Digital technology for democracy

The digital age has seen an increase in opportunities for citizens to hold governments accountable and to mobilize in the wake of discontent. Yet, over the last decade, the misuse of new technologies to undermine human rights and democratic values has become a global challenge. The opportunities brought about by the expansion of the internet and growth in communications technology have led to democratic backsliding, as authoritarian governments have utilized the growth of new technology to monitor and repress citizens (Shahbaz 2018).

Digital repression, understood as "the use of information and communications technology to surveil, coerce, or manipulate individuals or groups in order to deter specific activities or beliefs that challenge the state" (Feldstein 2021, p. 25), has emerged as a key challenge to global democracy. Digital repression can be used by regimes to maintain power and, more generally, to undermine democratic values and human rights worldwide. To counter this, rights-respecting technology frameworks are viewed as opportunities to strengthen democratic values in digital societies (Wainscott et al. 2021).

Founded in 2018, the Digital Society Project was created to track and report research on the intersection between the internet and global politics. Various indicators show an increasing global trend in governments using technology to repress their citizens. For example, in 2010, 67 governments worldwide were identified as disseminating false information on key political issues at least 50 per cent of the time; this rose to 93 governments in 2021. Likewise, in 2021, 58 governments were identified as sometimes censoring political information by blocking access to certain websites, thereby effectively removing approximately half of the critical political commentary available online. For the same year, 22 governments were reported as having shut down access to the internet several times a year, and 35 governments successfully censored a significant portion of public discontent on social media.

Highlights

- Ensuring that technology and digital ecosystems advance democracy, rather than undermine it, has become a global issue.
- Across the six DRG evidence gap maps, there is currently no available evidence on the impact of policies and programs that encourage digital democracy.
- Two studies were identified that discussed the intersection between technology and democracy; 19 studies were identified that evaluated technology-based interventions aimed at improving outcomes related to democracy.
- New frameworks and legislation on rights-respecting technology have recently been developed by multilateral organizations, though rigorous evidence on the impacts of these regulations is yet to be conducted.

Digital repression is being used more frequently and effectively than ever before. This is no surprise given that digitally repressive governments face fewer protests and remain in power longer than those that do not use such strategies (Frantz et al. 2020). Keremoğlu and Weidmann (2020) note three layers through which autocracies repress citizens digitally: infrastructure, network, and application. At the infrastructure layer, governments can shut down internet access; at the network layer, they can censor information and prevent access to certain platforms; and at the application layer, governments can carry out surveillance of citizens. Examples of the application layer include monitoring through social media and facial imaging technology, which can provide governments with data on dissent and mobilization (Cebul and Pinckney 2021).

Beyond the ways in which governments use these technologies, it is also critical to examine how they are created and accessed. New and improved software for digital repression is being produced by companies in democratic nations and exported to autocracies, with no meaningful consideration of the repercussions of its use in non-democratic contexts (USAID 2021). Without a shared legal framework among democratic actors that can regulate such dynamics at an international scale, the spread of new technologies may be undermining civil society activism and facilitating human rights abuses.
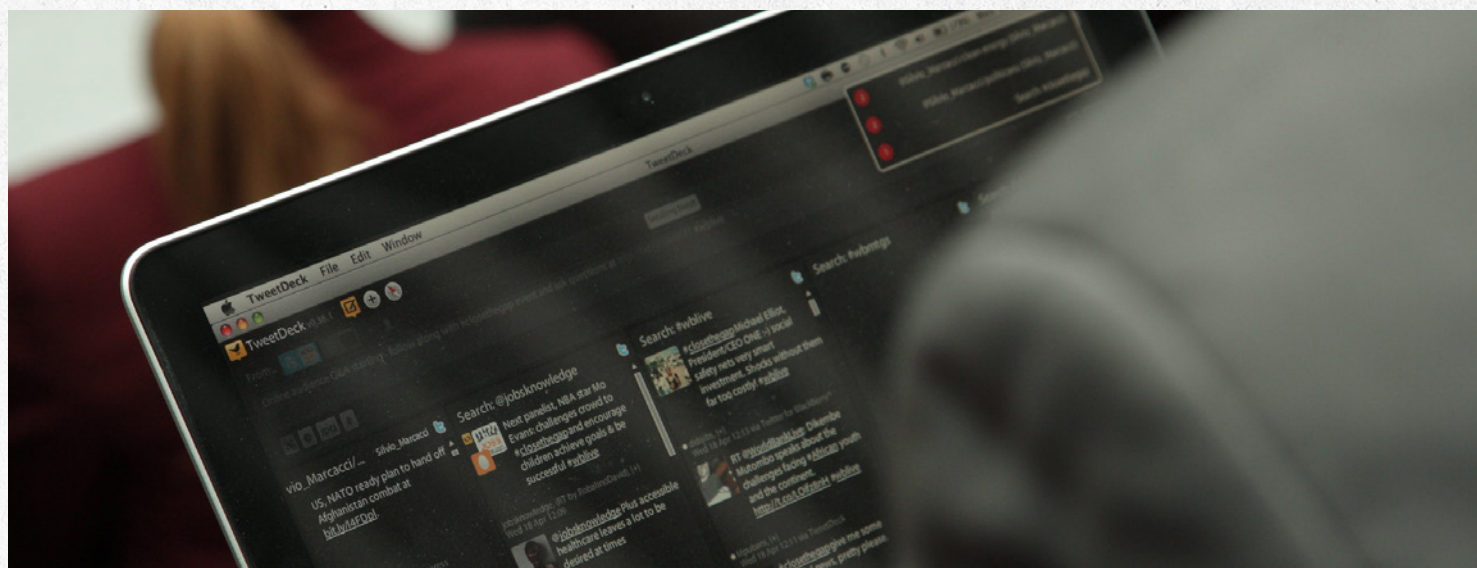
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Digital democracy at USAID

To build resilience to and mitigate digital repression in USAID partner countries, the DRG Center has proposed a new strategic approach: digital democracy. Based on the work of the USAID digital strategy – and employing a "whole of society" approach that engages governments, technology companies and hubs, universities, civil society, and the general public – digital democracy aims to align the development, use, deployment, and governance of technology with international human rights norms and democratic values.

Under the 2021 Summit for Democracy's Presidential Initiative for Democratic Renewal, "harnessing technology for democratic renewal" was highlighted as a key theme, and USAID has requested $70 million over the next two years to establish the Advancing Digital Democracy initiative (USAID 2022). The initiative adopts a digital democracy approach to foster open, secure, and inclusive digital ecosystems that advance, rather than undermine, democracy and human rights.

To strengthen links and embed democratic values and respect for human rights across digital ecosystems,

efforts under the initiative will include supporting the establishment of multi-stakeholder working groups in USAID partner countries (including private sector, government, academic, and civil society representatives), and developing programming through three complementary pillars (USAID 2022):

- "Help governments fulfill their international human rights commitments and advance democratic values through legal and regulatory frameworks that constrain the use of technology for repression and foster the development and use of rights-respecting technology and data.
- Increase investments in and demand for rights-respecting tech innovation by supporting software engineers, tech companies, and researchers to embed respect for human rights and democratic values into tech development, design, and deployment.
- Support civil society, technologists, independent oversight bodies, and the general public to hold governments and companies accountable for protecting and respecting human rights and fostering democratic values across the digital ecosystem."

Objectives and methods of this brief

Given the strategic importance of technology and democracy-promotion efforts, this brief draws on evidence gap maps (EGMs) across the six DRG program areas, with the aim of: (1) mapping and characterizing evidence on key technology issues around the program areas; and (2) identifying and synthesizing available evidence against the three pillars of the "digital democracy" framework.

The six EGMs focused on rule of law, human rights, civil society, independent media, governance, and political competition. For each map, the research team systematically searched for published and unpublished impact evaluations and systematic reviews, and then mapped and described the evidence based on key interventions and outcomes for each sector. The evidence that populated these maps was searched and screened to identify studies of relevance against the three "advancing digital democracy" pillars. Full details of the search, screening process, and results are available in the online appendix.
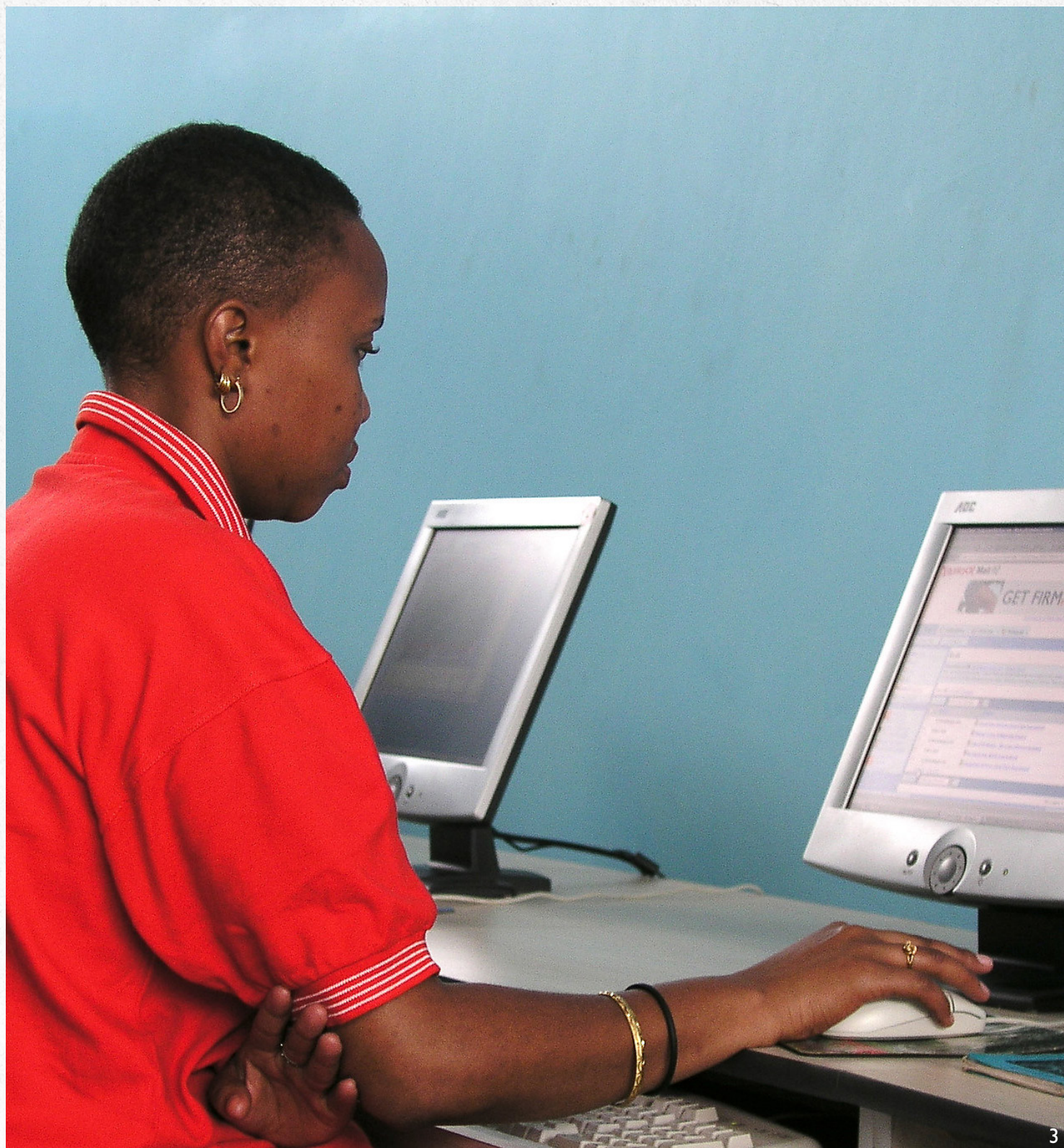
Findings

Our search identified 111 potentially relevant studies across the six DRG EGMs, which were then screened for relevance based on their full text. We were unable to identify relevant studies on government or private sector accountability regarding technology and data issues, or on any of the three "advancing digital democracy" pillars.

However, we identified two studies that included a discussion of the intersection between technology and democracy, and 19 studies that analyzed the effect of using technological tools on democratic outcomes. These studies are discussed below, and further details are presented in the online appendix.

Discussions on digital technology and democracy

Two studies were categorized as having a discussion relevant to the intersection between technology and democracy. A book by Welsh and Farrington (2009) reported the findings of a systematic review of the effects of public surveillance (CCTV, improved street lighting, security guards, place managers, and defensible space) on crime reduction. Focusing on surveillance measures in the UK and US, the authors discussed the tradeoff between privacy and security, concluding that further rigorous evidence is required to judge the impact of surveillance technologies.

As part of an "emerging developments" discussion, the authors also mentioned the introduction of changes to CCTV technology, including facial recognition and digital monitoring. While this is the earliest published work of all studies included in this brief, the authors highlighted the need to ensure that legal and regulatory frameworks are in place to monitor the use of these new technologies.

The second study with a discussion of the broader issue of digital technology and democracy focused specifically on the political effects of the internet in authoritarian regimes. In this PhD dissertation, Shi (2016) evaluated the introduction of the internet in rural Chinese villages. The background section of this work provides an extensive theoretical discussion on at least three assumed benefits of the internet for citizens.

First, the internet provides, to a certain extent, a space for citizens to express their opinions anonymously, as they can create profiles to mask their identities. In doing so, this environment can lower the social cost of expressing opinions, thereby potentially allowing citizens to overcome information barriers and share their feelings truthfully when they are unsure of how others in their community feel about the same issues. Second, the internet may lower barriers to political participation, in terms of both effort and access – particularly in closed regimes where political participation is restricted. Finally, the internet may theoretically weaken censorship and facilitate interaction between citizens through anonymity and the possibility of disseminating uncensored information and events.

Findings

Interventions using technology for democracy

Nineteen studies were identified as evaluations of the impact of technology-based interventions on democracy-related outcomes. These studies have been categorized according to the groups below.

Voter and civic education through technology

The use of technological tools to provide voter and civic education is an approach that seeks to overcome information deficiencies by providing voters with knowledge on political processes and candidate positions (Aker et al. 2017). Information transfer is seen as a mechanism to increase participation during elections and, as a result, the accountability of elected governments (Mudau 2022). Eleven studies across the six DRG EGMs were identified in this category. Amongst other interventions, SMS reminders have been used to provide voters with information on electoral dates (Marx et al. 2021; Harris 2021), and websites, SMS, and social media have been used as platforms to educate voters on candidate platforms (Çarkoğlu 2012; Alao 2012; Moura and Michelson 2017).

Technology to reduce electoral fraud

Technology can be used to counter electoral fraud by reducing the impact of human involvement in electoral processes (Bader 2013) and by increasing transparency in electoral counts (Callen et al. 2015). Four studies were identified under this category: one audited polling station managers (Callen and Long 2015); three others provided technology-based platforms for reporting electoral irregularities (Gonzalez 2016; Aker et al. 2017; Montenegro 2020).

Technology to connect constituents and government officials

Outside of elections, mechanisms are in place for citizens to hold elected representatives accountable. Technological tools can open channels of communication between the government and citizens for reporting, feedback, and monitoring. Four studies evaluated this type of intervention. In one study, SMS was used to educate citizens on public service provision programs (Nussio et al. 2020). In two others, SMS was used to provide avenues of communication between citizens and public officials (Grossman et al. 2014; Grossman et al. 2017). Finally, a cell phone-based application was used to help monitor public service delivery projects (Freire et al. 2020).

Countering disinformation and misinformation education

With the growth of disinformation and misinformation, countering such efforts and building resilient information ecosystems has become an important topic in recent years (Shu et al. 2020; Adjin-Tettey and Johnston 2022). Two studies educated citizens on how to identify disinformation and misinformation. In one, citizens were taught to run reverse image searches through Google and how to navigate a fact-checking website (Badrinathan 2021). In the other, an intervention conducted in India provided citizens with the tools to spot misinformation on Facebook® and WhatsApp® (Guess et al. 2020).

Conclusions and discussion

Overall, the lack of studies identified for this brief highlights the need for greater evidence on the effectiveness of interventions addressing the misuse of technology and data for repression, as well as on opportunities to use technology in support of democracy and human rights. One reason for this dearth of studies is that this is an emerging area of work with a new approach to the types, uses, and challenges of digital technologies; rigorous research has yet to catch up to evaluate and inform this new programming area.

With the need for future evaluation, however, also comes a need for funding and investment to understand what works and how. Among the studies discussed in the brief, evaluations were funded by a multitude of actors including academic institutions, governments agencies, and non-profit organizations (details available in the online appendix). This highlights a cross-sectoral intention to understand the impact of technology-based interventions on democracy. Future research on the impacts of regulations and frameworks on digital democracy could follow a similar approach.

Another potential reason for the small number of studies is that the DRG EGMs did not search for studies explicitly related to the intersection between digital technologies and democracy. Therefore, it is possible that other impact evaluations or systematic reviews have been conducted and published, but that these are not covered by the DRG maps.

Given that this is an emerging area of work, new and rigorous research could be fostered through new initiatives, such as USAID's Advancing Digital Democracy initiative. There are also recent examples of frameworks and legislation on rights-respecting technology that are being implemented on an international scale. For example, in 2019, the Office of the United Nations High Commissioner for Human Rights launched the Business and Human Rights in Technology Project (B-Tech) to provide guidance on how to implement the UN Guiding Principles on Business and Human Rights in the technology space.

Based on four key areas (business models, due diligence and end-use, accountability and remedy, and regulatory and policy responses), the B-Tech project aims to "contribute to addressing the urgent need to find principled and pragmatic ways to prevent and address human rights harms connected with the development of digital technologies and their use by corporate, government and non-governmental actors, including individual users" (UN Human Rights 2019, p. 2).

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Conclusions and discussion

Similarly, the European Union has recently passed the Digital Services Act package, consisting of a Digital Markets Act and a Digital Services Act. The Digital Markets Act intends to regulate the gatekeeper power of digital companies by establishing defined obligations and prohibitions and by creating enforcement mechanisms to ensure companies' compliance (European Commission 2022a). This act focuses on ensuring consumers and competitors are not disadvantaged in the digital marketplace, and that unfair market practices are not enacted by companies with significant influence in the EU digital marketplace.

The Digital Services Act focuses on four sets of measures which complement the Digital Markets Act. The first comprises measures to counter illegal goods, services or content online, including the ability of users to flag these illegal goods or services. The second includes measures to empower users and civil society, including the ability of researchers to access key data from large platforms and transparency measures on the algorithms used to produce targeted content.

The third entails measures to assess and mitigate risks, such as obligations for large platforms and search engines to prevent misuse of their systems, and new safeguarding measures for the protection of minors. The last set comprises measures to enhance supervision and enforcement by the European Commission on large platforms (European Commission 2022b).

Collectively, these two acts establish a new legal framework that aims to create a safer digital space that respects the rights of all digital users, and fosters innovation, growth, and competitiveness within the EU and internationally.

These examples highlight the emerging and ongoing nature of efforts to understand, structure, and regulate the digital space. They also point to the need for regulations and frameworks on democracy within the digital space to be implemented by multilateral organizations, where multiple countries are bound by the regulations set. Legislative initiatives, such as the EU Digital Services Act, could also motivate other countries and regions to establish similar regulatory frameworks.

With the implementation of new frameworks and regulations, one missing piece of information is their impact on countering digital repression and fostering democratic values. Investment in programming and research should be a priority to enable policymakers to make judgements on what works and the direction in which future policy should go.

There is a need to commission and produce rigorous evidence on the activities and programs that work best to ensure that digital technologies are developed, used, governed, and deployed in ways that respect the fundamental rights of citizens across the globe. For example, assessing the extent to which data protection mechanisms are incorporated by multiple actors will be key to ensuring that vulnerable citizens and communities are protected from risks and harm. In addition, developing appropriate and shared measures of key concepts (for example, how to identify rights-respecting technology), and improving access to relevant data for research, would contribute to the production of evidence for decision-making.

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About the brief

The International Initiative for Impact Evaluation (3ie) develops evidence on how to effectively transform the lives of the poor in low- and middle-income countries. Established in 2008, we offer comprehensive support and a diversity of approaches to achieve development goals by producing, synthesizing and promoting the uptake of impact evaluation evidence. We work closely with governments, foundations, NGOs, development institutions and research organizations to address their decision-making needs. With offices in Washington DC, New Delhi and London and a global network of leading researchers, we offer deep expertise across our extensive menu of evaluation services.

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