

MELANIE ALLWINE

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ADDRESS:

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EDUCATION:

Ph.D. Economics, George Washington University, August 2014.
M.Sc. Economics, University College of London, September 2008.
B.A. Economics and Mathematics (cum laude), Stonehill College, May 2007.
Study Abroad Economics & Mathematics, Oxford University, 2004-2005.

DISSERTATION:

Meeting the Millennium Development Goals: Improving Evaluation of Service Delivery and Understanding Caveats in Poverty Benchmarking

Committee: James E. Foster (chair), Stephen Smith, and Tony Castleman

FIELDS OF CONCENTRATION:

Primary: Development Economics and Applied Econometrics
Secondary: Applied Microeconomics and Economic Education

TEACHING EXPERIENCE:

Visiting Assistant Professor, University of Mary Washington

International Economics, Fall 2014
Introduction to Econometrics, Fall 2014
Principles of Macroeconomics, Fall 2014

Instructor, George Washington University

Economic Development, Summer 2013
Survey of International Economics, Summer 2013
Intermediate Microeconomics, Summer 2013
Financial Economics, Summer 2011 & Summer 2012

Teaching Assistant, George Washington University

General Education Curriculum (GPAC), Fall & Spring 2012-2013
Graduate Microeconomics I & II, Fall & Spring 2010-2012
Principles of Macroeconomics, Fall & Spring 2009-2010

WORKING PAPERS:

“The Service Delivery Underperformance Index: A Multidimensional Approach to Measuring the Inadequacies in Service Delivery” *with James E Foster*

“Healthcare Delivery in Rwanda, Uganda, and Tanzania: Applying the Service Delivery Underperformance Index to the Healthcare Sector” **[JOB MARKET PAPER]**
 “The Delivery of Education Services in Papua New Guinea: Applying the Service Delivery Underperformance Index to the Education Sector of Papua New Guinea”
 “The Unfairness of (Poverty) Targets” *with Jamele Rigolini (World Bank and IZA) and Luis-Felipe Lopez-Calva (World Bank)*. World Bank Working Paper WPS 6361, IZA Discussion Paper 7194 (*under review at The Journal of Economic Inequality*)
 “The Role of Algebra I Assessment in Improving Student Performance in Economics” *with Irene Foster*
 “Does Calculator Use and Test Format Mask Weakness in Basic Math Ability? Experimental Evidence of Impact on Comprehension in Principles of Economics” *with Irene Foster*

CONFERENCE ACTIVITIES:

Presenter, Eastern Economic Association, March 2014
 Presenter, ASSA Meetings, January 2014
 Presenter, George Washington University Department of Economics Microeconomics Seminar, November 2013
 Presenter, George Washington University Department of Economics Development Tea, October 2013 & April 2012
 Presenter, Lilly Conference on College and University Teaching, May 2013
 Presenter, Author’s Workshop on Chronic Poverty in Brazil, World Bank, June 2012

RESEARCH EXPERIENCE:

Research Assistant, Institute for International Economic Policy- Hewlett Foundation Grant, 2013-2014
 Consultant, Poverty Gender and Equity Group, World Bank, Washington, DC, March-April 2012
 Consultant, Poverty Reduction and Economic Management Group, World Bank, Washington, DC, July-December 2012. (Included Mission Travel to Lesotho.)

AWARDS:

Stipend for 2 Undergraduate Research Assistants, Institute for International Economic Policy, Fall 2013
 Academic Achievement Award, George Washington University, 2011-2013

CITIZENSHIP:

United States & United Kingdom

REFERENCES:

James E Foster, George Washington University	fosterje@gwu.edu	(202) 994-8195
Luis-Felipe Lopez Calva, The World Bank	lflopezcalva@worldbank.org	(202) 477-1234
Irene Foster, George Washington University	fosterir@gwu.edu	(202) 994-6150

PAPER ABSTRACTS

“The Service Delivery Underperformance Index: A Multidimensional Approach to Measuring the Inadequacies in Service Delivery” *with James E. Foster*

Abstract: A new approach to the measurement of service delivery is introduced. The Service Delivery Underperformance Index (SDUI) adapts the Alkire and Foster (2011) methodology used for poverty measurement to measure the underperformance, or multiple inadequacies, in service delivery. The index satisfies numerous properties. It focuses on underperformance, satisfies dimensional monotonicity, subgroup decomposability, and decomposability by dimensions and indicators. Dimensions and indicators that could be used to populate the index are discussed, referencing past work that has shown the negative impact of the poor delivery of services on health and education of individuals. It is demonstrated how the Alkire and Foster (2011) methodology is applied to calculate the index using facilities as the unit of analysis. Significance and robustness of the resulting rankings are discussed.

“Healthcare Delivery in Rwanda, Uganda, and Tanzania: Applying the Service Delivery Underperformance Index to the Healthcare Sector” [JOB MARKET PAPER]

Abstract: The Service Delivery Underperformance Index (SDUI) is used to analyze healthcare delivery in Rwanda, Uganda and Tanzania using data from Demographic and Health Surveys Service Provision Assessment. A cross-country ranking of healthcare delivery is done for these countries, where it is found that Rwanda has the best performing healthcare delivery despite being ranked below Tanzania and Uganda in terms of some health outcomes. A more extensive analysis of healthcare delivery in Rwanda shows that there are significant disparities in the performance of different types of healthcare facilities. An analysis is done of healthcare delivery in facilities that did and did not participate in policies intended to improve healthcare delivery. It is found that facilities that participated in community involvement performed significantly better than facilities that did not. This observation calls for future work to be done using the SDUI as an impact evaluation tool to analyze how policies impact underperforming healthcare delivery.

“The Delivery of Education Services in Papua New Guinea: Applying the Service Delivery Underperformance Index to the Education Sector of Papua New Guinea”

Abstract: The delivery of education services in Papua New Guinea is explored using the SDUI. Results from this analysis show that there are significant differences in the delivery of education services across different managerial types. It is also found that there are significant differences across managing authority and types of facilities depending on the province, which is expected considering that the education sector in PNG is highly decentralized. An evaluation is done of facilities in PNG that did or did not participate in multigrade classroom use and that did or did not have community involvement. These are two policies that the government was interested in expanding at the time of the survey. It is found that facilities that participated in either policy performed

better than facilities that did not. This observation calls for future work to be done using the SDUI as an impact evaluation tool to analyze how policies impact underperforming education delivery. The impact of the poor delivery of education services, as measured by the SDUI, is explored using school level enrolment and national grade 8 test scores. It is found that schools classified as underperforming have significantly lower enrolment rates and lower test scores than schools not classified as underperforming. When analyzing results for male and female students, it is found that the impact is significantly larger for female students than male students.

“The Unfairness of (Poverty) Targets” with Jamele Rigolini (World Bank and IZA) and Luis-Felipe Lopez-Calva (World Bank). World Bank Working Paper WPS 6361, IZA Discussion Paper 7194 (under review at *The Journal of Economic Inequality*)

Abstract: Adopted on September 8 of 2000, the United Nations Millennium Declaration stated as its first goal that countries “...[further] resolve to halve, by the year 2015, the proportion of the world’s people whose income is less than one dollar a day and the proportion of people who suffer from hunger...” Each country committed to achieve the stated goal, regardless of their initial conditions in terms of poverty and inequality levels. This paper presents a framework to quantify how much initial conditions affect poverty reduction, given a level of “effort” (growth). The framework used in the analysis allows for the growth elasticity of poverty to vary according to changes in the income distribution along the dynamic path of growth and redistribution, unlike previous examples in the literature where this is assumed to be constant. While wealthier countries did perform better in reducing poverty in the last decade and the half (1995-2008), assuming equal initial conditions, the situation reverses: we find a statistically significant *negative* relation between initial average income and poverty reduction performance, with the poorest countries in the sample going from the worse to the best performers in poverty reduction. The analysis also quantifies *how much* poorer countries would have scored better, had they had the same level of initial average income as wealthier countries. The results suggest a remarkable change in poverty reduction performance, in addition to the reversal of ranks from worse to best performers. The application of this framework goes beyond poverty targets and the Millennium Development Goals. Given the widespread use of targets to determine resource allocation, in education, health, or decentralized social expenditures, it constitutes a helpful tool to measure policy performance towards all kinds of goals. The proposed framework can be useful to evaluate the importance of initial conditions on outcomes, for a wide array of policies.

“The Role of Algebra I Assessment in Improving Student Performance in Economics” with Irene Foster

Abstract: Anecdotal evidence from Principles of Economics faculty suggests that many students fail to comprehend foundational material in economics due to gaps in their understanding of basic Algebra I concepts. To address this issue, Principles faculty at George Washington University administer a common Algebra I assessment at the start of each fall semester. This paper presents results from primary data collected on 1361 students registered for a Principles of Economics class for which the prerequisite is Algebra I. The results show that student performance on the Algebra I assessment is a good predictor of cumulative final exam

scores in the Principles class. However, SAT Math scores cannot be used as an equally good predictor. We suggest that use of a calculator and/or multiple-choice format on the SAT Math test are masking students weaknesses in Algebra I.

“Does Calculator Use and Test Format Mask Weakness in Basic Math Ability? Experimental Evidence of Impact on Comprehension in Principles of Economics” *with Irene Foster*

Abstract: Results from an experiment in Fall 2013 of 971 incoming students at George Washington University in a Principles of Economic course are reported. In this experiment students were given an Algebra I assessment (to ensure they had the necessary Algebra I skills to take a Principles of Economics course), and immediately following were randomly allocated to a treatment or control group conditional on SAT math scores to test if there was a significant impact of test format (multiple choice vs. open ended), calculator use and type, and the interaction of calculator use/ type and test format on students scores on the assessment. The results from this experiment do suggest that each treatment had a significant impact on students’ scores, with much variation depending on the type of question asked.