Shonel Sen

Dual-Ph.D. Candidate in Applied Economics and Demography

The Pennsylvania State University

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PERSONAL INFORMATION:

Date of birth: 30 November 1984 Citizenship: Indian Languages: English, Bengali, Hindi.

EDUCATION:

08/2009 – Present:	Dual-Ph.D. Candidate in Agricultural, Environmental and Regional Economics & Demography, Department of Agricultural Economics and Rural Sociology; The Pennsylvania State University, University Park. [GPA of 3.84 on 4] Expected time of graduation: Summer 2013
08/2008 – 07/2009:	Ph.D. Student in Economics (subsequently transferred to PSU), Department of Economics; University of Minnesota, Twin Cities.
06/2006 – 07/2008:	Master of Arts in Economics, Department of Economics; Jadavpur University, Kolkata, India. [Gold Medalist 1st Division with 1st Rank; GPA of 9.45 on 10]
06/2003 – 05/2006:	Bachelor of Arts in Economics, Department of Economics; Jadavpur University, Kolkata, India. [1st Division; GPA of 9.29 on 10]

WORK EXPERIENCE:

Fall 2012:	Teaching Assistant at PSU for Agribusiness Management and Community, Environment & Development, AGBM 338: Agribusiness in the Global Economy & CED 450: International Development, Renewable Resources and the Environment.
Summer 2012:	Research Assistant at Temple University; Supervisor: Prof. Kiranmoy Das, Ph.D.
Spring 2012:	Research Assistant at PSU for AEREC; Supervisor: Professor David G. Abler, Ph.D.
Fall 2011:	Teaching Assistant at PSU for Agribusiness Management and Community, Environment & Development, AGBM 338: Agribusiness in the Global Economy & CED 450: International Development, Renewable Resources and the Environment.
Summer 2011:	Research Assistant at JU for Global Change Program; Supervisor: Prof. Joyashree Roy, Ph.D.
Spring 2011:	Teaching Assistant at PSU for Agribusiness Management, AGBM 102: Economic Food Systems & AGBM 338: Agribusiness in the Global Economy.
Fall 2010:	Research Assistant at PSU for AEREC; Supervisor: Professor David G. Abler, Ph.D.
Summer 2010:	Research Assistant at JU for Global Change Program; Supervisor: Prof. Joyashree Roy, Ph.D.
Summer 2009:	Teaching Assistant at UMN for Economics, ECON 1102: Principles of Macroeconomics.

RESEARCH INTERESTS: **Primary:-** Development Economics; Demography & Population Studies; Public Policy.

Secondary:- Health & Behavioral Economics; Environmental & Natural Resource Economics.

COMPUTER SKILLS: Stata, Matlab, SPSS, ArcGIS, Geoda, UCINET, C++, MS Office.

WORKING PAPERS:

"Economic Incentives to Reduce Above Replacement Fertility: Simulating the Quantity-Quality Tradeoff" - static analysis testing the Quantity – Quality model of fertility for various functional forms, estimating outcomes from different policy experiments and calculating the elasticities of change to see how household decision making with regard to child bearing and educational investments are affected.

"Model of Childbearing with Two-sided Altruism in Developing Countries: A Calibration Exercise" - dynamic OLG model of inter-generational transfers incorporating child labor and lack of old age security which are more prevalent in developing countries; with longitudinal data on intra-household income and allocation I calibrate the system and analyze how fertility decision making is influenced by lack of social safety nets.

"Raising Quality to Reduce Quantity: Testing the Tradeoff with Evidence from India" - empirical analysis with DHS 2005-06 data to estimate how raising quality level (health and education) of children may offset parent's propensity for higher fertility to recompense for future uncertainty, this explores reverse direction of causality unlike earlier studies.

WORK IN PROGRESS:

"Incentives for Healthy Behavior: Experimental Approach to Reduce Obesity" - interdisciplinary project in collaboration with Health Policy & Administration Department at the Pennsylvania State University. Using tools of Behavioral and Experimental economics, we target health issues like obesity among the PSU staff and employees who are at high risk of bad health outcomes. We intend to use instruments like financial rewards, gym memberships and training sessions to encourage physical exercise among participants and will track and record the change in health indicators to assess response behavior.

"Cost of Congestion: A Socioeconomic Study of Street Vending in Kolkata" - project at Global Change Program with report for Kolkata Municipal Corporation and working paper in with Prof. J.Roy, Economics Department, Jadavpur University.

OTHER RESEARCH EXPERIENCE:

Group project on ***"Performance of Small-Scale Garment Industry in West Bengal: A Case Study in The Post Liberalisation Era"*** as B.A. dissertation under the supervision of Prof. A.Dhar, Economics Department, Jadavpur University. The study was based on primary data collected with the objective of analyzing the current conditions of garment manufacturing units to provide a critical analysis of the wage, profit, productivity, employment, costs and market-structure and identify specific trends in these parameters after liberalization of the Indian economy in the 1990's.

Project entitled "***An Analysis of Household Preference Ordering for Environmental Services: Case Study of Kolkata"*** under the supervision of Prof. J.Roy, Economics Department, Jadavpur University for Summer 2007. The study looked into the four main Environmental Problems, namely Water Pollution, Air Pollution, Noise Pollution and Solid Waste within the metropolitan area and determined the Mitigation and Averting Expenditure of the households.

RECENT PROFESSIONAL MEETINGS, CONFERENCES & WORKSHOPS:

"Testing the IPAT: A Cross Country Analysis" poster presented at the Pennsylvania State University for the 18th Annual College of Agricultural Sciences Research Expo, 14 March 2012 and 27th Annual Graduate Exhibition, 25 March 2012.

Participated in 19th Annual Population Research Institute Methodology Workshop "Introduction to Bayesian Statistics" at the Pennsylvania State University, 8 May 2012.

Participated at 48th Annual Conference of the Association for International Agriculture and Rural Development "Priorities for Inclusive Agriculture and Rural Development", 3-6 June 2012.

"More may not be merrier: Ways to encourage smaller family size" presentation at the Population Reference Bureau Washington D.C., 17 Aug 2012.

Participated at 25th PRB Policy Communications Fellowship Summer Workshop at Washington D.C., 6-17 August 2012.

PROFESSIONAL MEMBERSHIPS & AFFILIATIONS:

Agricultural and Applied Economics Association (AAEA)
American Economic Association (AEA)
Population Research Institute (PRI)
Population Association of America (PAA)
Association for International Agriculture and Rural Development (AIARD)

EXTRA-CURRICULAR ACTIVITIES:

Academic Services:- Board member of School Student's Council (1999-2002); Joint Secretary of Interact Club of M.B. Girls Higher Secondary School (2001); Representative at Teachers-Students Committee at Economics Department, JU (2003).

Sporting Accomplishments:- Gold Medal at WBRA State Rowing Championship (2000); Silver Medal at RFI National Rowing Championships (2000).

Journalist for national daily *The Statesman* as Student Coordinator for VOICES (1999-2003) and CAMPUS (2003-2007).

President and founding member of the Penn State Graduate Economics Association (2012-2013).

Organising Committee member for Population Research Institute Summer Methodology Workshop for May 2013.

AWARDS & ACHIEVEMENTS:

Gold Medal from Jadavpur University for 1st position distinction in Master of Arts in Economics, 2008.

S. K. Mitra Memorial Gold Medal for securing highest aggregate marks in Master of Arts in Economics, 2008.

Sandor Fellowship in Environmental Economics 2008-2009 from Economics Department, University of Minnesota.

Graduate Fellowship for 2009-2010 from University Graduate School, The Pennsylvania State University.

2012 Future Leaders Forum Fellowship from the Association for International Agriculture and Rural Development.

Population Reference Bureau (PRB) Policy Communications Fellowship for 2012-2013.

REFERENCES:

Name: Professor David G. Abler
Designation: Professor of Agricultural, Environmental and Regional Economics and Demography, Department of Agricultural Economics and Rural Sociology, The Pennsylvania State University.
Contact: d-abler@psu.edu

Name: Professor Spiro E. Stefanou
Designation: Professor of Agricultural, Environmental and Regional Economics, Department of Agricultural Economics and Rural Sociology, The Pennsylvania State University.
Contact: SpiroS@psu.edu

Name: Professor Edward C. Jaenicke
Designation: Professor of Agricultural, Environmental and Regional Economics, Department of Agricultural Economics and Rural Sociology, The Pennsylvania State University.
Contact: tjaenicke@psu.edu

Name: Professor Joyashree Roy
Designation: Professor of Economics, Department of Economics and Coordinator, Global Change Program, Jadavpur University, India.
Contact: joyashreeju@gmail.com

DISSERTATION ABSTRACTS:

Ph.D. thesis on theoretical extensions and empirical testing of Quantity – Quality model of Fertility with 3 main essays.

Essay 1: "Economic Incentives to Reduce Above Replacement Fertility: Simulating the Quantity-Quality Tradeoff"

The paper applies the Quantity-Quality model to speed up the demographic transition and investigates incentives for curbing high fertility behavior in developing nations to ease the burden of a rapidly growing population. My static analysis contributes to the existing literature by testing the Q-Q model for well-known functional forms, such as the Cobb-Douglas, Leontief and Stone Geary utility functions. Using simulations with data from India, I estimate income and price elasticities for the different forms of household utility to demonstrate their effect on household decision making with regard to child bearing and educational investments. I also run comparative static exercises to analyze the outcome of policy experiments on fertility and schooling and test the hypothesis that policy initiatives may not always yield anticipated results; one of the key findings is that simply subsidizing qualitative improvements in children (reducing cost of education alone without other investments in family planning etc.) may be insufficient to trigger the Q-Q tradeoff that may curtail above replacement TFR. Reduction in parent's out-of-pocket childcare costs to increase quality, in absence of other programs, may prompt greater childbearing as children are now cheaper to raise.

Essay 2: "Model of Childbearing with Two-sided Altruism in Developing Countries: A Calibration Exercise"

Social, economic and institutional characteristics differ greatly between developing countries but we can identify some common factors that may cause high levels of childbearing and rapid population growth. This paper incorporates child labor and old age security into the dynamic Quantity-Quality model of fertility and extends the earlier economic modeling to 3 time periods and 3 generations with bi-directional gifts and bequests. By constructing a structural OLG model with a dynastic utility function I examine how intergenerational altruism affects the individual decision maker's choice of fertility and investment in their children. This study is important for three reasons: first, old age dependence and child-labor are highly prevalent in most developing economy family structures but previous studies do not at look at the simultaneous presence of both factors in fertility choice; second, I calibrate parameters to solve for the household decision variables after tracing consumption, fertility, transfers to elderly, schooling and child labor behavior from 1967 to 2007 and finally I conduct comparative statics exercises to test policy instruments like conditional cash transfer's to boost investment in health and education, midday meal schemes to raise school attendance and fertility reduction subsidies. Reliance on one's offspring for contributing to household income via child labor earnings and expectation of financial support after retiring in the absence of social security are major motivations for greater child bearing; so policy reforms and interventions affecting fertility alone will be ineffective without provision of appropriate social safety nets.

Essay 3: "Raising Quality to Reduce Quantity: Testing the Tradeoff with Evidence from India"

India is the second most populous country in the world and is currently undergoing the demographic transition with the average number of children per woman gradually declining. However the fertility rate is still above replacement level and rapidly growing population is a major challenge to sustainable development. Earlier empirical studies on the Quantity-Quality tradeoff just explore how greater number of children is usually associated with lower levels of quality but the current analysis examines the reverse direction of causality using the nationally representative sample for 2005-06 from the Demographic Health Survey or the National Family Health Survey (NFHS-3). Using desired number of children as an indicator of fertility preference, I use multinomial ordered responses to predict the most effective target variables; these can guide the creation of feasible and effective policy instruments that can be implemented to incentivize smaller family sizes. Preliminary results from Probit analysis of the data suggest that increasing quality level (health and education) of children may in the long run reduce the demand for child quantity as income-earning potential and the probability of survival to adulthood for children increases, this in turn will offset the parent's propensity to have greater number of children to recompense for future uncertainty. In addition, I present evidence that inspite of a decline in infant mortality, increased use of contraception and rise in the average age at marriage; gender bias and son preference still exists and acts as a major barrier to a more rapid decline in fertility.