CEGA

Annual Report
2015-2016

We design and test solutions for the problems of poverty.

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The Center for Effective Global Action (CEGA) is a hub for research on global development. We design and test solutions for the problems of poverty, generating actionable evidence for decision-makers. Our West Coast-based network of over 70 academic affiliates uses rigorous field trials, behavioral experiments, and tools from data science to measure and maximize the impacts of economic development programs throughout the world.

Girl helping her family
in a marketplace in
Chichicastenango, Guatemala.
Photo: Lauren Russell

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CEGA is a network of scientists and engineers who are advancing the frontiers of global development. We produce rigorous research and innovative technologies that reduce poverty and promote equitable growth.

In the last year, we invested more than $5 million in projects led by researchers in our network. We convened decision-makers to learn and share at over 35 events around the world, and we provided training for hundreds of researchers in developing countries — not only in the design of interventions and field experiments, but also in reproducible research methods. Through outreach and partnership, we generate ideas, implement experiments, and translate proven ideas into action to improve policies and programs for millions of people in developing countries.

As you will see in the coming pages, CEGA has begun to emerge as a leader in technology and innovation for global development. We recognize that economic growth and welfare are increasingly driven by big data, algorithms, digital services, and real-time communications. And so we are working across disciplines and sectors to create technology-driven policies, processes, products, and services that empower the poor and grow economies.

To institutionalize and deliver these solutions at scale, we are building networks of leading researchers in Sub-Saharan Africa, South and Southeast Asia, and Latin America — whose influence and expertise are essential for identifying policy priorities, testing ideas, and mainstreaming new solutions. We are also pursuing new strategies to transform the data exhaust from field experiments into visualizations, dashboards, predictive algorithms, and other tools that policy-makers can use.

Thank you for taking the time to learn about our work here at CEGA. As we move forward, we welcome your reflections, suggestions, and contributions in generating solutions for global poverty.

Temina Madon
Executive Director
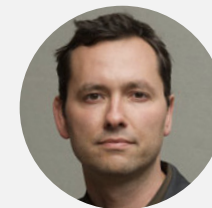
Edward Miguel
Faculty Director

Agricultural Technology Adoption Initiative

$300,000
in research funding awarded in 2015-2016 to support new studies.

10
randomized evaluations synthesized in the *Make It Rain* policy report.

Seventy percent of the world's rural poor rely on agriculture for their livelihoods, and agricultural growth can help lift millions out of poverty and hunger. Yet there is limited evidence on how to improve the productivity, profits, and welfare of poor, small-scale farmers. The Agricultural Technology Adoption Initiative (ATAI) is a portfolio of 40+ randomized experiments focused on rural development in Sub-Saharan Africa and South Asia. Co-led by CEGA and the Abdul Latif Jameel Poverty Action Lab, ATAI is producing rigorous evidence to improve agricultural livelihoods and nutrition in 14 low- and middle-income countries.

ATAI launched in 2010, and the majority of the initiative's studies are still ongoing. However, there have already been successful scale-ups of ideas developed by ATAI researchers. In 2015, the results from an evaluation of stress-tolerant rice in India motivated the Odisha State Seed Corporation to increase production of this variety by 20-fold, to more than 6,000 metric tons. Also in the last year, organizations in Kenya began scaling up collateralized loans for water tanks and precision agriculture extension services, two products developed by ATAI researchers.

In 2015-2016, findings were shared directly with decision-makers from the US Agency for International Development, the World Bank, the US Department of Agriculture, Governments of Zambia and Kenya, UK Aid, the Bill and Melinda Gates Foundation, 3ie, World Vision, Root Capital, and many more.

In early 2016, the initiative launched a synthesis of all evidence generated to date, called the "Emerging Insights" report. This four part series distills lessons from more than a dozen studies of agricultural training programs, credit and savings products, and weather risk reduction strategies. To ensure these findings reach policy makers, we re-designed the program's website, atai-research.org, to more effectively share lessons and results.

Energy and Economic Growth

EEG is co-managed by CEGA and Oxford Policy Management (OPM). In its first year, the team has focused on producing 18 state-of-knowledge papers on topics ranging from energy access and clean energy technology, to utility governance and regulation. A policy workshop in Tanzania this summer engaged over 40 senior policymakers, development professionals, and energy researchers from Sub-Saharan Africa to help shape the EEG agenda from a practitioners' perspective.

More than a dozen CEGA affiliates are leading ongoing studies in climate and energy.

In addition to our work in energy, CEGA faculty contribute to a growing body of evidence on the effectiveness of measures designed to curb air pollution, promote urban green growth, and increase the resilience of small-holder farmers in the face of weather shocks. This research will contribute to future CEGA initiatives on climate change and the environment.

$15 million

5-year-long research initiative, funded by UK Aid.

18

policy reports under development by leading energy researchers.

With growing demand for energy in low- and middle-income countries, it is important to understand the complex trade-offs between economic growth and environmental protection. In 2016, CEGA launched a five-year program on Energy and Economic Growth (EEG), funded by the UK Department for International Development (DFID), to explore how investments in large-scale energy systems can contribute to poverty alleviation and "green" economic growth.

Household electrification in Siaya, Kenya. Photo: Ken Lee

Financial Inclusion Lab

$250,000

in research funding for FinTech evaluations in Mexico and the Dominican Republic.

200

stakeholders engaged at events organized with Google, the World Bank, and other partners.

CEGA formally launched the Financial Inclusion Lab (FIL) in 2014-2015. The initiative generates scientific evidence to reduce vulnerability and promote equitable growth for under-banked individuals around the globe. In two years, FIL has grown to include a range of partners and donors working together to develop financial products for households and firms in emerging markets.

As part of the initiative, CEGA data scientists have worked with the technology company Visa to develop and test methods for indirectly measuring financial inclusion, using transactions data from prepaid debit cards distributed in developing markets. The team also presented a report on the benefits and challenges of digitizing government-to-person payments to the Vice President of the Dominican Republic, resulting in government approval of several new, experimental products for savings and credit to be evaluated by CEGA researchers.

Buyers and sellers at a market in Mexico. Photo: Basho Mosko

Two successful events have bolstered FIL this year. In May 2016, CEGA hosted its annual Evidence to Action (E2A) conference on "FinTech for Global Development" at Google San Francisco, with participation from 25 policymakers and 46 private sector partners. In June, CEGA and the World Bank co-hosted a workshop to explore a joint research agenda for financial inclusion, further exposing the need for coordinated work in this space.

Behavioral Economics in Reproductive Health Initiative

Since its 2013 launch, BERI has funded six evaluations in Sub-Saharan Africa. The portfolio includes a birth planning and commitment program for Kenyan women, to increase delivery in facilities; social reminders for childhood immunization in Sierra Leone; and a goal-setting exercise for adolescent girls in Tanzania. In 2016, CEGA built on this portfolio by funding another six studies on behavioral economics in global health, more broadly – including studies of worker safety in Bangladesh, take-up of prostheses in Rwanda, and child marriage in Pakistan.

Child receives polio vaccine in Kamuli, Uganda. Photo: Brandie Nonnecke

$190,000

in research funding awarded to CEGA affiliates and graduate students in 2015-2016.

6

new studies in Kenya, Bangladesh, Pakistan, Rwanda, Sierra Leone, and the US.

Central to CEGA's work in the health sector is the Behavioral Economics in Reproductive Health Initiative (BERI), which integrates tools from psychology and economics into the delivery of family planning and health services for women and adolescents. The initiative provides catalytic funding to researchers to test novel behavioral strategies that improve reproductive outcomes for low-income families.

In Fall 2015, CEGA hosted the second annual conference on Behavioral Economics in Global Health, with support from UC Berkeley. The one-day event explored topics on health and behavioral decision making, and convened over 70 researchers and practitioners across economics, psychology, and public health. In Spring 2016, BERI presented ongoing research at multiple venues, including at the International Conference on Family Planning in Indonesia and the Consortium of Universities for Global Health meeting in San Francisco.

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Responsive, transparent governments are critical for sustainable economic growth. In 2015, CEGA launched a new research portfolio on public sector institutions, to identify policy reforms that can drive inclusive growth and enhance the government service delivery.

$50,000
in research funding for pilot studies in eight different countries.

40
open questions to inspire new research on institutional reform.

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Working Group on African Political Economy

Housed within CEGA's Institutions portfolio is the Working Group on African Political Economy (WGAPE), an international network of researchers combining rigorous methods with deep field expertise in African politics. In Spring 2016, WGAPE hosted its semi-annual conference in DC with the World Bank, providing an opportunity for researchers to receive feedback and guidance on ongoing studies. Upcoming WGAPE convenings include a West Coast meeting in Fall 2016 at Stanford, a supplemental meeting in January at NYU Abu Dhabi, and a national meeting in Spring 2017 at UC Berkeley.

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Economic Development and Institutions

The Economic Development and Institutions (EDI) initiative is funded by the UK Department for International Development (DFID); it will support a coordinated portfolio of randomized evaluations managed by CEGA. The program launched in 2016 with a state-of-knowledge report on governance interventions, identifying 40 outstanding research gaps in the field. CEGA also organized a Spring 2016 matchmaking conference in Washington, D.C. to identify opportunities for embedding experiments within planned interventions and policy reforms. The event drew more than 80 researchers, government officials, and civil society actors.

Experimental priming of nationalism using Malawian flags.
Photo: Amanda Robinson

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Development Impact Lab

80

researchers innovating
across four disciplines.

26

projects in ten
different countries.

In 2015-2016, DIL's research competitions attracted 59
applications from interdisciplinary teams of researchers
in CEGA and beyond. The Lab funded 14 research projects,
ranging from lottery-linked mobile savings products
in Haiti to low-cost air quality sensors for mapping air
pollution in Uganda.

An interactive data visualization for Agrinet, a
partner in Uganda that matches farmers with
buyers in other districts. Image: Ofir Reich

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To better communicate results with policy-makers, CEGA has supported new data visualization projects in 2015-2016, building on DIL research investments.

CEGA's technology and infrastructure portfolio builds
interventions that use engineering, data science, and
economic insights to accelerate development in poor
countries. At the center of this portfolio is the Development
Impact Lab (DIL), launched in 2012-2013 with support
from the US Agency for International Development
(USAID). DIL enhances the impact of tech-driven products
and services by generating a body of evidence to improve
design, deployment, and maintenance of these innovations.

Each of these projects integrates engineering and
the natural sciences with lessons from development
economics, political science, and other social sciences.
This approach — called Development Engineering — has
been institutionalized through a new open access journal,
Development Engineering, launched by CEGA in Spring 2016
at the UNESCO Tech4Dev Conference in Switzerland.

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CEGA is unique in its mission to provide training and research opportunities for top developing country investigators, through our Global Networks portfolio. The portfolio currently includes three programs that equip researchers in universities, governments and NGOs with the skills needed to carry out rigorous, policy-relevant evaluations in their home countries.

$200,000
in research funding to scholars from developing countries.

100
attendees at the Impact Evaluation Summit in Nairobi.

350
people trained in research methods in 2015-2016.

3
visiting fellows from East African universities.

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East Africa Social Science Translation Collaborative

In 2015-2016, the East Africa Social Science Translation (EASST) Collaborative hosted three Visiting Fellows at UC Berkeley, including faculty members from universities in Ethiopia, Uganda, and Tanzania. The 2016 EASST research competition awarded $200,000 to four projects led by East African and CEGA co-investigators, supporting studies of trade cost reductions in Ethiopia, screening for noncommunicable diseases in Tanzania, involuntary teacher transfers in Uganda, and women's empowerment programs in Ethiopia.

EASST Fellows (from left to right) Hailemariam Ayalew Tiruneh, Dr. Saint Kizito Omala, and Dr. Fredrick Manang. Photo: Kuranda Morgan

Also this year, former EASST Fellows conducted impact evaluation courses for East African students and development professionals in Uganda and Ethiopia, reaching more than 300 students and researchers. Fellows also led trainings for African policy-makers sponsored by UNICEF and the World Bank. In July 2015, EASST hosted a week-long Evidence Summit in Nairobi, Kenya commemorating 20 years of randomized experiments in the country. Co-hosted by the World Bank, the African Population and Health Research Center (APHRC), Innovations for Poverty Action (IPA), and The Abdul Latif Jameel Poverty Action Lab (J-PAL), the event featured talks by EASST fellows as well as researchers from CEGA, the World Bank, IPA, and Harvard University. More than 100 local researchers, policy-makers, and development practitioners attended.

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BRAC-CEGA Collaborative

This year CEGA also continued its partnership with Bangladesh-based BRAC, the largest global development NGO in the world. To date, the BRAC-CEGA Collaborative has trained eight BRAC visiting researchers at UC Berkeley and has launched five rigorous studies of BRAC programs in Bangladesh, South Sudan, Uganda, and Tanzania. In 2015-2016 the program focused on research dissemination, including development of a joint website to share findings from complete and ongoing studies.

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Berkeley-IDB Collaborative

This year marked the culmination of CEGA's partnership with the Inter-American Development Bank (IDB), known as the Berkeley - IDB Collaborative (BIC). To provide IDB staff with training in applied data analysis and field methods, CEGA developed a Small Private Online Course (SPOC) on the EdX platform. The private course was used to train IDB professionals and students at UC Berkeley, and this year it was converted into a Massive Open Online Course (MOOC). The course, _Applied Impact Evaluation_, is a companion resource for the 2016 edition of the _Impact Evaluation in Practice_ textbook, published by the World Bank and the Inter-American Development Bank.

Goldilocks

In 2016, CEGA collaborated with Innovations for Poverty Action (IPA) to launch the Goldilocks Toolkit, an online resource for development organizations. Through case studies on more than a dozen non-profits and social businesses, Goldilocks demonstrates how to build "right fit" systems to track the performance and impact of development programs. CEGA contributed a series of technology scans to the toolkit, describing how mobiles, sensors, and satellites are increasingly used for monitoring and evaluation.

Fields being monitored in the One Acre Fund study. Image: Marshall Burke and David Lobell

3
how-to guides for using sensors, satellites, and mobile data in research.

3
case studies, with applications in Kenya, Liberia, and Sudan.

Traditional methods for measuring poverty are often error-prone and can be costly and challenging to implement. CEGA's Measurement portfolio focuses on enhancing the integrity and diversity of data used in global development research, by promoting the use of tools and technologies like wireless sensors, satellites, and 'big data'.

As part of Goldilocks CEGA also funded three partnerships with technology companies and NGOs to pilot new tools for measuring development outcomes. Projects include the use of high resolution satellite imagery to predict Kenyan farmers' crop yields, the capture of high-frequency market price data using mobiles in Liberia, and the use of wireless sensors to track the adoption of improved cook-stoves by households in Sudan. Each project has now been published in the academic literature, accompanied by a case study on the Goldilocks website.

Berkeley Initiative *for* Transparency *in the* Social Sciences

$550,000
in funding for meta-analysis and research transparency studies.

100
students reached through the new Catalyst Program.

To foster open, reproducible research practices within the scientific community, CEGA is working across disciplines to train young researchers, develop new research tools, and promote widespread change in academic norms. The Berkeley Initiative for Transparency in the Social Sciences (BITSS), the anchor of our Transparency sector, has grown into an international network over the last year, reaching hundreds of scholars globally.

This past year, BITSS launched the Social Science Meta-Analysis and Research Transparency (SSMART) grant program and the Catalyst Program, two competitive funding opportunities with the goal of cultivating transparency in research. SSMART, a first-in-class "meta-research" competition, funds studies of the practice of science. Two SSMART competitions in 2015-2016 awarded a total of $550,000 to 20 projects throughout the world. The Catalyst Program enrolled 25 participants in 2015-2016, accelerating the training of the next generation of social scientists with the goal of strengthening the scientific evidence that informs social and economic policies.

In 2015-2016, BITSS organized 12 training events and conferences, reaching more than 500 students, faculty, researchers, and policymakers worldwide. Highlights include the BITSS Annual Meeting and Summer Institute, a Research Transparency Workshop with IPA in Kenya, and a Data Sharing Forum with the California Judicial Agencies. BITSS also published an online course on transparency. With 40 videos, the course offers an overview of topics like publication bias, pre-analysis plans, and replication.

Attendees of the 2016 BITSS Summer Institute.

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Featured Events

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North America

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Africa

July 8-10, 2015
East Africa Evidence Summit
Nairobi, Kenya

March 7-8, 2016
BITSS-IPA Transparency and
Reproducibility Workshop
Machakos, Kenya

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Europe

May 2-4, 2016
Launch of the Journal of
Development Engineering
Lausanne, Switzerland

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Middle East

January 6-9, 2016
Working Group in African
Political Economy Workshop
Abu Dhabi, UAE

June 6-7, 2016
Economic Development and
Institutions Conference
Paris, France

July 27-31, 2015
Workshop on Institutionalizing
Impact Evaluation at the IDB
Berkeley, California

October 16, 2015
Conference on Behavioral
Economics in Global Health
Berkeley, California

November 6-7, 2015
Working Group in African
Political Economy Workshop
Tempe, Arizona

December 10-11, 2015
BITSS Annual Meeting
Berkeley, California

March 5, 2016
Pacific Conference for
Development Economics
Stanford, California

April 13-14, 2016
Economic Development and
Institutions Workshop
Washington, D.C.

April 29-30, 2016
Working Group in African
Political Economy Workshop
Washington, D.C.

May 9, 2016
Evidence to Action: FinTech
for Global Development
San Francisco, California

June 8-10, 2016
BITSS Summer Institute
Berkeley, California

June 28, 2016
World Bank and CEGA Financial
Inclusion Research Workshop
Washington, D.C.

Financials

Funding Sources

73k	200k	500k	2.6m	3m
Campus	Contract	Gift	Government	Foundation

Expenses

51k	70k	300k	400k	5.5m
Students	Dissemination	Fellows	Operations	Research
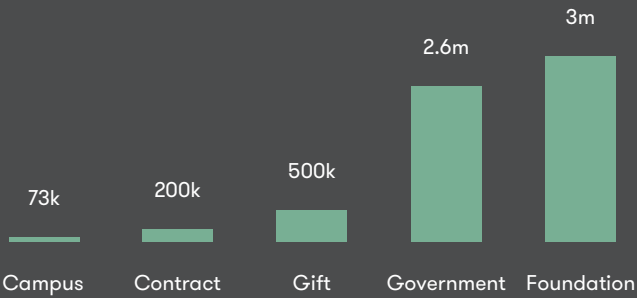
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Saint Kizito Omala
Makerere University

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Affiliates

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Jack Colford	Ethan Ligon
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