

## AMRITA AHUJA

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### Graduate Studies:

Ph.D., Business Economics, Harvard University, 2009

Thesis Title: “Essays in Empirical Contracting and Development”

#### Thesis Committee:

Michael Kremer

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#### Teaching and Research Fields:

Primary fields: Development Economics

Secondary fields: Personnel Economics, International Business

### Undergraduate Studies:

A.B., Mathematics and Chemistry, Williams College, *summa cum laude*, 1998

### Work Experience:

**Harvard Kennedy School, Cambridge, MA – *Post-Doctoral Fellow* 09/2009– present**

- Conducts research on the design of institutions for large scale delivery of health and education programs in developing countries.

**Anonymous International Education Foundation, Houston, TX –*Director* 01/2011– present**

- Leads definition and execution of foundation focus and strategy
- Manages all grants, including identifying projects and grantees, supporting grantee proposal development, supporting program management for delivering outcomes, and reporting
- Leads foundation’s collaborations with other donors

**Innovations for Poverty Action, Global – *Managing Director, Safe Water* 05/2009–08/2011**

- Provided strategic guidance and overall management to a start-up program that provides access to safe water via an innovative point of collection water treatment technology. Led activities to:
  - Expanded program in Kenya from 5,000 to over 200,000 beneficiaries, with planned continued growth
  - Conduct feasibility pilots to Ethiopia, Swaziland, Haiti, India and Bangladesh
  - Develop partnerships with ministries, local governments and water boards
  - Disseminate results to policy makers and potential funders
  - Raise approximately \$10 million for program activities and related research
  - Recruit top talent to the management team

- Frame organizational goals and strategies to design effective programs and increase adoption of the technology
- Co-ordinated with network of researchers evaluating the program to:
  - Help ensure that research focused on issues most critical for scaling the program
  - Facilitate dissemination of results on point of collection water treatment

**Harvard University, Cambridge, MA – Research Assistant** **2004, 2005, 2006**

- Worked with Professors Jordan Seigal (2004), Sendhil Mullainathan (2005) and Michael Kremer (2006)

**Monitor Group, USA, UK, India – Management Consultant** **09/1998–06/2003, 2006**

- Advisory Consultant (Summer, 2006) – *Monitor Market Based Solutions, India*
  - Led project that analyzed the business models of over 100 organizations using market-based approaches to deliver employment, products, and services to the poor with the goal of identifying their potential to achieve financial solvency and scale
- Engagement Manager (2001 – 2003) – Developed expertise in marketing strategy and consumer behavior
  - Led projects to: develop the consumer-marketing strategy for a health product with potential annual revenues of over \$ 1 billion; evaluate traditional and non-traditional channels for distribution of life insurance products in India; design best practices for marketing strategy development in pharmaceuticals and health
- Analyst (1998 – 2001) for projects across a range of industries, business issues and countries

**Teaching Experience:**

Spring 2008	<i>The Contents of Globalization: Issues, Actors and Decisions</i> , Teaching Fellow for Professors Lant Pritchett and Lawrence H. Summers, Harvard Economics Department and Kennedy School of Government
Spring 2007	<i>Serving the Poor: The Role of Firms</i> , Teaching Fellow for Economics Department Sophomore Tutorial
Spring 2006	<i>New Approaches to Industrial Policy in Developing Economies</i> , Course Assistant to Professor Asim Khwaja, Kennedy School of Government

**Honors, Scholarships, and Fellowships:**

2008	Harvard Certificate of Distinction in Teaching
2003-2008	Harvard Business School/ Business Economics Fellowship
1994-1998	Williams College Haystack Fellowship

**Publications and Research Papers in Progress:**

Kremer, M. Ahuja, A., Zwane, A., 2010. “Providing Clean Water: Evidence from Randomized Evaluations”, *Annual Review of Resource Economics*, 2:237-256

This paper uses a public economics framework to review evidence from randomized trials on domestic water access and quality in developing countries and to assess the case for subsidies. Water treatment can cost-effectively reduce reported diarrhea. However, many consumers have low willingness to pay for cleaner water; few households purchase household water treatment under retail models. Free point-of-collection water treatment systems designed to make water treatment convenient and salient can generate take-up of approximately 60% at a projected cost as low as \$20 per year of life saved, comparable to vaccine costs. In contrast, the limited existing evidence suggests that many consumers

value better access to water, but it does not yet demonstrate that better access improves health. The randomized impact evaluations reviewed have also generated methodological insights on a range of topics, including (a) the role of survey effects in health data collection, (b) methods to test for sunk-cost effects, (c) divergence in revealed preference and stated preference valuation measures, and (d) parameter estimation for structural policy simulations.

“Incentive Contracts: Evidence from Indian Retail Distribution” (main dissertation chapter) – 2009

I use a proprietary dataset on the distribution of goods by a manufacturer in India to explore the design and effects of incentive contracts in contexts with multiple products and multiple parties. To increase product sales, the manufacturer provides incentives to two parties: retailers and salespersons. While profit maximization suggests equalization of returns, returns to salesperson incentives are six times those for retailer incentives. This results from the manufacturer accounting for differences in hidden costs of incentive provision for the two parties, arising from differences in substitutability between products and to a lesser extent between time periods. After differences in negative cross-product and cross-period spillovers are accounted for, the sales impact of both types of incentives are statistically indistinguishable. I use the non-linear structure of salesperson incentives to trace the mechanisms by which they have effect. Shifts in salesperson effort between products and between retailers in different geographies, complementarities in effort, and information revelation through repeated interactions are shown to be important. Finally, the paper suggests that firms take these hidden incentive costs and interactions between parties into account when designing incentive systems

“Male Circumcision and the Impact of AIDS in Africa” (with Brian Wendell and Eric Werker) -2009

Theories abound on the potential macroeconomic impact of AIDS in Africa, yet there have been surprisingly few empirical studies to test the mixed theoretical predictions. In this paper, we examine the impact of the AIDS epidemic on African nations through 2005 using the male circumcision rate to identify plausibly exogenous variation in HIV prevalence. Medical researchers have found significant evidence that male circumcision can reduce the risk of contracting HIV. We find that national male circumcision rates for African countries are both a strong predictor of HIV/AIDS prevalence and uncorrelated with other determinants of economic outcomes. Two-stage least squares regressions do not support the hypotheses that AIDS has had any measurable impact on economic growth or savings in African nations. However we do find weak evidence that AIDS has led to a decline in fertility combined with a slow-down in education gains, as measured by youth literacy, and a rise in poverty, as measured by malnutrition.

“Compensation for Community Workers: A Field Experiment from Water Provision in Rural Kenya” (with Vivian Hoffmann and Céline Gratadour) - 2013

Non-government organizations as well as the public sector in developing countries often rely on members of the communities they serve to assist with program delivery. While an extensive theoretical and some empirical literature explores the design and effects of incentive contracts in the context of formal employment –in both the private and public sectors – the question of how to compensate part-time community workers has received much less attention. This paper provides evidence from a randomized trial on different compensation mechanisms on community worker selection and performance in the provision of community-level safe water infrastructure in rural Kenya. We find that providing a fixed financial payment does not affect household chlorine adoption compared to the standard volunteer contract. However, performance-based payment increases chlorine use by 4.9 percentage points over a baseline adoption rate of 27% under the volunteer contract. The effect of the incentive contract on household adoption appears to be through its motivating effect as opposed to the selection of more effective promoters. Finally, we find some evidence that workers’ intrinsic motivation may affect how they respond to different compensation schemes as more socially motivated community workers achieve similar outcomes under the performance pay contract and the volunteer contract.

“Long term take-up for point of collection chlorination for water treatment: Results from a cluster randomized controlled trial in rural Kenya” (with Clair Null, Alix Zwane, Jeff Berens, Edward Miguel, Jessica Vernon, Michael Kremer) - 2014

Point-of-use chlorination is widely promoted but has not achieved high take-up and evidence on long-term sustainability is lacking. We present results from a three-year cluster randomized controlled trial of point-of-collection (POC) chlorination, which consists of a dispenser at communal water sources, refills of 1.2% sodium hypochlorite solution provided for free, and a local promoter. Forty-nine water sources serving over 2000 households in rural western Kenya were randomly assigned to POC chlorination (n=20; 334 households surveyed at baseline) or the comparison group which had access to point-of-use chlorination through socially-marketed bottles sold in shops (n=29; 490 households). In an open cohort surveyed 4-, 16-, 28-, and 42-months after dispenser installation, POC chlorination households were five times as likely to have total chlorine residual >0.2 mg/L in their drinking water relative to comparison households (51% versus 9%, p-value<0.000) and this trend was stable over time. Among a random subsample surveyed 42 months after installation, POC chlorination households were three times as likely as comparison households to have drinking water with 10 or fewer colony-forming units of thermotolerant coliform per 100 mL (46% versus 15%, p-value<0.000) and the odds of children under 5 having diarrhea in the past week were 38% less (p-value=0.068).

“Rethinking the Standard Decision Framework for Health Intervention Financing” (with Sarah Bird, Joan Hicks, Michael Kremer, Edward Miguel, Alix Zwane, Shawn Powers) – 2014, in process

**Advisory and Board Positions:**

<b>Evidence Action, USA – Board Member</b>	<b>2012-present</b>
<b>Anonymous International Education Foundation, USA – Board Member</b>	<b>2010-present</b>
<b>Ummeed Child Development Center, India – Adviser</b>	<b>2001-present</b>
<b>Deworm the World, USA – Board Member</b>	<b>2009-2013</b>
<b>Monitor Inclusive Markets, India – Adviser</b>	<b>2006-2008</b>