

What's Next
Data for Change
By Suzie Boss

Stanford Social Innovation Review
Spring 2012

Copyright © 2012 by Leland Stanford Jr. University
All Rights Reserved

women, who make up about 40 percent of the staff. Many employees take part in informal literacy education after work. As more women move into mid-level management roles, “that sets an example for their families,” she says. “We’re looking at this as a multigenerational endeavor. It’s exciting to see the ripple effects.” ■

BUSINESS

Litmus Test for Entrepreneurs

► Walk into the crowded Kariakoo market in Dar es Salaam, Tanzania, and you’re likely to see 25 traders in a row selling similar goods. If you’re a banker with money to loan to a small business, you naturally want to pick

so-called “missing middle” of finance—too big for microfinance and too small to attract attention from most commercial lenders. To help banks assess risk of first-time borrowers in developing countries, EFL has devised a psychometric test that can be administered on-site at spots like Kariakoo, using a tablet computer or mobile phone.

After several years of academic research followed by trials around the globe, the test is now rolling out in a big way. Standard Bank, South Africa’s largest bank, has contracted to use the EFL test in 15 countries across sub-Saharan Africa during the next two years. That could unlock as much as \$1 billion for borrowers “who wouldn’t have been lent to otherwise,” DiDonna

jockey, not the horse.”

To carry out its assessment, EFL has crafted a large pool of short-answer and multiple-choice questions, deliberately written to prevent applicants from gaming the test. Scoring assesses two broad criteria. “Willingness to pay is about ethics and honesty. Ability to pay looks at optimism, drive, intelligence, and business skills,” says DiDonna.

There’s no magic wand preventing default, he cautions. Instead, the test provides data enabling lenders to assess risk, even when traditional credit information is lacking. EFL estimates that its test enables banks to cut default rates by an estimated 25 to 40 percent, compared with more traditional loan approval processes.

EFL began as an academic research project by Bailey Klinger and Asim Khwaja of Harvard Kennedy School’s Center for International Development. With early funding from Google.org, they were able to turn existing research on entrepreneurship into a psychometric test—similar to a pre-employment screening—that takes from 30 to 45 minutes to administer. DiDonna joined in 2010 to help spin off EFL Global as a for-profit enterprise, funded primarily by licensing the test to bank clients.

EFL is also attracting attention from nonprofits working to boost the fortunes of small- and medium-sized entrepreneurs as a development strategy. A winner in the G-20/Ashoka Finance Challenge competition in 2010, EFL has found interested partners in organizations such as TechnoServe, which trains entrepreneurs in the developing world.

Andrés Rico of TechnoServe says his organization has partnered with EFL in entrepreneurship development efforts in South America, Africa, Central

America, and Mexico. In TechnoServe’s business plan competitions, the EFL test now accounts for 15 to 25 percent of the total score in the first round of entrepreneur selection. For example, Rico says the test has helped TechnoServe evaluate dairy farmers in northern Mexico “in an effort to understand their commitment and capability to fulfill financial obligations.” ■

TECHNOLOGY & DESIGN

Data for Change

► Round up a roomful of statisticians and technologists to dive into data for a weekend and intriguing things can happen. An opaque spreadsheet about traffic stops in New York City, for instance, morphs into an easy-to-read map of potential racial profiling hot spots.

“Working quickly can be an impressive trick, but the real value is when organizations start to see what you can do with data. Every organization needs data in its DNA,” says Jake Porway, co-founder of Data Without Borders (DWB).

Since its launch in mid-2011, DWB has demonstrated not only the value of bringing data science to social change organizations, but also the willingness of technical experts to donate their time to good causes. Porway, with a PhD in statistics and a day job in *The New York Times* R&D Lab, started DWB to create more meaningful volunteer outlets for people who share his credentials. Weekend hackathons didn’t “scratch the itch,” he says. “Those events generate a lot of excitement, but the products coming out of them tend to be things like new apps for restaurant reviews.”

Meanwhile, NGOs lag behind



Pius Ndegwa, a clothes wholesaler in Nairobi, received a bank loan after taking the EFL test. Sales tripled in 2011.

the one most likely to make repayments. But without formal credit histories to compare, says Dennis “DJ” DiDonna, chief operating officer of Entrepreneurial Finance Lab (EFL), “how can you tell which one has the grassroots skills to be successful?”

This mystery has hamstrung entrepreneurs who fall into the

says. Individual loans, which start at about \$5,000, are typically short term and unsecured.

More pilots are under way in Mexico, South America, and Pakistan, with Southeast Asia the next likely market. Across these diverse cultures and contexts, EFL assesses a core set of traits to identify bankable entrepreneurs. “Business ideas are important, but what matters more is the person behind the idea,” says Colin Casey, emerging market analyst for EFL. “We look at the

the for-profit world in harnessing data and using analytical tools to make better decisions. “Most nonprofits don’t have the resources to bring this expertise in-house,” says Lucy Bernholz, visiting scholar at the Stanford Center on Philanthropy and Civil Society. “But nonprofits have tons of data. They are a critical part of our collective data ecosystem.”

Porway launched DWB with a blog post that went viral, helped along by tech guru Tim O’Reilly, among others. “All of a sudden, organizations were flooding my inbox and data scientists were lining up to get involved,” he says.

DWB co-founder Drew Conway says he’s typical of those attracted to the new organization. A graduate student at New York University, he also runs an open-source statistical computing group. “There are a lot of us who pay the bills with our day jobs, then work on what’s meaningful at 4 a.m.,” he says.

At one of DWB’s first events, Conway served in the role of “data ambassador” for a UN initiative called Global Pulse. In an effort to detect world problems more rapidly, Global Pulse conducted a large-scale mobile survey and wanted help analyzing results. “We helped them visualize the data to get to a more granular level of understanding,” Conway explains. Results were later shared with the UN General Assembly, leaving DWB “feeling like a proud parent,” Porway says.

That wasn’t the only outcome. DWB volunteers also brought “a more dispassionate view” to their analysis of UN data, Conway says. He pointed out the limitations of a survey that asks people to opt in, in exchange for mobile minutes. “That doesn’t accurately take the mood of a billion people.

You need to understand the limits when you talk about data.”

Getting organizations to ask better questions is a likely outcome of DWB’s efforts. “Questions never stop coming when you start looking at data,”

Porway says. Turning raw numbers into visual representations, for instance, “helps you understand connections much more quickly. But visualization is really the beginning point,” he says. “It’s where you can begin to compare things in an otherwise opaque mist of numbers.”

During 2012, DWB plans to continue hosting weekend data dives in a handful of cities while also embarking on longer-term projects with nonprofit partners.

Bernholz, who serves as an DWB advisor, says the organization “has tremendous potential. The successes they have with early adopters will send a strong signal throughout the sector that data matter, that nonprofits have data, and that they can improve their own work and their communities by learning how to share it, use it, and put it to work.” ■

ENVIRONMENT

Shrinking Your Plastic Footprint

▶ Shoppers in the market for a tube of lipstick may soon be able to narrow their selection by comparing not just color and price, but also how much plastic various manufacturers use. A cosmetics maker from the United Kingdom is the first business to agree to measure its “plastic footprint,” using tools developed by the Plastic Disclosure Project (PDP).

“If you don’t measure something, you can’t manage it,” explains Doug Woodring, founder of the international project that launched at the 2011 Clinton



Global Initiative. As a first step toward plastic reduction, PDP encourages companies to calculate their baseline footprint by tallying their use of plastics for manufacturing, packaging, and shipping.

“We’re not saying that anyone has a good or bad number,” Woodring says. “Let’s say your number this year is 100. Then next year, you get rid of some packaging and it drops to 90. That’s a great story.” The initiative is voluntary and nongovernmental. “We’re trying to do this without saying ban this or tax that,” he adds. Instead, PDP plans to leverage consumer and investor interest in brands associated with using less plastic.

PDP is a project of the nonprofit Ocean Recovery Alliance, based in Hong Kong, which has brought global attention to the giant plastic trash patch floating in the Pacific Ocean. Although the PDP website features images of plastic-strewn beaches and polluted waters, the organization is trying to take a neutral tone in communicating with companies. “We don’t say, ‘Don’t use plastic,’” Woodring says. “We know it’s lightweight, cheap, and durable. But if we’re not thinking about what happens to this stuff for the next 200 years, we’re doing ourselves a disservice. We need to look at the end life of things.”

Some businesses have already started thinking about redesigning products and packaging to remove unnecessary plastic. “There’s a lot of blatant

waste,” Woodring says. He predicts PDP will enlist 150 companies from 15 countries during 2012. They won’t all be manufacturers. PDP is also reaching out to hospitals, hotels, airlines, and others

that may be surprised by how much plastic they touch in the course of doing business.

Consumers are likely to pay attention to plastic-reduction stories. “Plastic has a high consumer touch point. Kids know this material. It’s visible, unlike carbon,” Woodring says. “When companies get out in front and show they’re leaders, we think they’ll be rewarded.”

Socially responsible investors are just beginning to pay attention to plastics. “We think investors will see a company’s plastic footprint as a valuable piece to look at in yearly investment decisions,” Woodring predicts. PDP surveyed investors last year to gauge their attitude toward plastic. “At first, their reaction was, ‘Why should we care?’ But after we talked with them about environmental issues, wildlife issues, as well as opportunities for new investments, then 90 percent said yes, they would want to know [about a company’s plastic footprint].”

Along with reducing plastic use, PDP is keen to encourage innovation when it comes to recycling and reusing the petroleum-based material. If plastic is treated as a secondary raw material instead of waste, Woodring says, “then someone out there can make value from collecting, gathering, sorting, and having someone use it.” An estimated 15 million people around the world currently survive by sorting garbage. With a refocus of their energy, today’s trash pickers could become part of tomorrow’s plastic reuse industry. ■