Introduction to Demography
Pardee RAND Graduate School
2016 Spring Quarter

Professor Ernesto F. L. Amaral

Instructor information
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Course information
Meeting place: Wolf Conference Room (m1402)
Meeting time: Tuesday 1–4pm
Website: www.ernestoamaral.com/rand-dem16.html

Course description
This course fits into the Social and Behavioral Sciences track in the Pardee RAND Graduate School program. The main objective is to introduce concepts and methods in demography, related to fertility, mortality, and migration, with an emphasis on the overall policy implications of these components. Discussions about demographic issues will be linked to the methods needed to analyze these topics. First, I will cover topics related to population growth and decline, age-sex composition, data sources, and the association between demographic transition and economic outcomes. Second, I will present general concepts on periods and cohorts, Lexis diagram, mortality measures, epidemiological transition, causes of mortality decline, life tables, period measures, and behavioral and policy influences on health. The third focus will address trends and differentials in fertility, proximate determinants of fertility, period measures, and tempo-quantum effects. The class on migration will evaluate trends and differentials in population flows, estimation of migration rates, urbanization, and effects on receiving and sending areas. The final class will cover demographic projections, age structure transition, changes in household composition, labor force participation, and population policies.

I will present lectures about the main readings in each class, which are selected chapters from textbooks listed below. Each student will be assigned to present one policy reading at the end of one of the classes. Supporting articles and materials will be available on the course website.

Student learning outcomes
Specifically, this course will focus on the following topics:
1. Main concepts and methods in demography, related to fertility, mortality, and migration.
2. Link between demographic changes, economic outcomes, and public policy issues.
3. Access to secondary data to evaluate general demographic trends throughout the world.

Prerequisites
Students should have taken a basic statistics class that would help them understand the demographic concepts and methods presented in this course. This prerequisite class could be a standard descriptive statistics course, such as Pardee RAND's Empirical Analysis I: Probability and Statistics. Students should read the assigned texts before each class, in order for them to participate in the discussions. While not required, students will benefit from having some experience with statistical software. This familiarity will help students prepare the class assignment.

Evaluation criteria
Weekly readings (30%). Students are required to answer one question prior to each of the five classes. These questions are going to be related to the readings assigned for each week. Answers should be no more than 350 words and students must email their answers to the professor by the Monday before each class. The questions will be posted on the course website.

Class presentation (20%). At the end of each class, previously assigned policy readings will be presented by students and discussed by the whole group. Each student will make one presentation throughout the length of the course.

Final assignment (50%). Students will work on one assignment, which will involve answering questions related to demographic concepts and the application of methods. The questions will cover issues discussed in class, as well as the estimation of mortality, fertility, and migration indicators. The technical part of this assignment will involve analyzing publicly available demographic data by utilizing aggregated and organized materials from diverse institutions (such as the United Nations and U.S. Census Bureau), which does not require the use of specific statistical software. Students will be guided to connect these estimations to public policy issues and implications. Students will be encouraged to work on this assignment from the beginning of the course, in order for me to provide them with feedback on appropriate references and data sources for each topic.

Main textbooks
Weeks JR. 2015. Population: An Introduction to Concepts and Issues. 12th edition. Boston: Cengage Learning.

Wachter KW. 2014. Essential Demographic Methods. Cambridge: Harvard University Press.

Reading list

March 29 – Introduction

– Main readings

Weeks, chapter 1 (pp. 1–24), Introduction to Demography

Weeks, chapter 2 (pp. 25–57), Global Population Trends

Wachter, chapter 1 (pp. 5–29), Exponential Growth

– Policy readings

Ehrlich PR, Ehrlich AH, Daily GC. 1993. "Food security, population and environment." Population and Development Review, 19(1): 1–32.

Kelley AC. 2003. "The population debate in historical perspective: Revisionism revised." In: Population Matters (N Birdsall, AC Kelley, SW Sinding, eds.). Oxford: Oxford University Press, pp. 24–54 (chapter 2).

Lam D. 2011. "How the world survived the population bomb: Lessons from 50 years of extraordinary demographic history." Demography, 48(4): 1231–1262.

April 5 – Periods, Cohorts, Mortality

– Main readings (Periods and cohorts)

Wachter, chapter 2 (pp. 30–47), Periods and Cohorts

Fleurence RL, Hollenbeak CS. 2007. "Rates and probabilities in economic modelling: Transformation, translation and appropriate application." Pharmacoeconomics, 25(1): 3–6.

– Main readings (Mortality)

Weeks, chapter 5 (pp. 139–188), The Health and Mortality Transition

Wachter, chapter 7 (pp. 153–173), Period Mortality

Kintner HJ. 2003. "The life table." In: The Methods and Materials of Demography (DA Swanson, JS Siegel, eds.). San Diego: Elsevier Academic Press, pp. 301–340 (chapter 13).

– Policy readings (Mortality)

Horiuchi S. 1999. "Epidemiological transitions in developed countries: Past, present and future." Health and Mortality: Issues of Global Concern. New York: United Nations, 54–71.

Soares RR. 2007. "On the determinants of mortality reductions in the developing world." Population and Development Review, 33(2): 247–287.

April 12 – Fertility

– Main readings

Weeks, chapter 6 (pp. 189–250), The Fertility Transition

Wachter, chapter 6 (pp. 125–152), Period Fertility

– Policy readings

Hodgson D, Watkins SC. 1997. "Feminists and neo-Malthusians: Past and present alliances." Population and Development Review, 23(3): 469–523.

Hodgson D. 2009. "Abortion, family planning, and population poverty: Prospects for the common-ground approach." Population and Development Review, 35(3): 479–518.

Campbell M, Bedford K. 2009. "The theoretical and political framing of the population factor in development." Philosophical Transactions of The Royal Society, 364(1532): 3101–3113.

April 19 – Migration

– Main readings

Weeks, chapter 7 (pp. 251–297), The Migration Transition

Amaral EFL. 2008. "Improvements of techniques to estimate migration rates: An application with Brazilian censuses data." Population Review, 47(2): 1–24.

– Policy readings

Massey DS, Espinosa KE. 1997. "What's driving Mexico-US migration? A theoretical, empirical, and policy analysis." American Journal of Sociology, 102(4): 939–999.

Massey DS, Durand J, Pren KA. 2014. "Explaining undocumented migration to the U.S." International Migration Review, 48(4): 1028–1061.

Massey DS, Durand J, Pren KA. 2015. "Border enforcement and return migration by documented and undocumented Mexicans." Journal of Ethnic and Migration Studies, 41(7): 1015–1040.

Massey DS. 2015. "A missing element in migration theories." Migration Letters, 12(3): 279–299.

Massey DS, Durand J, Pren KA. 2016. "Why border enforcement backfired?" American Journal of Sociology, 121(5): 1557–1600.

April 26 – Age transition and projection

– Main readings

Weeks, chapter 8 (pp. 298–342), The Age Transition

– Policy readings

RAND Health. 2015. "Current and future demographic of the Veteran population." In: Current and Projected Characteristics and Unique Health Care Needs of the Patient Population Served by the Department of Veterans Affairs. Santa Monica: RAND Corporation. http://www.rand.org/t/rr1165z1. Chapter 3 (pp. 31–56), Appendix A (pp. 171–211).

Extra readings (not required for this course)

Introduction – Extra

Lee R. 2003. "The demographic transition: Three centuries of fundamental change." Journal of Economic Perspectives, 17(4): 167–190.

McFalls Jr. JA. 2007. Population: A Lively Introduction. Washington, DC: Population Reference Bureau.

Weeks, chapter 3 (pp. 58–99), Demographic Perspectives

Weeks, chapter 4 (pp. 100–138), Demographic Data

Mortality – Extra

Caldwell JC. 2001. "Population health in transition." Bulleting of the World Health Organization, 79(2): 159–170.

Cutler D, Deaton A, Lleras-Muney A. 2006. "The determinants of mortality." Journal of Economic Perspectives, 20(3): 97–120.

Omran AR. 2005. "The epidemiologic transition: A theory of the epidemiology of population change." The Milbank Quarterly, 83(4): 731–757.

Wachter, chapter 3 (pp. 48–78), Cohort Mortality

Wilmoth JR. 2000. "Demography of longevity: Past, present, and future trends." Experimental Gerontology, 35(9): 1111–1129.

Wilmoth JR. 2007. "Human longevity in historical perspective." In: Physiological Basis of Aging and Geriatrics. (Paola S Timiras, ed.). New York: Informa Healthcare, 11–22.

Fertility – Extra

Potter JE. 1999. "The persistence of outmoded contraceptive regimes: The cases of Mexico and Brazil." Population and Development Review, 25(4): 703–739.

Ruggles S. 2015. "Patriarchy, power, and pay: The transformation of American families, 1800–2015." Demography, 52(6): 1797–1823.

Thornton A, Binstock G, Yount KM, Abbasi-Shavazi MJ, Ghimire D, Xie Y. 2012. "International fertility change: New data and insights from the developmental idealism framework." Demography, 49(2): 677–698

Wachter, chapter 4 (pp. 79–97), Cohort Fertility

– Proximate determinants of fertility

Davis K, Blake J. 1956. "Social structure and fertility: An analytic framework." Economic Development and Cultural Change, 4(3): 211–235.

Bongaarts J. 1978. "A framework for analyzing the proximate determinants of fertility." Population and Development Review, 4(1): 105–132.

Bongaarts J. 1982. "The fertility-inhibiting effects of the intermediate fertility variables." Studies in Family Planning, 13(6/7): 179–189.

Bongaarts J, Potter RG. 1983. "Fertility, biology, and behavior: An analysis of the proximate determinants." New York: Academic Press. Chapters 1, 2, 3, and 4 (pp. 1–102).

Bongaarts J, Watkins SC. 1996. "Social interactions and contemporary fertility transitions." Population and Development Review, 22(4): 639–682.

Bongaarts J. 2003. "Completing the fertility transition in the developing world: The role of educational differences and fertility preferences." Population Studies, 57(3): 321–336.

Brown JC, Guinnane TW. 2002. "Fertility transition in a rural, Catholic population: Bavaria, 1880–1910." Population Studies, 56(1): 35–50.

Cleland J, Wilson C. 1987. "Demand theories of the fertility transition: An iconoclastic view." Population Studies, 41(1): 5–30.

Kohler HP, Billari F, Ortega JA. 2002. "The emergence of lowest-low fertility in Europe during the 1990s." Population and Development Review, 28(4): 641–680.

Mason, KO. 1997. "Explaining fertility transitions." Demography, 34(4): 443–454.

– Quantum and tempo of fertility
Bongaarts J, Feeney G. 1998. "On the quantum and tempo of fertility." Population and Development Review, 24(2): 271–291.

Bongaarts J, Feeney G. 2006. "The quantum and tempo of life-cycle events." Vienna Yearbook of Population Research: 115–151.

Bongaarts J, Feeney G. 2010. "When is a tempo effect a tempo distortion?" GENUS, 66(2): 1–15.

Bongaarts J, Sobotka T. 2012. "A demographic explanation for the recent rise in European fertility." Population and Development Review, 38(1): 83–120.

Feeney G, Yu J. 1987. "Period parity progression measures of fertility in China." Population Studies, 41(1): 77–102.

Migration – Extra

Salzmann T, Edmonston B, Raymer J (eds.). 2010. Demographic Aspects of Migration. Germany: VS Research.

Vargas-Silva C (ed.). 2012. Handbook of Research Methods in Migration. Northampton: Edward Elgar.

Wachter, chapter 11 (pp. 250–270), Migration and Location

Xu-Doeve WLJ. 2008. Introduction to the Measurement of Internal and International Migration. Netherlands: ANRC Publishing.

– Theories of migration
Alba R, Nee V. 1997. "Rethinking assimilation theory for a new era of immigration." International Migration Review, 31(4): 826–874.

Massey DS, Arango J, Hugo G, Kouaouci A, Pellegrino A, Taylor JE. 1994. "An evaluation of international migration theory: The North American case." Population and Development Review, 20(4): 699–751.

Portes A. 1997. "Immigration theory for a new century: Some problems and opportunities." International Migration Review, 31(4): 799–825.

Zhou M. 1997. "Segmented assimilation: Issues, controversies, and recent research on the new second generation." International Migration Review, 31(4): 975–1008.

– Policies

Côte RR, Jensen JE, Roth LM, Way SM. 2015. "The effects of gendered social capital on U.S. migration: A comparison of four Latin American countries." Demography, 52: 989–1015.

Massey DS. 1999. "International migration at the dawn of the twenty-first century: The role of the state." Population and Development Review, 25(2): 303–322.

Massey DS, Gentsch K. 2014. "Undocumented migration to the United States and the wages of Mexican immigrants." International Migration Review, 48(2): 482–499.

– Modeling migration schedules

Raymer J, Bonaguidi A, Valentini A. 2006. "Describing and projecting the age and spatial structures of interregional migration in Italy." Population, Space and Place, 12(5): 371–388.

Raymer J, Rogers A. 2007. "Using age and spatial flow structures in the indirect estimation of migration streams." Demography, 44(2): 199–223.

Rogers A, Castro LJ. 1981. Model Migration Schedules. Laxenburg: International Institute for Applied Systems Analysis.

Rogers A, Jordan L. 2004. "Estimating migration flows from birthplace-specific population stocks of infants." Geographical Analysis, 36(1): 38–53.

Rogers A, Willekens FJ, Little JS, Raymer J. 2002. "Describing migration spatial structure." Papers in Regional Science, 81(1): 29–48.

Rogers A, Willekens FJ, Raymer J. 2001. "Modeling interregional migration flows: Continuity and change." Mathematical Population Studies, 9(3/4): 231–263.

Rogers A, Willekens FJ, Raymer J. 2003. "Imposing age and spatial structures on inadequate migration-flow datasets." The Professional Geographer, 55(1) : 56–69.

Projection – Extra

Weeks, chapter 9 (pp. 343–383), The Urban Transition

Weeks, chapter 10 (pp. 384–431), The Family and Household Transition

Weeks, chapter 11 (pp. 432–480), Population and Sustainability

Weeks, chapter 12 (pp. 481–504), What Lies Ahead?

Wachter, chapter 5 (pp. 98–124), Population Projection