

## CURRICULUM VITAE

J. Brad Schwartz

### Contact Information

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### Education

Ph.D., Economics, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, 1982.  
Major Area: Public Finance Economics.  
Dissertation Title: "Wealth Neutrality and Public Subsidies to Higher Education"  
Doctoral Fellow, Institute for Child and Family Policy, University of North Carolina at Chapel Hill, 1980-1982.

M.A., Economics, University of Iowa, Iowa City, Iowa, 1978.  
Concentration: Health Economics.

B.A., Economics, University of South Florida, Tampa, Florida, 1972.

### Specialization

Health Economics and Financing in Developing Countries, Economic Analysis of Projects, Costing of Health Care Systems, Statistical Analysis of Household Health Survey Data

### Academic and Professional Experience

1993 – Present. Independent Consultant, Asian Development Bank, The World Bank, and others. Economics and financing of health care services in developing countries. Country experience: Bangladesh, Cambodia, China, Egypt, Ghana, Indonesia, Jamaica, Laos, Malawi, Nepal, Philippines, Sri Lanka, Thailand, Viet Nam, Zimbabwe.

2000 – 2005. Lecturer. Department of Economics, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina. Courses: Public Finance, Intermediate Microeconomics, Principles of Economics.

1984 – 2005. Research Associate, Carolina Population Center, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina.

1987 – 1993. Senior Economist. Center for International Development, Research Triangle Institute, North Carolina.

1984 – 1987. Assistant Professor. Department of Economics, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina. Courses: Public Finance, Intermediate Microeconomic Theory, Labor Economics.

1982 – 1984. Assistant Professor. Department of Economics, University of South Florida, Tampa, Florida. Courses: Public Finance, Microeconomic Theory, Statistics.

### Refereed Journal Articles

Schwartz, J. Brad and Indu Bhushan. 2004. "Improving Equity in Immunization Through a Public-Private Partnership in Cambodia." Bulletin of the World Health Organization, Vol. 82, No. 9, pp. 661-67.

Margolis, Lewis H. and J. Brad Schwartz. 2000. "The Relationship Between Maternal Postpartum Discharge Timing and Breastfeeding." Journal of Human Lactation, Vol. 16, No. 2, pp. 121-128.

Schwartz, J. Brad, Barry M. Popkin, Janet Tognetti, and Namvar Zohoori. 1995. "Does WIC Participation Improve Breast-Feeding Practices?" American Journal of Public Health, Vol. 85, No. 5, pp. 729-731.

Popkin, Barry M., David K. Guilkey, J. Brad Schwartz, and Wilhelm Flieger. 1993. "Survival in the Perinatal Period: A Prospective Analysis." Journal of Biosocial Science, Vol. 25, pp. 359-370.

Schwartz, J. Brad and Wilhelm Flieger. 1989. "Contraceptive Prevalence and Continuation: A Longitudinal Study of Traditional and Other Method Users in the Philippines." Journal of Biosocial Science, Supplement 11, pp. 75-93.

Schwartz, J. Brad, John S. Akin, and Barry M. Popkin. 1988. "Price and Income Elasticities of Demand for Modern Health Care: The Case of Infant Delivery in the Philippines." World Bank Economic Review, Vol. 2, No. 1, (January), pp. 49-76.

Akin, John S. and J. Brad Schwartz. 1988. "The Effect of Economic Factors on Contraceptive Choice in Jamaica and Thailand: A Comparison of Mixed Multinomial Logit Results." Economic Development and Cultural Change, Vol. 36, No. 3, (April), pp. 503-527.

Schwartz, J. Brad. 1986. "Wealth Neutrality in Higher Education: The Effect of Student Grants." Economics of Education Review, Vol. 5., No. 2, pp. 107-117.

Schwartz, J. Brad. 1985. "Student Financial Aid and the College Enrollment Decision: The Effects of Public and Private Grants and Interest Subsidies." Economics of Education Review, Vol. 4, No. 2, pp. 129-144.

Haskins, Ron, J. Brad Schwartz, John S. Akin, and Andrew Dobeinstein. 1985. "How Much Child Support Can Absent Fathers Pay?" Policy Studies Journal, Vol. 14, No. 2, (December), pp. 201-222.

Herander, Mark and J. Brad Schwartz. 1984. "An Empirical Test of the Impact of the Threat of U.S. Trade Policy: The Case of Antidumping Duties." Southern Economic Journal, Vol. 51, No. 1, (July), pp. 59-79.

### **Books, Monographs, Other Articles and Chapters in Books**

Schwartz, J. Brad and Indu Bhushan. 2005. *Cambodia: Using Contracting to Reduce Inequity in Primary Health Care Delivery in Reaching the Poor with Effective Health, Nutrition, and Population Services: What Works, What Doesn't, and Why*, edited by Davidson R. Gwatkin, Adam Wagstaff and Abdo S. Yazbeck, pp. 137-161. Washington, DC: The World Bank.

Indu Bhushan, Erik Bloom, Benjamin Loevinsohn, and J. Brad Schwartz. 2005. "Contracting Health Care Services for the Rural Poor in Cambodia," Development Outreach, (May), World Bank Institute, Washington, D.C.: The World Bank.

Schwartz, J. Brad and Indu Bhushan. 2004. *Cambodia: Using Contracting to Reduce Inequity in Primary Health Care Delivery*, HNP Discussion Paper, Reaching the Poor Program Paper No. 3, Washington, D.C.: The World Bank.

Bhushan, Indu, Sheryl Keller and J. Brad Schwartz. 2002. *Achieving the Twin Objectives of Efficiency and Equity: Contracting Health Services in Cambodia*. ERD Policy Brief, Number 6. Manila: Asian Development Bank.

Schwartz, J. Brad and Benjamin Loevinsohn. 1999. *Sustaining Effective Social Programs: Financing Immunization in Cambodia, Lao PDR, and Viet Nam*. Manila: Asian Development Bank.

Schwartz, J. Brad. 1999. *Health Sector Financing in the Philippines, 1991-1997: The Effects of Devolution*. Manila: Department of Health, Republic of the Philippines.

Rannan-Eliya, Ravindra P., Tahmina Begum, Sadiqa Tahera Khanam, J. Brad Schwartz and Peter Berman. 1998. *Bangladesh: National Health Accounts*. Manila: Asian Development Bank.

Berman, Peter, Gilles Fortin, Vernon Hicks, William McGreevey, and J. Brad Schwartz. 1995. *China's National Health Accounts, an Assessment*. Washington, D.C.: The World Bank.

Galvez-Tan, Jaime and J. Brad Schwartz. 1994. *Social Health Financing: The Philippine Experience*. In Proceedings, The Social Financing of Health Care Services Conference. Cairo: Egyptian Ministry of Health and USAID.

Schwartz, J. Brad. 1993. *DOH Programs: Sources and Uses of Funds*, in Proceedings, Pesos for Health: Assessing Health Financing Reform Possibilities. Manila: UPEcon Foundation, University of the Philippines and Department of Health, Republic of the Philippines.

Schwartz, J. Brad, John S. Akin, and Barry M. Popkin. 1993. *Economic Determinants of Demand for Modern Infant Delivery in Low-Income Countries: The Case of the Philippines*, in Health Economics Research in Developing Countries, edited by Anne Mills and Kenneth Lee, pp. 165-192. London: Oxford University Press.

Herrin, Alejandro N., Orville Solon, Michael Alba, Rachel. Racelis, Mario Taguiwalo, A. Barrozo, and J. Brad Schwartz. 1993. *Health Sector Review: Philippines*. Manila, Philippines: Health Finance Development Project, Monograph No. 9, Department of Health, Republic of the Philippines.

Schwartz, J. Brad, David K. Guilkey, John S. Akin, and Barry M. Popkin. 1992. *The WIC Breastfeeding Report: The Relationship of WIC Program Participation to the Initiation and Duration of Breastfeeding*. Washington, DC: Office of Analysis and Evaluation, Food and Nutrition Service, USDA.

Solon, Orville, Rhais M. Gamboa, J. Brad Schwartz, and Alejandro N. Herrin. 1992. *Health Sector Financing in the Philippines*. Manila, Philippines: Health Finance Development Project, Monograph No. 2, Department of Health, Republic of the Philippines.

Schwartz, J. Brad, John S. Akin, David K. Guilkey, and Vicente Paqueo. 1989. *The Effect of Contraceptive Prices on Method Choice in the Philippines, Jamaica, and Thailand*, in Choosing a Contraceptive: Factors in Method Choice in Asia and the United States, edited by Rodolfo A. Bulatao, James A. Palmore, and Sandra E. Ward, pp. 78-102. Boulder: Westview Press.

Schwartz, J. Brad, John S. Akin, and Barry M. Popkin. 1987. *Price and Income Elasticities of Demand for Modern Health Care: The Case of Infant Delivery in the Philippines*. PHN Technical Note No. 87-23. Washington, DC: Population and Human Resources Department, World Bank.

Akin, John S. and J. Brad Schwartz. 1986. *Demand Analysis with Price Information Obtained Directly from Respondents*. PHN Technical Note No. 86-22. Washington, DC: Population, Health, and Nutrition Department, World Bank.

### **Selected Papers Presented at Conferences**

Schwartz, J. Brad and Indu Bhushan. *Reducing Inequity in the Provision of Primary Health Care Services: Contracting in Cambodia*. Paper presented at "Reaching the Poor with Effective Health, Nutrition, and Population Services," World Bank, Washington, DC, 18-20 February 2004.

Schwartz, J. Brad and Indu Bhushan. *Improving Equity in Immunization Through Public-Private Partnership in Cambodia*. Paper presented at "Technical Workshop on the Economics of Vaccination in Low and Middle Income Countries," London School of Hygiene and Tropical Medicine, London, 29-30 October, 2003.

Schwartz, J. Brad. *Results of the Bangladesh National Health Accounts*. Presented at NHA Dissemination Seminars, August, 1998, in Chittagong and Dhaka, Bangladesh.

Schwartz, J. Brad. *Essential Health Care in Bangladesh: Who Should Pay?* Paper presented at the Annual Conference on Health Economics, sponsored by the Health Economics Project, ODA, 11-13 August, 1996, Hotel Sonargaon, Dhaka, Bangladesh.

Galvez-Tan, Jaime and J. Brad Schwartz. *Social Health Financing: The Philippine Experience*. Paper presented at the "Social Financing of Health Care Services Conference," sponsored by Cost Recovery for Health Project, Egyptian Ministry of Health and USAID, 9-12 January, 1994, Cairo, Egypt.

Schwartz, J. Brad. *DOH Programs: Sources and Uses of Funds*. Paper presented at "Pesos for Health: Assessing Health Financing Reform Possibilities," conference sponsored by the UPEcon Foundation-Health Policy Development Program and Philippines Department of Health, September 1-3, 1993, Pasig, Philippines

Schwartz, J. Brad and John S. Akin, *The Effect of Economic Factors and Health Services Characteristics on the Demand for Modern Health Care*. Paper presented at the annual meeting of the Population Association of America, Chicago, April, 1987.

Akin, John S. and J. Brad Schwartz. *The Effect of Economic Factors on Contraceptive Choice in Jamaica and Thailand: A Comparison of Mixed Multinomial Logit Results*. Paper presented at Methodological Issues in Cost-Effectiveness Analysis for Family Planning Programs Conference, sponsored by USAID and Tulane University, New Orleans, December, 1985.

### Selected Project Papers

Schwartz, J. Brad. 2006. *Health Equity Funds and Soft Loan Funds: Proposed System Design, Implementation Plan, and Evaluation Design*. Primary Health Care Expansion Project, ADB Loan 1749-LAO (SF), Ministry of Health, Vientiane (September).

Schwartz, J. Brad. 2005. *Reaching the Rural Poor with Essential Drugs and Health Services: Village Drug Revolving Funds in Lao PDR*. Primary Health Care Expansion Project, ADB Loan 1749-LAO (SF), Ministry of Health, Vientiane (September).

Schwartz, J. Brad. 2005. *Hospital Financing Study: Strategies to Finance Expenditures Incurred by People Using Hospitals*. Primary Health Care Expansion Project, ADB Loan 1749-LAO (SF), Ministry of Health, Vientiane (September).

Schwartz, J. Brad. 2004. *Bangladesh: Efficiency and Equity of Contracting Urban Primary Health Care Services*. Asian Development Bank, Social Sectors Division, South Asia Department. Manila, Philippines: Asian Development Bank.

Schwartz, J. Brad. 2002. *Cost of Health Services in Viet Nam: Study Design*. Asian Development Bank, Social Sectors Division, Mekong Department. Manila, Philippines: Asian Development Bank.

Schwartz, J. Brad, David K. Guilkey and Rachel Racelis. 2002. *Decentralization, Allocative Efficiency and Health Service Outcomes in the Philippines*. Measure Evaluation Project. Chapel Hill, NC: University of North Carolina at Chapel Hill.

Schwartz, J. Brad. 2001. *Efficiency and Equity of Contracting Primary Health Care Services: The Cambodia Pilot Tests*. Asian Development Bank, Education, Health and Population (West) Division. Manila, Philippines: Asian Development Bank.

Schwartz, J. Brad, Rachel Racelis, and David K. Guilkey. 2000. *Decentralization and Local Government Health Expenditures in the Philippines*. Measure Evaluation Project. Chapel Hill, NC: University of North Carolina at Chapel Hill.

Schwartz, J. Brad. 1999. *Health Care Financing Options in Lao PDR*. Vientiane: ADB Primary Health Care Expansion Project, Ministry of Health.

Schwartz, J. Brad. 1999. *Beneficiary Financing of Health Care in Lao PDR*. Vientiane: ADB Primary Health Care Expansion Project, Ministry of Health.

Schwartz, J. Brad. 1999. *Cost Recovery and Revolving Drug Funds in Lao PDR*. Vientiane: ADB Primary Health Care Expansion Project, Ministry of Health.

Schwartz, J. Brad. 1999. *Public and Private Health Expenditures in Lao PDR*. Vientiane: ADB Primary Health Care Expansion Project, Ministry of Health.

Schwartz, J. Brad. 1999. *Evaluation of Devolution on the Health Sector of the Philippines*. Measure Evaluation Project, Chapel Hill, North Carolina: Carolina Population Center, University of North Carolina at Chapel Hill.

Schwartz, J. Brad and Tahmina Begum. 1998. *Official and Unofficial User Fees at Government Health Facilities*. Bangladesh National Health Accounts Policy Brief. Asian Development Bank, Education, Health and Population (West) Division. Manila, Philippines: Asian Development Bank.

Schwartz, J. Brad. 1998. *Philippines Local Health Accounts*. Government of the Philippines, Department of Health. Manila, Philippines: Integrated Community Health Services Project: Department of Health.

Schwartz, J. Brad. 1998. *Health Care Financing Assessment*. Philippines Department of Health. Manila, Philippines: Integrated Community Health Services Project: Department of Health.

Schwartz, J. Brad. 1997. *International National Health Accounts Experience*, presented at the Bangladesh National Health Accounts Inception Seminar, sponsored by Asian Development Bank, 14 December, Hotel Sonargaon, Dhaka, Bangladesh.

Schwartz, J. Brad. 1997. *Cambodia: Cost Effectiveness Analysis Protocol for Pilot Tests of the Basic Health Services Project*, Asian Development Bank, Education, Health and Population (West) Division. Manila, Philippines: Asian Development Bank.

Schwartz, J. Brad. 1997. *Republic of the Philippines: Economic Analysis of the Early Child Development Project*. Washington, D.C.: Human Resources Operations Division, Country Department I, East Asia and Pacific Region. The World Bank.

Schwartz, J. Brad. 1996. *Indonesia: Economics of the Pharmaceutical Sector*. The World Bank, Human Resources Operations Division, Country Department III, East Asia and Pacific Region. Washington, D.C.: The World Bank.

Schwartz, J. Brad and Benson M. Zwizwai. 1995. *Economics of the Health Sector in Zimbabwe*. Harare: USAID/Zimbabwe.

Schwartz, J. Brad. 1994. *Economic Analysis of the Lao PDR Primary Health Care Project*. Manila, Philippines: Asian Development Bank.

Schwartz, J. Brad. 1994. *National Health Accounts: Principles, Definitions, and Data Sources*. Manila, Philippines: Health Policy Development Project, UPEcon Foundation, University of the Philippines.

Schwartz, J. Brad. 1993. *EPI/ARI Strategic Financial Planning: Lessons Learned from Experience in the Philippines*. Arlington, VA: REACH Project, USAID.

Schwartz, J. Brad and Deborah E. Bender. 1992. *Economic and Environmental Implications of Changes in Health Status and Reduced Fertility*. Washington, D.C.: Asia Bureau, USAID.

Schwartz, J. Brad. 1992. *Economic Evaluation of Child Survival Programs: An Example from Malawi*. Lilongwe: USAID/Malawi.

Schwartz, J. Brad, Lionel Deang, Wilhelm Flieger, and Barry M. Popkin. 1988. *Contraceptive Prevalence and Continuation: A Longitudinal Analysis of Natural Family Planning (NFP) and Non-NFP Users in the Philippines*. Washington, D.C.: Institute of International Studies in Family Planning, Georgetown University.

Akin, John S., David K. Guilkey, Vicente Paqueo, Barry M. Popkin, and J. Brad Schwartz. 1985. *An Analysis of the Effects of Infrastructure Development and Medical Service Changes on the Patterns of Health Care Use in the Bicol Region of the Philippines*. Manila, Philippines: USAID.

### **Selected Research Projects and Consultancies**

**Ministry of Health, Lao PDR.** For the Primary Health Care Expansion Project, system design, detailed implementation plans and evaluation design for health equity funds and health loan funds in Lao PDR. Vientiane, Laos: July-August 2006.

**Ministry of Health, Lao PDR.** For the Primary Health Care Expansion Project: i) evaluation and analysis of hospital cost and revenue data, and household survey data on hospital utilization and expenditures; ii) development of strategies to increase hospital utilization and revenue, provide hospital services to the very poor, and increase the ability of near-poor households to pay for catastrophic hospital care; and iii) analysis of a quasi-experimental trial in which villages were randomly selected to receive drug revolving funds, start-up drug kits and trained village health volunteers to manage the fund and provide essential curative services compared with randomly selected control villages. Vientiane, Laos: August – September 2005.

**Asian Development Bank, Social Sectors Division, Mekong Department.** Efficiency and equity effects of a large scale quasi-experiment of contracting primary health care services to NGOs in rural districts of Cambodia. Phnom Penh, Cambodia: July 2004. April 2004 – February 2005.

**Asian Development Bank, Social Sectors Division, South Asia Department.** Analysis of efficiency and equity effects of contracting primary health care services to NGOs in urban slum areas of four cities in Bangladesh. Dhaka, Bangladesh: June 2004. May – November 2004.

**Asian Development Bank, Social Sectors Division, Mekong Department.** For the Asian Vaccination Initiative, analysis of the equity of immunization coverage under NGO contracting and government provision of health care services in Cambodia. September 2003 – March 2004.

**The World Bank, Thematic Group on Health, Nutrition and Population (HNP) and Poverty.** Grant to study the equity effects of contracting primary health care services to NGOs in rural areas of Cambodia (with Indu Bhushan). October 2002 – June 2004.

**Asian Development Bank, Social Sectors Division, Mekong Department.** For the Viet Nam Capacity Building for Rural Health Project: i) summarized the literature on alternative methods of estimating the costs of providing health care services; ii) assessed the feasibility of alternative methods of hospital costing given data availability; and iii) developed a detailed plan for undertaking the study including the rationale and description of the method chosen, data collection requirements, computerized costing system, and analysis. 2002. Hanoi, Viet Nam: July – August 2002.

**Asian Development Bank, Education, Health and Population (West) Division.** For the preparation of the Cambodia Second Basic Health Services Project, conducted an evaluation of the impact of pilot tests of contracting primary health care on district-wide performance and individual use of health services, including an analysis of the efficiency and equity levels associated with changes in health coverage and service use over time in pilot and control districts. 2001. Phnom Penh, Cambodia: June-July, 2001.

**University of North Carolina at Chapel Hill, Carolina Population Center.** For the Measure *Evaluation* Project, conducted a study of the effects of devolution on the level and structure of health care financing and the provision of public health care services by central and local government units in the Philippines, in collaboration with the University of the Philippines. November 1999 – 2001.

**Asian Development Bank, Education, Health and Population (West) Division.** For the Lao PDR Primary Health Care Expansion Project: i) estimation of public and private health care expenditures in Lao PDR; ii) analysis of public expenditures on health at national and provincial levels; iii) development of preliminary national health accounts; iv) analysis of cost recovery and drug revolving funds in the public health care system; v) evaluation of beneficiary financing of health services; vi) analysis of user fees and the effect on the poor; and vii) evaluation of alternative health care financing options. 1999. Vientiane, Lao PDR: March-April, June-July, September-October, 1999.

**Asian Development Bank, Education, Health and Population (East) Division.** For the Philippines Integrated Community Health Services Project: i) advised local government officials on health financing issues and options; ii) designed and implemented Local Health Accounts in six provinces; and iii) assisted in the design and implementation of health finance demonstrations and pilot tests at the local government level. 1998-1999. Manila, Philippines: April – June 1998, November – December 1998, May 1999.

**The World Bank, Human Resources Operations Division, Country Department I, East Asia and Pacific Region.** For the mid-term review mission of the Philippines Women's Health and Safe Motherhood Project, economic and financial analysis of i) disbursed, committed, programmed and un-programmed funds; ii) commitment charges; iii) the effect of fluctuations in the exchange rate on future project funding; iv) the ability of DOH to ensure counterpart requirements; and v) the ability of DOH to ensure 1999 loan disbursements. Manila, Philippines: December 1998.

**Asian Development Bank, Education, Health and Population (West) Division.** Conducted a study of the current and future financing of immunization programs in Cambodia, Lao PDR, and Viet Nam including: i) immunization coverage rates, effects on disease incidence, methods for delivering immunization services, and major challenges; ii) description of the current funding and trend in immunization financing in each country; iii) estimation the future costs of routine Expanded Programme on Immunization (EPI) activities; iv) analysis of the burden of disease that is preventable by currently available vaccines and estimation of their

costs; v) description of the economic rationale for investing in immunization; and vi) evaluation of various mechanisms for financing of routine immunization and the introduction of new vaccines. 1998-1999. Vientiane, Lao PDR; Hanoi, Viet Nam; Phnom Penh, Cambodia: September-October 1998.

**Asian Development Bank, Education, Health and Population (West) Division.** For the Bangladesh National Health Accounts (NHA) Project: i) reviewed the conceptual framework, operational definitions, household and health facility survey sample designs, and questionnaires; ii) made recommendations for mid-course corrections; iii) presented a review of NHA international experience and lessons learned at the project inception seminar; and iv) reviewed and assisted in the dissemination of the final results in seminars to senior policy makers. 1997-1998. Dhaka, Bangladesh: November - December 1997 and July - August 1998.

**The World Bank, Human Resources Operations Division, Country Department I, East Asia and Pacific Region.** For the Philippines Early Childhood Development Project: i) economic analysis of the project; ii) developed a cost planning model; iii) rationalized investment and recurrent expenditures for midwives, child development workers, day care mothers, and day care workers; and iv) developed indicative municipal development fund requirements for local government grant, loan and equity requirements. 1997-1998. Manila, Philippines. May-June, August-September 1997, February 1998.

**Asian Development Bank, Education, Health and Population (West) Division.** For the Cambodia Basic Health Services Project in Cambodia, developed a protocol for determining the cost-effectiveness of delivering primary health care services through contracting under three project pilot-tests: i) contracting-out service delivery to NGOs and private sector groups; ii) contracting-in management services to district health management teams; and iii) funding government delivery of services under the current system. Phnom Penh, Cambodia: November 1997.

**Asian Development Bank, Education, Health and Population (East) Division.** For the Philippines Early Childhood Development Project: i) reviewed initial cost estimates; ii) reviewed World Bank reports on local government revenue profiles and capacity to cost-share the project; iii) reviewed funding mechanisms including use of municipal development funds and re-lending policies; iv) developed a financial planning model and prepared an initial multi-donor financing plan for ADB, World Bank, UNICEF, local governments, and the national Government of the Philippines. Manila, Philippines. April 1997.

**Asian Development Bank, Education, Health and Population (East) Division.** For the Indonesia Intensified Communicable Diseases Control Project: i) developed a financial planning model; ii) estimated costs at the district, province and central government levels; iii) prepared the financing plan; iv) prepared the disbursement schedule; and v) assisted with modifications of the budget during loan negotiations. Appraisal mission, November - December 1996. Jakarta, Indonesia. Loan Negotiations, Manila, Philippines. April 1997.

**University of North Carolina at Chapel Hill, School of Public Health.** In collaboration with university researchers, estimated a bivariate probit model of the relationship between early maternity discharge, covariates and other outcomes including breast feeding, well-baby visits, and incidence of illness using National Maternal and Infant Health Survey data. Chapel Hill, North Carolina, February 1996 - March 1997.

**Asian Development Bank, Education, Health and Population (West) Division.** For the Bangladesh Urban Primary Health Care Project: i) estimated the cost of delivering urban primary health care services; ii) identified cost recovery options that do not discourage the poor from publicly provided primary health care services; iii) estimated potential revenues; iv) evaluated the major health financing issues and developed options other than user fees to enhance the sustainability of urban PHC services; and v) conducted an economic analysis for the Project. Dhaka, Bangladesh: May to mid-June and mid-July through August, 1996.

**The World Bank, Population and Human Resources Division, Country Department III, East Asia and Pacific Region.** Conducted an economic analysis of the pharmaceutical sector in Indonesia including: i) economic characteristics of pharmaceutical production; ii) the efficiency of public and private distribution and retailing of pharmaceuticals; iii) international trade issues; iii) health policy and equity; and iv) a macroeconomic and fiscal overview of the sector. 1996. Jakarta, Indonesia: March, 1996.

**Asian Development Bank, Education, Health and Population (West) Division.** Designed a technical assistance project for the development of the Bangladesh National Health Accounts in collaboration with the Health Economics Unit of the Ministry of Health and Family Welfare. Dhaka, Bangladesh: November, 1995.

**The World Bank, Population, Health and Nutrition Department.** Reviewed and assessed Chinese methods and estimates of the level of health sector expenditures by source of financing. Developed recommendations for the measurement of uses of health sector funding in China consistent with OECD standards, and a comprehensive system of national health accounts. Beijing, China: July 1995.

**Asian Development Bank, Education, Health and Population (West) Division.** For the Cambodia Basic Health Services Project, analysis of health care financing in Cambodia, including: i) public and private health care expenditure sources and uses; ii) experience with user charges, risk-sharing, and other forms of resource generation; iii) central and provincial budget allocations and expenditures; iv) rural poor household's method to deal with catastrophic medical expenses; and v) extent of private sector involvement in basic health services at the commune and district levels. Design of pilot tests for efficiency improvements and cost recovery including revolving funds, contracting-out health care services, rural health care credit schemes, and pre-payment plans. Phnom Penh, Cambodia: June and August 1995.

**US Agency for International Development, Zimbabwe.** Prepared an economic assessment of the health sector, including public and private supply and demand conditions, economic effects of the structural assessment program, health sector sources and uses of funds, public sector cost recovery system, and the private health insurance market in Zimbabwe. Recommended interventions for more efficient health care markets, and a more equitable distribution of public health care services. Harare, Zimbabwe: April - May 1995.

**Asian Development Bank, Education, Health and Population (West) Division.** In conjunction with the Nepali National Planning Commission, and Ministries of Health, Education, and Finance, designed a study of health and education sector finance and assisted in the development of a medium-term strategy for Bank assistance in the social sectors. Katmandu, Nepal: January 1995.

**Asian Development Bank, Education, Health and Population (East) Division.** Examined the economic rationale, designed the health financing component, and reviewed and revised cost estimates for the Philippines Integrated Community Health Services Project. Fact-Finding and Loan Appraisal missions. 1994-1995. Manila, Philippines: October - November 1994 and February-March 1995.

**University of North Carolina at Chapel Hill, Carolina Population Center.** For the USAID Evaluation Project, designed and tested a survey methodology to be used as an evaluation tool for international health and population projects. Chapel Hill, North Carolina. July 1994 - February 1995.

**The World Bank, Population and Human Resources Division, South Asia III.** In Sri Lanka: i) assessed the progress of the Health Strategy and Financing Study component of the Sri Lanka Health and Family Planning Project; and ii) held discussions on health finance policy in a decentralized system with senior officials from the Ministries of Health and Finance. Colombo, Sri Lanka: September - October 1994 and November - December 1994.

**Asian Development Bank, Education, Health and Population (West) Division.** Analyzed the capacity of the Lao PDR Ministry of Public Health to fund the recurrent costs of an expanded primary health care system, examined the potential for cost recovery of essential drugs through revolving funds, and examined the economic rationale for the Lao Primary Health Care Project. Project Preparation Technical Assistance and Loan Fact Finding missions. Vientiane, Lao PDR: February 1994 and April 1994.

**US Agency for International Development, Cairo.** Presented the proposed Philippines National Health Insurance system, gave a general critique and potential pitfalls of NHI systems, and participated as discussant at "The Social Financing of Health Care Services Conference," sponsored by the Egyptian Ministry of Health and USAID, 9 - 12 January, Cairo, Egypt.

**Harvard University, Institute for International Development.** In collaboration with the University of the Philippines, UPEcon Foundation, Health Policy Development Project, assisted in the development of the Philippines National Health Accounts, strategic financial planning for the public health sector, and design criteria for the reform of health care financing including national health insurance alternatives. Previously collected and analyzed public sector and donor agency sources and uses of funds for thirty vertical DOH health care programs. 1993-1994. Manila, Philippines: May - June 1993, August - September 1993, November - December 1993, March - April 1994, June 1994, and August 1994.

**US Agency for International Development, Cairo.** Developed the conceptual framework for MOH for the collection and analysis of public health sector budget and expenditure data, and assisted with the early development of the framework for national health accounts. Cairo, Egypt: January 1994.

**US Agency for International Development, Manila.** Financial planning for the Philippines Expanded Program for Immunization and Control of Acute Respiratory Infections Program including estimates of future funding shortfalls for vaccines and ARI medicines. Conducted a series of discussions with the DOH Secretariat that resulted in government financing of EPI vaccines and ARI medicines in future GOP recurrent budgets. 1992-1993. Manila, Philippines: September 1992, November - December 1992, and February - March 1993.

**US Agency for International Development, Center for Development Information and Evaluation.** Examined the cost-effectiveness of the USAID/Ghana family planning program. Accra, Ghana: May 1992.

**US Agency for International Development, Center for Development Information and Evaluation.** Evaluated the costs and benefits of the USAID/Malawi child survival program. Lilongwe, Malawi: March 1992.

**US Agency for International Development, Center for Development Information and Evaluation.** Estimated the internal rate of return for investments in urban infrastructure, including water, sanitation, electrification, and telecommunications systems. Cairo, Egypt: September 1991, February 1992.

**US Agency for International Development, Asia Bureau.** Conducted a review of the literature on the economic and environmental implications of changes in health status and reduced fertility. 1991-1992.

**US Department of Agriculture, Food and Nutrition Service.** In collaboration with the Carolina Population Center, University of North Carolina at Chapel Hill, conducted a selectivity-corrected statistical evaluation of the effect of participation in the Women, Infants, and Children (WIC) Program on the initiation and duration of breast feeding. 1991.

**US Agency for International Development, Manila.** Conducted an economic analysis and evaluated the economic rationale for the Health Finance Development Project. Manila, Philippines: August 1991.

**US Agency for International Development, Manila.** In collaboration with the University of the Philippines, School of Economics, analyzed public and private health sector financing, sources and uses of health care funds in the Philippines, and collected baseline data for the development of the Philippines National Health Accounts. Manila, Philippines: April 1991, June 1991, August - September 1991.

**US Agency for International Development, Manila.** Economic evaluation of the Oral Rehydration Therapy Component of the Primary Health Care Financing Project. Manila, Philippines: November - December 1990.

**US Agency for International Development, RHUDO, Bangkok.** Conducted an economic analysis of the effects of the Decentralized Shelter and Urban Development Project. Manila, Philippines: July 1990.

**US Agency for International Development, Office of Health.** Conducted an analysis of the economic contribution to health and productivity from investments in water supply infrastructure in developing countries. 1990-1991.

**Georgetown University, Institute for International Studies in Family Planning.** Estimated prevalence and continuation rates for contraceptive methods in the Philippines, and presented findings to central and local government officials in Manila and Cebu. Philippines: March 1988.

**The World Bank, Population, Health and Nutrition Department.** Using a mixed multinomial logit econometric technique, - examined the economic determinants of the choice of modern and traditional health care for infant delivery in the Cebu region of the Philippines.

**National Institutes for Health.** Examined the effects of socio-economic factors on infant mortality and morbidity in the Cebu Region of the Philippines. 1985-1987. Cebu, Philippines: March 1987.

**US Agency for International Development, Manila.** Evaluated the economic effects of a rural development project on the delivery of modern health care to adult and child outpatients in the Bicol Region of the Philippines. 1984-1985. Manila, Philippines: May, 1985.

**US Agency for International Development, Office of Population.** For the Social Marketing Project (SOMARC), examined the socioeconomic determinants and elasticity of demand for contraceptives in Jamaica, Thailand and the Philippines using a multinomial logit econometric technique. 1984-1985.

#### **Referee for Journals**

*Bulletin of the World Health Organization*  
*Economic Development and Cultural Change*  
*Economics of Education Review*  
*Health Policy and Planning*  
*Social Science and Medicine*  
*Southern Economic Journal*  
*World Bank Economic Review*

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