

Project Leaders Professor Phil Roessler, <u>proessler@wm.edu</u> Professor Fiona Shen-Bayh, <u>fshenbayh@wm.edu</u>

The Digital Inclusion & Governance Lab at William & Mary's Global Research Institute undertakes rigorous, policy-relevant research on the impact of digital technologies on society, politics, and the economy. DIGLab researchers employ a range of methodological tools, from randomized-controlled trials to textual analysis, to better understand how to increase digital inclusion and leverage digital tools to maximize societal benefits in the five following focus areas.

- 1.) Bridging the digital divide: As far and fast as the digital tech revolution has spread globally, key disparities in access and use persist. One of the most stubborn is the mobile gender gap. DIGLab researchers working in Tanzania, Malawi and Uganda have been fielding the first-of-its-kind experiments targeting the smartphone gender gap—demonstrating the substantial economic costs of this digital divide and how to effectively address it. (See more below.) Another critical inequity is disparities in broadband and the constraints irregular access to internet connectivity places on productivity. The digital divide is not only a problem affecting emerging economies. It represents a critical constraint to learning, employment, empowerment, and economic growth in the United States as well.
- 2.) Digital tools for climate change risk-mitigation: Climate change represents an unprecedented threat to livelihoods, economic development, and social cooperation. This research stream offers actionable insights into how digital technologies can mitigate climate change impacts by reducing the costs of risk-sharing, increasing the accessibility and uptake of insurance, and facilitating innovative governance solutions to environmental problems, such as managing forests or adjudicating pastoralist grazing rights.
- 3.) Digitization, text-as-data, and governance: Recent transformations in digital tech and the increasing availability of digital data have created opportunities to analyze governance in the

Global South. One of the most important is the digitization of government archives, which provide researchers direct access to text records that might otherwise have been costly to find or inaccessible. Such data present the opportunity to enhance understanding of the most pressing challenges confronting emerging democracies, from judicial decision-making to social policy.



- **4.)** Interoperable payments and financial inclusion: In many emerging economies one of the key benefits of owning a mobile phone is for sending and receiving money. The next frontier in digital financial services is the deployment of interoperable payment systems, which enable seamless, instantaneous transactions and hold great promise to accelerate economic growth, financial inclusion, and revenue mobilization. Working with Innovations for Poverty Action and a team of global researchers, the DIGLab is studying the impact of interoperable payment systems in Pakistan, Tanzania, Congo-Brazzaville, and beyond.
- 5.) Social media in emerging economies: Over the last two decades, the advent of social media use on smartphones has transformed communication, coordination, and information-sharing the world over. Existing research suggests that these technologies could have multiple countervailing effects on social trust and cooperation—essential conditions for democracy and economic development. On the one hand, social media use may exacerbate societal divisions and polarization through the creation of "echo chambers" and "filter bubbles" and the spread of divisive content that engenders out-group animosity. At the same time, the use of smartphones and social media can increase individuals' intergroup contact—both virtually and in-person—as well as strengthen cross-group economic ties through increased mobility, occupational change from farming to market trading, and long-distance communication. In line with the vibrant literature on the contact hypothesis, these new social and economic ties may lead to intergroup contact that reduces prejudice and increases cooperation with outgroups. This research stream aims to use randomized evaluations to disentangle these countervailing effects and identify design implications for social media.

RESEARCH IN THE FIELD: STRENGTHENING WOMEN'S SMARTPHONE OWNERSHIP AND PROPERTY RIGHTS IN MALAWI



A couple participates in the Livelihoods of Women Program in Blantyre, Malawi in July 2021 that aims to increase women's smartphone ownership and digital literacy.

One of the core findings from our initial RCTs on bridging the digital divide is getting smartphones into hands of women — and thus closing the gender smartphone gap — brought substantial economic benefits to low-income households. But for these gains to materialize, the women had to retain control of the smartphone. Yet, only some 33% of women had the smartphone on their person at the end of the study. This points to the importance of not just increasing access to tech but strengthening women's property rights over mobile technology and shifting community norms to uphold those rights.

In 2021, supported by a <u>Gates Foundation Grand Challenges Call-to-Action Award</u>, we have replicated our Tanzania study but with greater focus on women's property rights over smartphones. To do so, we have teamed up with the <u>Institute of Public Opinion and Research (IPOR)</u> based in Zomba, Malawi and the <u>Girls Empowerment Network (GENET)</u> based in Blantyre, Malawi to develop a program designed not only to improve women's digital literacy but also strengthen their property rights over smartphones. One way we sought to do this is broaden participation of the smartphone program to include participants' husbands. (See couples' training in below photo). Thus couples could learn together how to use the smartphone technology, including mobile money, the internet and WhatsApp. But just as importantly the couples, in a community setting with other couples, could affirm the smartphones belonged to the women and collectively agree to respect women's property rights—with the goal of shifting community beliefs to uphold digital equality.



Immediate Research Opportunity: Studying the Impact of Scaling Women's Smartphone Ownership in Uganda

In addition to secure property rights, another fundamental challenge to bridging the smartphone gender gap is the high up-front cost of the technology. Research by GSMA's Connected Women program regularly finds cost is the number one barrier to increasing women's smartphone ownership in emerging economies, even as the price of internet-enabled handsets have declined. How, then, to increase access in a sustainable and scalable way? One innovative model is developed by the start-up, KEIPhone, that uses video and static ads to cover the costs of providing women in Uganda with smartphones and solar chargers. To strengthen women's control over the handsets, KEIPhone distributes smartphones to women active in social groups, such as village savings & loans associations (VSLAs)—with the expectation that this may have the effect of not only increasing women's sense of ownership over the handset but also will lead to a shift in social norms about the right of women to own and use smartphones.



Participant in Bushenyi, Uganda receiving a KEIPhone smartphone and solar charger during the pilot at the end of 2021. Photo courtesy of KEIPhone.

After a successful pilot at the end of 2021, in April through June 2022 KEIPhone is scaling its distribution to 4,000 women and 1,000 small and medium-sized enterprises. DIGLab is evaluating this potentially transformational approach. We are looking for a partner to help us study KEIPhone's intervention as the start-up scales in 2022.



Participants in Bushenyi, Uganda testing their new KEIPhone smartphones during the pilot at the end of 2021. Photo courtesy of KEIPhone.