paxson (2000); Kinugasa and Mason (2006).
5. Financial Markets, Housing Markets, Asset Prices: Abel (2003); \*Bosworth et al. (2004); Poterba (2001; 2004) on financial markets. Mankiw and Weil (1989) on housing.
6. International or Cross-border effects: Attanasio et al. (2006); \*Borsch-Supan et al. (2006); Bryant (2004).
7. Fiscal effects of population aging and immigration; public policy (4-5 lectures)
  - a. Overview: \*Greenspan (2004), \*Heller (2003), Kotlikoff (2001).
  - b. Simulation models of aging: Kotlikoff, Smetters et al. (2001).
  - c. Generational Accounting: \*Kotlikoff (2001), Auerbach, Gokhale, and Kotlikoff (1991), Auerbach, Kotlikoff, and Leibfritz (1999).
  - d. Aging and public policy: \*Lindbeck and Persson (2003); Kotlikoff, Smetters et al. (2001); Gruber and Wise (1999).
  - e. Fiscal Impacts of Immigration: \*Smith and Edmonston (1997) Chapter 7.

#### **IV. Economics of the family**

This section of the course will rely heavily on a recently published textbook (Ermisch 2003) to provide a theoretical foundation for research on the family. Supplemental readings will be assigned to illustrate applied research on the economics of the family and alternative theoretical approaches. Two useful publications that address many aspects of the economics of the family are Becker (1991) and Rosenzweig and Stark (1997).

##### **A. Intra-Household Allocation \*Ermisch (2003), Chapter 2.**

##### **B. Altruism in the Family \*Ermisch (2003), Chapter 3.**

##### **C. Home Production and Investment \*Ermisch (2003), Chapter 4.**

The pill and female labor force participation: ♣ Goldin and Katz (2002)

##### **D. Investment in and Financial Transfers to Children \*Ermisch (2003), Chapter 5, sections 5.1-5.3 only.**

Estimating the cost of children: Deaton (1997: 241-68) Lazear and Michael (1988)

Income, gender, and child investment: ♣ Duflo (2003)

##### **E. Economics of Fertility \*Ermisch (2003), Chapter 6.**

Abortion and crime rates in the US: ♣ Donahue and Levitt (2001)

The US baby boom: Butz and Ward (1979)

Research on fertility in developed countries: Hotz et al. (1997)

Research on demand for children in developing countries: Schultz (1997: sections 1, 2, 5, and 6) Rosenzweig (1977)

## **F. Economics of Marriage \*Ermisch (2003), Chapter 7.**

Marriage: Manser and Brown (1980)

Recent analysis of dowry payments in India Anderson (2003)

Divorce: Weiss and Willis (1985) Becker et al. (1977)

## **H. Non-Altruistic Family Transfers \*Ermisch (2003), Chapter 9.**

Additional theoretical and empirical research on IG transfers:

Becker (1974; 1991); Becker and Tomes (1976); § Becker and Murphy (1988); Barro (1974); Altonji et al. (2000); Cox (1987); Frankenberg et al. (2002); Kotlikoff and Spivak (1981); § Lillard and Willis (1997); McGarry and Schoeni (1997).

## **I. Household Formation \*Ermisch (2003) Chapter 10.**

Recent broad overview: Palloni (2001)

Analysis of US historical patterns: Costa (1998, Chapter 6)

Decision-making by young men: McElroy (1985)

Valuable contribution that provides a somewhat different and broader theoretical perspective: Ben-Porath (1980) Pollak (1985)

## **V. Special Topics**

### **REFERENCES**

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- Borsch-Supan, A., A. Ludwig, et al. (2006). "Aging, Pension Reform, and Capital Flows: A Multi-Country Simulation Model." NBER Working Paper 7(25).
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- Bryant, R. C. (2004). Cross-Border Macroeconomic Implications of Demographic Change. Symposium on Global Demographic Change: Economic Impacts and Policy Challenges, Jackson Hole, Wyoming.
- Butz, W. P. and M. P. Ward (1979). "The Emergence of Countercyclical U.S. Fertility." American Economic Review: 318-28.
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Oster paper; Ebenstein comment. Presented by students.

Policy: The value of life; tradeable procreation rights; other  
(Ashenfelter 2006) How about China? Missing daughters?

Age and Productivity: (Jones 2005)