

Population and Environmental Economics

Course Description

The course will have a focus on population economics. We will examine the economic determinants of population change and demographic behavior including household formation, child bearing and mortality and key forms of human capital investment including schooling and migration. We will apply analytical tools of economics to investigate various economic and social consequences of population change and environmental changes.

The course will emphasize a microeconomic approach, however, for some topics we may draw on tools from macroeconomics.

Required Texts and Related Readings

There is no required textbook for the class. Reading material will be placed on the course web page.

Exams, Assignments, and Grading

Grades for undergraduate students will be based on 100 points, distributed as: 15% for four short writing assignments and 10% for one writing research proposal assignment (described on Page 6), 20% for an in-class midterm, and 50% for a 120 minute final. The midterm will be multi-choice questions, while the final will also have calculation and short essay questions. In addition, there will be an in-class presentation (details on Page 7), worth 5 percent for completion. Graduate students will take the exams and write one research proposal by the end of the semester.

Contact Information

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Office Hours

Office: Room 425, School of Economics
Friday 3:30 pm to 5 pm and by appointment.

Exam dates:

Midterm Exam: Tuesday June 2, 2015 (in class)

Final Exam: TBD

Cheating and Plagiarism

Cheating and plagiarism will not be tolerated in any form. Any violation of the academic code of honor will result in a punishment proportional to the crime, as determined by the instructor and student or through the Honesty Committee process.

Reading List

Topic 1: Introduction and World Population Growth

- Cohen, J. (1995). *How Many People Can the Earth Support?*, pp. 25–75. Norton Publishing Company.
- Council, N. R. (2001). *Beyond Six Billion*, Chapter 1, pp. 25–50. National Research Council Press.
- Kremer, M. (1993). Population growth and technological change one million b.c. to 1990. *The Quarterly Journal of Economics* 108(3), 681–716.
- Livi-Bacci, M. (2007). *A Concise History of the World Population*, (4th ed.), pp. 1–69. Blackwell Publishers.

Topic 2: Theories of the Demographic Transition

- Coale, A. (1973). The demographic transition reconsidered. pp. 53–71. Liège: IUSSP.
- Davis, K. (1963). A theory of change and response in modern demographic history. *Population Index* 29(4), 345–366.
- Guinnane, T. W. (2011). The historical fertility transition: A guide for economists. *Journal of Economic Literature* 49(3), 589–614.
- Kirk, D. (1996). Demographic transition theory. *Population Studies* 50(3), 361–387.
- Lee, R. D. (2003, Fall). The demographic transition: Three centuries of fundamental change. *Journal of Economic Perspectives* 17(4), 167–190.

Topic 3: Population Aging and Consequences of Population Decline

- Bongaarts, J. (2004, March). Population aging and the rising cost of public pensions. *Population and Development Review* 30(1), 1–23.
- Demeny, P. (2003, March). Population policy delimitas in europe at the dawn of the twenty-first century. *Population and Development Review* 29(1), 1–28.
- Demeny, P. (2004, Sept). Population futures for the next three hundred years: Soft landing or surprises to come? *Population and Development Review* 30(3), 507–517.
- Fogel, R. W. (2004). Changes in the process of aging during the twentieth century: Findings and procedurs of the early indicators project. *Population and Development Review* 30(Supplement: Aging, Health, and Public Policy), 19–47.
- Teitelbaum, M. S. and J. M. WInter (1985). *The Fear of Population Decline*. Academic Press.
- Weil, D. (2006, March). Population aging. Technical Report 12147, NBER.
- Wise, D. A. (2004). Social security provisions and the labor force participation of older workers. *Population and Development Review* 30(Supplement: Aging, Health, and Public Policy), 176–205.

Topic 4: Malthus and the Population Debate

- Boserup, E. (1981). *Population and Technological Change*. University of Chicago Press.
- Kaplan, R. (2008). The return of thomas malthus.
- Malthus, T. R. (1971[1826]). *An Essay on the Principle of Population or a View of Its Past and Present Effect on Human Happiness*, pp. 1–13. New York: Harcourt.
- Nations, U. (1973). *Population Theory*, Chapter Sections A-E, pp. 33–51. Population Division, Department of Social Affairs, United Nations.
- Schultz, T. P. (1981). *Economics of Population*, pp. 9–33. Addison Wesley.
- Van de Walle, E. (1983). *Malthus Today*, pp. 233–245. Academic Press.

Topic 5: Population and the Environment

- Arrow, K., P. Dasgupta, L. Goulder, G. Daily, P. Ehrlich, G. Heal, S. Levin, K.-G. Maler, S. Schneider, D. Starrett, and B. Walker (2004, Summer). Are we consuming too much. *Journal of Economic Perspectives* 18(3), 147–172.
- Hardin, G. (1968). The tragedy of the commons. *Science* 162(3859), 1243–1248.
- Mann, C. (1993). How many is too many? *The Atlantic Monthly* 271(2), 47–67.
- Portney, P. R. (2000, Winter). Environmental problems and policy: 2000–2050. *The Journal of Economic Perspectives* 14(1), 196–206.
- Ruttan, V. W. (2002, March). Can economic growth be sustained? a post-malthusian perspective. *Population and Development Review* 28(1), 1–12.

Topic 6: Economic Theories of Fertility

- Bailey, M. (2006, February). More power to the pill: The impact of contraceptive freedom on women's life cycle labor supply. *Quarterly Journal of Economics*, 289–320.
- Becker, G. S. (1960). An economic framework for fertility analysis. In A. Coale and T. Hoover (Eds.), *Demographic and Economic Change in Developed Countries*, pp. 209–231. Princeton University Press.
- Carr, D. (2000). Is education the best contraceptive? Population Reference Bureau.
- Cleland, J. (2001). The effects of improved survival on fertility: A reassessment. *Population and Development Review* 27, 60–92.
- Hakim, C. (2003, Sept). A new approach to explaining fertility patterns: Preference theory. *Population and Development Review* 29(3), 349–374.
- Hotz, V. J., J. A. Klerman, and R. Willis (1997). The economics of fertility in developed countries. In O. Stark and M. Rozenzweig (Eds.), *Handbook of Population and Family Economics*, Volume 1, Chapter 7. North Holland.

- Jeon, Y. and M. P. Shields (2005). The easterlin hypothesis in the recent experience of higher-income oecd countries: A panel-data approach. *Journal of Population Economics* 18(1), 1–13.
- Kohler, H.-P., F. C. Billari, and J. A. Ortega (2002, December). The emergence of lowest–low fertility in europe during the 1990s. *Population and Development Review* 28(4), 641–680.
- Macunovich, D. J. (1997). Fertility and the easterlin hypothesis: An assessment of the literature. *Journal of Population Economics* 11, 53–111.
- Macunovich, D. J. (2000, June). Relative cohort size: Source of a unifying theory of global fertility transition? *Population and Development Review* 26(2), 235–261.
- Molyneaux, J. and P. Gertler (2000). The impact of targeted family planning programs in indonesia. *Population and Development Review* 26(Supplement), 61–85.
- Morgan, S. P. (2003, November). Is low fertility a twenty–first–century demographic crisis? *Demography* 40(4), 589–603.
- Schultz, T. P. (1997). The demand for children in low income countries. In M. R. Rosenzweig and O. Stark (Eds.), *Handbook of Population and Family Economics*, Volume 1, Chapter 8. North Holland.
- Tsui, A. O. (2001). Population policies options for the developing world: The record. *Population and Development Review* 27(Supplement), 184–204.

Topic 7 & 8: Human Capital: Schooling and Migration

- Council, N. R. (1986). *Population Growth and Economic Development*. National Research Council Press.
- Ehrenberg, R. G. and R. S. Smith (2000a). *Modern Labor Economics: Theory and Public Policy* (Seventh ed.). Addison Wesley.
- Ehrenberg, R. G. and R. S. Smith (2000b). *Modern Labor Economics: Theory and Public Policy* (Seventh ed.). Addison Wesley.
- Hanushek, E. A. and L. WoBmann (2007, February). The role of education quality in economic growth. World Bank Policy Research Working Paper 4122, World Bank.
- Lam, D. and S. Duryea (1999, Winter). Effects of schooling on fertility, labor supply and investments in children, with evidence from brazil. *Journal of Human Resources* 34(1), 160–192.
- Lucas, R. E. B. (1997). Internal migration in developing countries. In M. R. Rosenzweig and O. Stark (Eds.), *Handbook of Population and Family Economics*, Volume 1, Chapter 13. North Holland.

Topic 9: Health, Morbidity, and Mortality

- Adler, N. (1994). Socioeconomic status and health: The challenge of the gradient. *American Psychologist* 49(1), 15–24.
- Cutler, D. M., A. Deaton, and A. Lleras-Muney (2006). The determinants of mortality. *Journal of Economic Perspectives* 20(3), 97–120.

- Fogel, R. W. (1994, June). Economic growth, population theory, and physiology: The bearing of long-term processes on making of health policy. *American Economic Review* 84(3), 369–395.
- McKeown, T. (1979). *The Role of Medicine: Dream, Mirage or Nemesis?* Basil Blackwell.
- Preston, S. H. (1980). Causes and consequences of mortality declines in less developed countries during the twentieth century. In R. Easterlin (Ed.), *Population and Economic Change*. University of Chicago Press.
- Preston, S. H. and M. R. Haines (1991). *Fatal Years: Child Mortality in Late Nineteen Century America*. Princeton University Press.
- Preston, S. H. and P. Taubman (1994). Socioeconomic differences in adult mortality and health status. In L. Martin and S. H. Preston (Eds.), *Demography of Aging*, pp. 279–318. National Academy Press.
- Sen, A. (1993). The economics of life and death. *Scientific American* 268(5), 40–47.
- Smith, J. P. (2004). Unraveling the ses: Health connection. *Population and Development Review* 30(Supplement: Aging, Health and Public Policy), 108–132.
- Staff, W. B. (1993). *1993 World Development Report*. World Bank.

Anticipated Schedule

Table 1: *Anticipated Schedule*

Week	Topics
8	History of Population
9	Theories of the Demographic Transition
10	Population Aging and Population Decline
11	Population and the Environment
12	Economic theories of fertility
13	Human Capital
14	Midterm
15	Health, Morbidity and Mortality
16	Health, Morbidity and Mortality
17	Migration/Immigration

Writing Assignments

This is a writing-intensive course. During the semester you will submit four one-page summary papers and one longer research proposal paper (each 3 to 5 double-spaced pages). The writing assignments are designed to help you understand and analyze the course material. In the process, my hope is that you will improve your writing skills.

The first secret to good writing is good editing, which means **revising**. I do a brain dump on the first draft, restructure the document to form a coherent presentation/argument in the second draft and polish stylistic elements in the third draft. This means that I am the only reader of the first draft. Friends (A friend is someone who corrects your errors in private.) may read the second draft while remaining family members and the general public may read the third (and subsequent) drafts.

In this course you will be given practice at revising and editing your writing. Indeed, you are expected to write thoughtfully and revise your work to make it concise and clear.

Due Date Policy: Short writing assignments are due at the start of class on the date assigned. Late assignments are not accepted for credit. Longer writing assignments involving the WF are due by 5:00 on the date assigned. WF papers submitted before a negotiated deadline are counted as "on time." Otherwise, I will only accept posthumously submitted late WF papers. (Working to the deadline is part of the exercise. (It's axiomatic that a better product can be produced with more time.) Moreover, late papers will upset the WF's work schedule.

References: You must cite references for facts and ideas that are not your own. Anything less is plagiarism. (For example, CNN and *Time* suspended Fareed Zakaria last month after the media documented his plagiarism. He kept his job with Time Inc. because an internal review board ruled his plagiarism accidental.) You may cite class lectures. Anything else should follow standard bibliographic format, such as the style used in the Reading List.

1. *one-page summary.* An important goal of the course is to teach to read economic literature critically. To help you take an active approach to these readings, you will write brief summaries of four readings listed below. The one-page summaries are due in class on the day the reading is assigned.

The summary should contain a concise summary of the research or concept described in the reading, followed by your critique. (A concise summary can be four or five sentences. Stay focused on major ideas; avoid copying the abstract.) Papers should be typewritten, one-page, double-spaced with one-inch margins.

The summary should answer:

1. What is the author(s) primary idea?
2. What methods and data were used to support or investigate the idea?
3. What results were obtained?

4. How did the author(s) interpret the results?

The critique may consider one or two of the follow questions (or others as appropriate)

1. Did the empirical evidence adequately investigate the conjecture?
2. Was the author(s) interpretation of the results appropriate?
3. Did the paper consider and evaluate alternative explanations for the results?
4. Were all relevant results or sources considered?

2. *An three- to five-page paper .*

Research Proposal Objective:

1. To develop a narrative statement of your preliminary research topical area;
2. To develop a research question and/or begin narrowing down a list of research questions;
3. To write about and describe any difficulties you are encountering in the process of converting your research topic to a research question

Research Proposal Steps:

1. Write a one page summary of current literature review.
2. Write out your research question(s) and provide a narrative of the pathway that has led you to it.
3. Use economic theory to develop a framework to evaluate your research issues.
4. Present empirical evidence then.
5. Attach copies of your research sources to your completed paper.
 - List your sources at the end of the paper using a standard bibliographic reference style. The paper should be about three to five, typewritten doubled-spaces pages (with one-inch margins).
 - *Due date:* A polished draft of this paper is due on the last course.

In-class Presentation

Each student is required to give two small presentations for 25-30 minutes during the third section of every lecture to discuss a paper.

Students could choose papers from the reading list or any other paper that interests you.

Presentation Schedule: Starting from Week 9, No Presentation on Week 14 (Midterm), Last Presentation on Week 17.