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## CONTACT INFORMATION

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School of Public Affairs  
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Washington, DC 20016

## EDUCATION

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### University of Minnesota

Ph.D. in Applied Economics

THESIS TITLE: Essays on Development Economics

THESIS COMMITTEE:

#### Paul Glewwe

Department of Applied Economics  
[pglewwe@umn.edu](mailto:pglewwe@umn.edu)  
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#### Aaron Sojourner

Department of Work and Organizations  
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#### Elizabeth Davis

Department of Applied Economics  
[edavis@umn.edu](mailto:edavis@umn.edu)  
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#### Terrance Hurley

Department of Applied Economics  
[tmh@umn.edu](mailto:tmh@umn.edu)  
612-625-1238

M.S. in Economic Theory, ITAM, Mexico

B.A. in Economics, UNAM, Mexico

## RESEARCH FIELDS

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Primary

Applied Econometrics

Behavioral Economics

Secondary

Family Economics

Economics of Education

## Wife vs. Husband: How Can Differences in Identity Identify Poor Quality Data?

Asset information and household characteristics are frequently used to conduct empirical research and to guide public policy, such as generating measures of poverty or targeting programs to the poor. Practitioners assume that these variables are free of systematic measurement error. To test this assumption, I use an experiment with poor households participating in Mexico's PROGRESA program when the same questions regarding assets and home characteristics were asked to the wife and to the husband, I find: (1) important discrepancies in the information reported between the spouses; for example, when asked about the possession of a washing machine, **the information reported did not match in 24% of the households**; (2) differences in their self-identification of social class; for example, when asking about their social class (poor, middle class, or rich), the self-identification reported did not coincide for 43% of the spouses; and (3) evidence that self-identification of social class matters when answering a survey. The results show that individuals who participate in PROGRESA (a condition of being poor) and self-identify as being middle class or above **over-report information** regardless of gender. These results are robust to a bounding argument for omitted variable bias implemented by Oster (2016). Overall, these findings suggest that who answer the survey matters, and the information regarding assets and household services is not free of systematic measurement error.

## TEACHING EXPERIENCE

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### Instructor

- Quantitative Methods I (School of Public Affairs - American University) Fall 2017

### Teaching Assistant Graduate Courses

- Consumer Choice (Instructor: Prof. Paul Glewwe) Fall 2013
- Production (Instructor: Prof. Terry Hurley) Fall 2013
- Game Theory (Instructor: Prof. Steve Polasky) Spring 2014
- Social Choice and Welfare (Instructor: Prof. Jay Coggins) Spring 2014
- Econometric Analysis II (Instructor: Prof. Paul Glewwe) Spring 2015
- Econometric Analysis II (Instructor: Prof. Paul Glewwe) Spring 2016

### Teaching Assistant Undergraduate Courses

- Managerial Economics (Instructor: Prof. Jeffrey Apland) Fall 2016
- Managerial Economics (Instructor: Prof. Terry Hurley) Spring 2017

### Camp Instructor

- Math (Graduate) Fall 2013
- Stata (Graduate) Fall 2015

## PROFESSIONAL ACTIVITIES

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### PRESENTATIONS

2017

- School of Public Affairs (SPA) American University
- School of Government (TEC) Tecnologico de Monterrey
- Association for Public Policy Analysis & Management (APPAM) Chicago, IL
- International Economic Association (IEA) Buenos Aires, Argentina
- Latin American and Caribbean Economic Association (LACEA) Mexico City, Mexico

2016

- Pacific Conference for Development Economics (PACDEV) Stanford University
- Conference on Human Capital and Growth (UNU-WIDER) Helsinki, Finland
- Workshop on Inequality and Poverty (RIDGE/NIP) Montevideo, Uruguay
- Midwest Economic Association (MEA) Evanston, IL
- Agricultural & Applied Economics Association (AAEA) Boston, MA

2015

- North East Universities Development Consortium (NEUDC) Brown University
- Midwest International Economic Development Conference (MIEDC) Madison, WI
- Latin American and Caribbean Economic Association (LACEA) Santa Cruz, Bolivia
- Midwest Economic Association (MEA) Minneapolis, MN

2013

- Latin American and Caribbean Economic Association (LACEA) Mexico City, Mexico
- International Conference on Income and Wealth Rio de Janeiro, Brazil

### REFEREE

- Journal of Population Economics

### FELLOWSHIPS, HONORS, AND AWARDS

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- Fulbright Fellowship
- Outstanding Graduate Student Teaching Assistant Award, University of Minnesota
- Hsieh Graduate Fellowship, University of Minnesota
- Colonial Dames of America Scholar, University of Minnesota
- National Council for Science and Technology Fellowship, Mexico
- Centro de Estudios Espinosa Yglesias Fellowship, Mexico
- Ministry of Education Fellowship, Mexico
- Institute for Human Studies Conference & Research Grant, USA
- Minnesota Population Center Travel Grant, University of Minnesota
- Center for International Food and Agricultural Policy Travel Grant, University of Minnesota

## PROFESSIONAL EXPERIENCE

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- Professorial Lecturer. School of Public Affairs, American University, Washington, DC (August 2017 - present)
- Deputy General Director of Impact Evaluation. Ministry of Social Development in Mexican Government, Mexico, DF (January 2011 - July 2011)
- Director of Quantitative Methods. Ministry of Social Development in Mexican Government, Mexico, DF (January 2007 - December 2010)
- Deputy Director of Econometric Analysis. PROGRESA Social Program, Mexico, DF (July 2005 - December 2006)
- Consultant. UNESCO and Peruvian Ministry of Education, Lima, Peru (May 2016 - July 2016)

## OTHER RESEARCH PAPERS

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### FAMILY ECONOMICS

#### **Do You Really Know the Income of Your Spouse?**

Good quality data is fundamental for applied economic research; particularly data relating to income, which is used to calculate the levels of poverty and proxy-based poverty measurements. This paper develops a non-unitary household model that predicts that when one spouse has bargaining power over the household resources, then the other spouse has incentives not to reveal his or her true salary or other kinds of income. Using a unique survey that asks the same questions to the wife and the husband within the household, I test the theoretical model. The income reported by the two spouses is different, it affects whether a household is classified as being poor or not poor, and it also affects the estimations of the proxy mean test used. Increasing the sample size will not solve the problem of bias for the estimation; being a consequence of the problem of asymmetric information inside the household. However, the non-cognitive skills of the wife can predict the difference in the income reported, and her non-cognitive variables can be used to improve the consistency of the data.

#### **Why A Great Woman Is Behind Every Great Man**

This paper incorporates psychological factors of the wife as elements to determine her husband's labor decisions and arrangements inside the household. In particular, I analyze the effects of the psychological variables of wives on the possession of durable goods and the level of salaries of their husbands. In order to do this, I use a database that has the following variables relating to the wives psychology: self-esteem, sense of humor, self-control, and rational resolution of problems. The question about why a great woman is behind every great man is in part explained by the psychological resources of a wife. A wife that has better sense of humor can positively influence the salary of her husband; but also a wife with high rational resolution of problems can help the household to accumulate more durable goods not related to entertainment, and reduce the consumption of durable goods related to entertainment.

## HUMAN CAPITAL

### **Girls vs. Boys: Who is Dropping Out of School Because of Bullying?**

Despite the rising interest in bullying, there is little evidence about its effects on dropping out of school, and this evidence suffers from the problem of omitted variables. To understand the effect of bullying on dropping out of school, I exploit a rich data set of adolescents between 13 and 16 years old from families participating in the Mexican conditional cash transfer program PROGRESA. Boys experience higher rates of bullying than girls, but bullying affects only girls's probability of dropping out of school. In particular, a one standard deviation increase of being bullied increases girls's probability of dropping out of school by 10 percentage points. To address the problem of omitted variables, I implement two novel bounding techniques: one developed by Oster (2016) and the other by Krauth (2016). My results suggest that the estimates are robust to omitted variable bias.

### **Are Second-hand Smokers Responsible for Childhood Obesity in Mexico?** (with Patricia López-Rodríguez)

Mexico is in the top ten of countries with highest number of children with overweight: one in three Mexican kids are overweight or obese. The main strategy to combat the overweight epidemic has emphasized healthy exercise and consumption. Yet, little attention has been given to environment factors such as smoking by parents. Bikman, et al. (2014), using experiments with animals, find evidence that cigarette smoke exposure causes metabolic disruption leading to fat gain. To understand the effect of second hand smokers on child obesity, we use a rich data set for adolescents between 12 and 18 years old from families living in urban areas in Mexico. We find that exposure to second hand smokers increases the probability of being overweight by 8.4 percentage points. To address the problem of omitted variables, we implement a recent bounding technique developed by Oster (2016). Our results are robust to the problem of omitted variables. Policies intended to attack the problem of child obesity should not only concentrate on risk factors such as diet and exercise, but also need to incorporate the environment where the children are living.

### **Self-Control: Does the Educator Matter More than the Education?**

Self-control has important effects on outcomes such as education, health and criminality. There is clear evidence that self-control is determined by the relationships inside the family. However, there is still debate about the role of schools and teachers on developing self-control. In this paper, I analyze the effects of teaching styles, teacher-student relationships and years of school on self-control. I exploit a data set that includes information for adults, family dynamics and school environments when they were children. I find that when teachers promote a participative teaching style and create supportive teacher-student relationships, they can affect the self-control of their students. The magnitudes of these effects are bigger than the effects of family relationships on self-control. In particular, I find that an increase by one standard deviation in the participative teaching style increases the level of self-control by .30 standard deviations. Also, I find a similar magnitude in the case of teacher-student relationships. However, I do not find evidence that the years of school determine self-control.

**Are Disasters Funds Enough to Smooth Consumption?** (with Julieth Santamaria and Juan Enrique Huerta-Wong)

Natural disasters worldwide have increased considerably as a consequence of climate change, and empirical evidence has found that individuals decrease their levels of consumption when facing a natural disaster. While countries can rely on loans and aid from international community when facing a natural disaster, one alternative is to use disaster funds and catastrophe bonds. Mexico was the first developing country to use disaster funds and catastrophe bonds through the Fund for Natural Disasters (FONDEN). The FONDEN provides food to households and resources for the reconstruction of infrastructure. De Janvry, Del Valle, and Sadoulet (2016) find evidence that this program increases local economic activity between 2 and 4 percent in the year following the disaster. Yet, can FONDEN smooth the consumption of the families affected? To answer this question, we analyze data for Hurricane Earl in Puebla, Mexico, where FONDEN resources were implemented. Using a difference-in-difference strategy, we find a decrease in consumption, including beans, which is an essential staple good for Mexican families. It is possible that the consumption of families would have been more affected without the FONDEN; yet, the resources of FONDEN were not enough to smooth families' consumption.

**Alternate Education for Rural Development in Peru: Evaluation of the Effect of CRFA Schools on Student Retention at the Secondary Level** (with Paul Glewwe, Johanna Fajardo-Gonzalez, and Suzanne Wisniewski)

This paper is a first attempt to evaluate the impact of the program Centros Rurales de Formaci3n en Alternancia (CRFA), a new type of secondary education program, on the proportion of children finishing primary school who subsequently enroll in the first year of secondary school in rural Peru. In these alternative schools, every month students attend class for 15 days and then return home for the rest of the month in order to reduce the cost (both direct and opportunity cost) of travel time to and from remote rural secondary schools. Using school-level panel data for the years 2015 and 2016, and taking advantage of the opening of new CRFA schools in 2016, we use a difference-in-difference methodology. The estimated effects of opening these schools are negative, although not significantly. This unexpected result may be due to a failure of the parallel trends assumption, or simply due to not allowing sufficient time for parents to decide whether to enroll their children in these new schools.

**Conditional or Unconditional Cash Transfers: Which is Better for School Attendance?**

There is an increasing debate about when to use Conditional Cash Transfers (CCTs) or Unconditional Cash Transfers (UCTs). CCTs have been used as a mechanism to induce parents to send their children to school. However, new evidence suggest that UCTs work almost as well as CCTs. In order to answer this question, a non-unitary household model is developed. Under a correct specification of the conditionality, CCTs dominate UCTs in welfare terms. An exception occurs when there is a high intensity of credit constraints, in which case both policies give the same result, and it does not matter who receives the transfer.