

## MARK P. WALSH

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### EDUCATION

Stanford University, PhD in Economics

*Expected 6/2024*

Fields: Applied Microeconomics, Development Economics, Experimental Economics, Networks

Stanford University, MA in Public Policy

*6/2016*

Stanford University, BA in Economics with Distinction

*6/2016*

### DISSERTATION COMMITTEE

Prof. Arun Chandrasekhar

Economics Department, Stanford University

[arungc@stanford.edu](mailto:arungc@stanford.edu)

Prof. Melanie Morten

Economics Department, Stanford University

[memorten@stanford.edu](mailto:memorten@stanford.edu)

Prof. Pascaline Dupas

Economics Department, Princeton University

[pdupas@princeton.edu](mailto:pdupas@princeton.edu)

### RESEARCH PAPERS

**Job Market Paper:** [Do social image concerns affect technology diffusion? Evidence from mobile banking in Pakistan](#)

Do social image concerns, such as garnering prestige from others and showing respect to others, affect information-passing about important technologies? In an experiment in rural Pakistan, I measure the effects of social image concerns on information-passing about mobile banking, an important technology in this context, and parse the role of prestige and respect concerns. Villagers (senders) decide whether to pass information designed for high-competence users, a growth-oriented pamphlet, or information designed for low-competence users, a safety-oriented pamphlet, to fellow villagers (receivers). To identify social image concerns, I cross-randomize (i) whether the sender's identity is hidden from the receiver or revealed and (ii) whether the sender's targeting of the receiver is hidden from the receiver (receiver told information passed to "a fellow villager") or revealed (receiver told information passed to "you, specifically"). When senders know their identity and targeting of the receiver will be revealed, they share the growth-oriented pamphlet more and the safety-oriented pamphlet less. These effects are entirely driven by sharing among weak social ties, consistent with signaling concerns being larger among pairs with fewer prior interactions. When only the sender's identity is revealed, effects are smaller and insignificant, suggesting that concerns around showing respect matter more than concerns around garnering prestige in this context. In simulations of a two-topic social learning model using full network data from Indian villages, communication in a network over time amplifies the effect of social image concerns on information diffusion, the frequency of conversations about growth relative to safety, and adoption of dangerous technologies, relative to the static effects estimated in the experiment. This amplification is stronger when fewer households are given information initially.

*Featured in:* [Stanford King Center on Global Development Blog "Examining barriers to communication in Pakistan"](#)

*Presentations:* Innovations Poverty Action and Global Poverty Research Lab Annual Research Gathering; Pacific Conference for Development Economics (PacDev)

[Informing mothers about the benefits of parent-infant conversations: Experimental evidence from Ghana](#)

with Pascaline Dupas, Camille Falezan, and Seema Jayachandran

*American Economic Journal: Economic Policy*, Revise and Resubmit

Despite the well-established importance of verbal engagement for infant language and cognitive development, many parents in low-income contexts do not converse with their infants regularly. We report on a randomized field experiment evaluating a low-cost intervention that aims to raise verbal engagement with infants by showing recent or expectant mothers a 3-minute informational video and giving them a themed wall calendar. Six to eight months later, mothers selected for the intervention report greater belief in the benefits of verbally engaging with infants, more frequent parent-infant conversations, and that their infants have more advanced language and cognitive skills. We measure positive but noisy effects on parental verbal inputs in a day-long recording and on surveyor-observed infant cognitive skills. The intervention could be delivered to expectant mothers through existing health clinics at very low marginal cost so could be a highly cost-effective early childhood development policy in low-income contexts.

*Featured in:* [The NBER Digest "A 'Light Touch' Intervention Gets Mothers Talking to Their Babies"](#)

[Intergenerational impacts of secondary education: Experimental evidence from Ghana](#)

with Esther Duflo, Pascaline Dupas, and Elizabeth Spelke

We provide experimental evidence on the intergenerational impacts of secondary education subsidies in a low-income context, leveraging a randomized controlled trial and 14-year longitudinal follow up that includes cognitive testing tailored to

our context. For young women, receiving a scholarship for secondary school delays childbearing and marriage, and reduces unwanted pregnancies. When female scholarship recipients marry and have children, they are more likely to marry a partner with tertiary education and their children have better early childhood development outcomes. In particular, we document a 36% reduction in under-three mortality as well as cognitive development gains of 0.3 standard deviations of test scores once children are of school age. The primary mechanism seems to be that more-educated caregivers have the knowledge and skills to stimulate their children’s cognitive development and safeguard their health. In contrast, we find no evidence of impact for the children of male scholarship recipients. This is likely driven by the fact that male scholarship recipients marry “down”, so the caregiver of their children (typically the mother) is not more educated. Together, these results suggest a key role for maternal education (and maternal education alone) in child outcomes. We estimate the benefit-cost ratio for secondary school scholarships and find that the impact on child survival alone is sufficient to make them a highly cost-effective investment.

*Presentations:* NBER Education Program Meeting (Fall 2022)

## SELECTED WORK IN PROGRESS

### [Scaling two-sided markets: Evidence from a market-level randomized controlled trial on digital retail payments in Tanzania](#)

with Phillip Roessler, Russell Toth, and Tiffany Tsai

Two-sided or platform markets often face a “chicken & egg” problem where there is little value in adoption for one side unless the other side adopts as well. This coordination problem exacerbates the social learning frictions that stall the diffusion of new technologies, since a potential user must learn about the technology and about the other side’s adoption intentions if they hope to accurately forecast the platform’s value to them. In this paper, we partner with one of the largest mobile banking platforms in Tanzania to run a market-level experiment across 300 markets to test interventions aimed at catalyzing adoption of an important two-sided platform, digital retail payments. The experimental design parses the role of network effects and social learning frictions in stalling adoption, and tests for complementarities between interventions addressing these forces. We will measure the adoption and usage of digital retail payments customers through household surveys and administrative data provided by our partner. Since the Bank of Tanzania is launching an interoperable instant payment system (TIPS) in early 2024, the study also provides an opportunity to offer insights into the amplifying effects of interoperability on digital payments.

*Project stage:* This study is fully funded, the baseline survey with 1200 merchants and 1800 customers is complete, the intervention is scheduled for February 2024, and the first follow-up survey is scheduled for May 2024.

*Featured in:* [Innovations for Poverty Action Blog “Most Tanzanian Merchants Believe That Digital Retail Payments Will Benefit Their Business. Why Are They Still Using Cash?”](#)

### [Algorithmic Truth Serum: Testing a novel screening method for digital workers from India](#)

with Jonas Metzger

We propose a novel information elicitation mechanism for the setting in which many individuals, about each of whom we have only little information, apply for a desirable treatment (such as a loan, job, or grant). Our mechanism incentivizes applicants to reveal additional information about themselves, which allows it to make a more efficient allocation decision than would be possible based on the verifiable information alone. The mechanism consists of two machine learning models, both of which can be estimated *without* access to any additional ‘ground-truth’ data: the first is a payment rule incentivizing truthful reports based on the available information, which is identified by a conditional moment restriction. The second is a decision rule which is robust to strategic misreports. Intuitively, ATS alleviates the adverse-selection problem by offsetting asymmetric information about an applicant’s characteristics with a reverse information asymmetry about the population distribution of these characteristics. In a Monte Carlo study, we show that the estimated models perform well at their respective tasks under realistic assumptions. We then experimentally evaluate the ability of ATS to increase online labor market access, by identifying productive online freelancers from India without requiring any previous work history.

*Project stage:* Data collection for this study is complete.

## GRANTS

**Total grant funding: \$1,897,133**

<i>Role</i>	<i>Funder</i>	<i>Research Project</i>	<i>Funding</i>
Co-PI	USAID Development Impact Ventures	Intergenerational impacts of secondary education	\$973,460
Co-PI	Bill and Melinda Gates Foundation	Scaling two-sided markets	\$582,129
Co-PI	JPAL Post-Primary Education Initiative	Intergenerational impacts of secondary education	\$151,525
Co-PI	World Bank Strategic Impact Evaluation Fund	Informing mothers about the benefits of parent-infant conversations	\$99,892

PI	Advanced Award, Stanford King Center	Do social image concerns affect technology diffusion?	\$21,807
Co-PI	Weiss Fund for Research in Development Economics Grant	Informing mothers about the benefits of parent-infant conversations	\$18,309
PI	FIT IN Initiative Grant, TSE	Do social image concerns affect technology diffusion?	\$15,000
Co-PI	Exploratory Award, Stanford King Center	Algorithmic Truth Serum	\$10,000
PI	Early Career Researcher Grant, IGC	Do social image concerns affect technology diffusion?	\$8,779
PI	George P. Shultz Dissertation Fund	Do social image concerns affect technology diffusion?	\$6,562
PI	Exploratory Award, Stanford King Center	Do social image concerns affect technology diffusion?	\$5,670
PI	Graduate Research Opportunities Grant	Do social image concerns affect technology diffusion?	\$4,000

## TEACHING

- 2021 Teaching Assistant for Gopi Goda and Rebecca Staiger, PUBLPOL 105/205 (Empirical Methods in Public Policy).  
2019-20 Teaching Assistant for Christine Chee, Stanford University, PUBLPOL 105/205 (Empirical Methods in Public Policy).  
2017-18 Teaching Assistant for Esther Duflo, MITx MicroMasters program in Data, Economics, and Design of Policy (DEDP), 14.73x (The Challenges of Global Poverty)

## RELEVANT POSITIONS

- 2016-18 Research Assistant for Esther Duflo, MIT  
2015-16 Research Fellow, Stanford India Health Policy Initiative  
2014-15 Research Assistant for Petra Moser, Stanford University

## SERVICE

- 2021-22 Mentored students as part of WE-Rise (Women's Empowerment and Rational Inclusion), a Stanford student organization, program advising economics undergraduates from Spelman College, a historically black liberal arts college for women.  
2022-23 Mentored a Nigerian student as part of the Graduate Applications International Network Program (GAIN), a program supporting prospective graduate students from countries across Africa in applying for PhD programs in economics and related fields.