GLOBAL INFORMATION SOCIETY WATCH 2021-2022

Digital futures for a post-pandemic world

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SUDAN

THE IMPACT OF COVID-19 AND US SANCTIONS ON DIGITAL RIGHTS IN SUDAN

Information and Communication Technologies Syndicate
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Introduction

United States (US) economic and technology sanctions have played a major role in the digital divide and decades of economic isolation of Sudan. In December 2018, peaceful demonstrations started in the country and continued for over eight months, with protestors calling for democracy and the removal of the dictatorial regime of Omer Al-Bashir. In August 2019, a new transitional government was formed, with Abdalla Hamdouk appointed as prime minister of the country. The transitional government faced challenges to meet its new democratic objectives and to balance its authority with that of the military, which had been in power since independence from British colonisation.

The struggle of the transitional government to implement change was worsened by the impact of the pandemic, in a country already hard hit by sanctions. These challenges included failing educational and health care systems, crippled economic development, a collapsed private banking sector, unreliable and very sporadic power generation, and a worsening digital divide. In this context, on 25 October 2021, a year and a half into the pandemic, the Sudanese military led by General Abdel Fattah al-Burhan staged a military coup. While the pandemic catalysed underdevelopment in Sudan, this has been incomparable to the impact of US sanctions on the country. With respect to digital rights, the primary advocacy goal remains mitigating the impact of sanctions, before any meaningful discussion on shifts in digital rights priorities as a result of the pandemic can be possible.

This report discusses the impact of sanctions on Sudanese citizens. It argues that sanctions are an outdated way to force regime change, and that instead of change they end up empowering autocratic regimes in their control over citizens.

The impact of US technology sanctions on Sudan

Sudan has a total diverse population of 44.38 million people with a Human Development Index score of 0.510 in 2019. This ranked the country in the lowest category, positioning it at 170 out of 189 countries and territories. Tribal conflict, a lack of awareness about the importance of education, and chronic underdevelopment contribute to the poor schooling of children in Sudan.[1]

In 1997, the US imposed economic sanctions against the government of Sudan because of its continued sponsorship of international terrorism. These included a comprehensive trade embargo and blocking the assets of Sudan's government.[2]

Sanctions were expanded in 2006 with several new prohibitions limiting the export of US goods, technologies and services to Sudan. Prohibited items were contained in the Commerce Control List (CCL), and included software, telecommunication equipment and e-governance systems, among other technologies.[3]

In 2017, the US revoked longstanding economic sanctions against Sudan. As a result, US persons are able to trade, make transactions and do business with individuals and entities in Sudan. However, these actions established the Bureau of Industry and Security (BIS) in the US as the sole licensing agency for export of items to Sudan.[4]

The president of the new transitional government submitted the statutorily required report certifying that Sudan had not provided any support for acts of international terrorism to the US Congress. After this, the determination regarding Sudan as a state sponsor of terrorism was rescinded, effective 14

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1   UNDP. (2020). *Briefing note for countries on the 2020 Human Development Report: Sudan*. http://hdr.undp.org/sites/default/files/Country-Profiles/SDN.pdf

2   Morland, A. (2017, 6 October). US ends 20 years of sanctions on Sudan. *The New Humanitarian*. https://www.thenewhumanitarian.org/news/2017/10/06/us-ends-20-years-sanctions-sudan

3   Bureau of Industry and Security. (2021, 19 January). Implementation in the Export Administration Regulations of the United States' Rescission of Sudan's Designation as a State Sponsor of Terrorism. *Federal Register*. https://www.federalregister.gov/documents/2021/01/19/2020-29037/implementation-in-the-export-administration-regulations-of-the-united-states-rescission-of-sudans

4   U.S. Department of State. (2022, 4 February). U.S. Relations with Sudan. https://www.state.gov/u-s-relations-with-sudan

ICT infrastructure and access in Sudan

INFRASTRUCTURE & ACCESS
Sudan

Network coverage

Population covered by a mobile-cellular network (2020) **91%**

Population covered by at least a 3G mobile network (2020) **65%**

Population covered by at least a 4G mobile network (2020) **35%**

Mobile phone ownership

Individuals owning a mobile phone (2016) **63%**

Female mobile phone ownership as a % of total female population (2016) **54%**

Male mobile phone ownership as a % of total male population (2016) **70%**

ICT access at home

Households with Internet access at home (2014) **4%**

Households with Internet access at home, rural **NA**

Households with a computer at home (2014) **12%**

Households with Internet access at home, urban **NA**

Source: https://www.itu.int/en/ITU-D/Statistics/Dashboards/Pages/Digital-Development.aspx

December 2020. Yet, still, technology and software licenses under the CCL are restricted, which means they require authorisation from the BIS.[5]

Impact of US technology sanctions on information and communications technology (ICT) infrastructure

Most of the studies reviewed for this report, and interviews conducted with stakeholders, demonstrate the failure of the sanctions imposed on technology to reach their desired result in most cases. Instead, the sanctions resulted in citizens suffering limited access to basic education and health services, and the country facing economic collapse, with the transitional government not being able to progress in the country's development. The COVID-19 pandemic has also revealed the impact of technological isolation when the whole country was completely paralysed during the pandemic lockdown.

For several months before the military coup in October 2021, there had been resentment among the civilian and military and militia leaders, with each blaming the other for the failing economic situation.

The absence of e-government systems had also affected the ability of the transitional government to manage the country's resources and projects. Restricted access to ICTs had impacted the digital divide in Sudan as well. Although five submarine cables pass through country, the internet penetration rate is low compared to countries that access the internet through the same cables in South Asia, the Middle East and other African countries in the region. To put this into perspective, it is estimated that only 35% of the population is covered by 4G in Sudan (see Figure 1), compared to 96% in neighbouring Egypt. The internet is considered as the main enabler to implement e-government services and to provide public services to citizens. However, Sudan's E-Government Development Index (EGDI) score for 2020 was 0.3154 and it ranked 170th out of 193 countries, compared to Egypt with an EGDI score of 0.5527 and ranked at 111th, and Saudi Arabia with a score of 0.7991 and ranked 43rd.[6]

Sanctions have limited any plans for implementing an e-government programme designed by ICT professionals in Sudan. They have prevented the government from forming relationships with

5 https://home.treasury.gov/policy-issues/financial-sanctions/sanctions-programs-and-country-information/sudan-and-darfur-sanctions

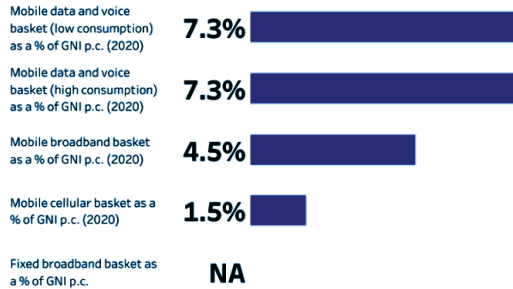6 https://publicadministration.un.org/egovkb/en-us/Data/Country-Information/id/162-Sudan

ENABLERS & BARRIERS
Sudan

ICT prices

Mobile data and voice basket (low consumption) as a % of GNI p.c. (2020)	**7.3%**
Mobile data and voice basket (high consumption) as a % of GNI p.c. (2020)	**7.3%**
Mobile broadband basket as a % of GNI p.c. (2020)	**4.5%**
Mobile cellular basket as a % of GNI p.c. (2020)	**1.5%**
Fixed broadband basket as a % of GNI p.c.	**NA**

ICT skills

Individuals with basic skills (2016)	**3%**
Individuals with standard skills (2016)	**2%**
Individuals with advanced skills (2016)	**2%**
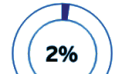
Source: https://www.itu.int/en/ITU-D/Statistics/Dashboards/Pages/Digital-Development.aspx

large international ICT companies from the US and Western Europe, and restricted access to security software, discouraging public institutions and civil society organisations from using technologies in the first place, and leaving the private and banking sectors vulnerable to cyber attacks.[7]

Technology sanctions also empowered the National Intelligence and Security Services (NISS) in their efforts to suppress activism – even though they were intended to put pressure on the regime. Activists are restricted from updating their software, leaving them exposed to surveillance and potential attack by the highly trained security officers in Sudan. In 2014, Citizen Lab reported that that the NISS had access to Hacking Team's Remote Control System (RCS), which allowed it to monitor political activists and detain them. RCS's capabilities include the ability to copy files from a computer's hard disk, record Skype calls, intercept emails and instant messages, and read passwords typed into a web browser. Furthermore, RCS can turn on a device's webcam and microphone to spy on the target.[8]

The NISS also had access to ProxySG servers from cybersecurity and network management company Blue Coat Systems that enabled the government to intercept internet traffic. This raised the issue of how the software had been sold to Sudan, which had been under sanctions for decades, empowering the old regime to restrict access to information or record private communications.[9]

According to research also conducted in 2014, regimes targeted by sanctions often exaggerate the negative effect of sanctions on the economy to prevent the population from revolting against them. States have also been found to intentionally deteriorate economic growth in order to increase the economic hardship of the population so that any revolt proves costly for citizens. Although the sanctions target the elite, due to their strong economic position, their funds hidden around the world, and international collaborators, it is the local population who feel the impact the most.[10]

Meanwhile, research conducted by the University of Oxford and the University of Khartoum highlighted the significant impact of tech sanctions on the content and continuity of academic research and education, given that they are increasingly reliant on software, hardware and other equipment. As the rate of technological innovation speeds up,

7   Li, Q., & Abdalla, O. (2014). The E-Government in Sudan: Challenges, Barriers and Prospects. *Proceedings of the 2014 International Conference on Global Economy, Commerce and Service Science.* https://www.atlantis-press.com/proceedings/gecss-14/10979

8   Marczak, B., Guarnieri, C., Marquis-Boire, M., & Scott-Railton, J. (2014, 17 February). Mapping Hacking Team's "Untraceable" Spyware. *The Citizen Lab.* https://citizenlab.ca/2014/02/mapping-hacking-teams-untraceable-spyware/

9   Marquis-Boire, M., Anderson, C., Dalek, J., McKune, S., & Scott-Railton, J. (2013, 9 July). Some Devices Wander by Mistake: Planet Blue Coat Redux. **The Citizen Lab**. https://citizenlab.ca/2013/07/planet-blue-coat-redux/

10 Oechslin, M. (2014). Targeting autocrats: Economic sanctions and regime change. *European Journal of Political Economy, 36*, 24-40. https://doi.org/10.1016/j.ejpoleco.2014.07.003

sustained periods of sanctions left Sudan's academic communities considerably out of date.[11]

The lack of internet connectivity in schools also meant that the flow of information in and between schools and the local education administrations, states and federal ministry of education was slow.[12]

The growth of tech startups has been stagnating in Sudan, making external and foreign investments in startups almost impossible. Samir Mohammed is a member of the ICT Syndicate and the founder of DA-TAQ, a data-driven research company. It helps clients to generate new value from their data sources, and collects, organises and analyses different sources of data in order to provide market insights for clients, which include small and medium-sized businesses. He commented, "I am struggling and looking for workaround plans to buy Power BI software online and I cannot access online tools. It is also challenging to get funds to invest in my start-up."

According to UNCTAD, the lack of digital innovation platforms in many developing countries has a significant impact on their development. It results in using global innovation platforms in the technological innovation pathways that might not align with local market needs in developing countries. Furthermore, digital enterprises in developing countries will continuously miss opportunities to compete in the global innovation market, thus hindering their ability to scale.[13]

Moreover, sanctions lead to women experiencing a higher level of economic burden, and also to women's rights decreasing. They have a negative impact on women's access to economic and social status, and under the country's traditional patriarchal norms and attitudes, women face violations every day. The social and economic burden on women increased during the pandemic, especially those with limited digital skills. However, there is simultaneously an absence of reliable data on digital take-up in Sudan. This lack of statistics impedes not only the visibility and understanding of the specific challenges faced by women but also the ability to address the "gender digital divide".[14]

Digital advocacy challenges in Sudan

The ICT Syndicate was formed by ICT professionals during the revolution in May 2019. The Syndicate aims to save the revolution's gains as well as enrich it, by forming a non-governmental body that urges civilian authority and advises government institutions. We planned to conduct the first assembly meeting in January 2020, but because of the pandemic lockdown, this plan was delayed until October 2020. Due to the lack of internet accessibility and availability of technology tools – as a consequence of, for example, limitations on licences for communications platforms in Sudan – conducting meetings online using Zoom was impossible with members from other states in Sudan. This meant we could not organise and prepare for awareness-raising workshops, and had to find alternative ways to secure a Zoom licence by using the Zoom accounts of international members to work online.

In an interview conducted by the Syndicate with Ammar Hamadien, the director general of National Information Center during the transitional government, Hamadien stated:

> The US sanctions have had a negative impact on the growth of digital services and ecosystems. The inaccessibility of software tools and hardware and the reservation of companies that are based in the US has forced digital enthusiasts to turn to open source software, which in many incidents posed great cybersecurity vulnerabilities to companies and end users. Therefore, digital development in Sudan is at the early stages, given the current demographics of the country and the large percentage of the population that is still offline.

Internet shutdowns are very common in Sudan. Throughout the revolution, the military blocked social media platforms, and blocked the internet for almost two months for political reasons in 2019. The internet was also blocked during the Certificate of Secondary exams in September 2020 during the pandemic to stop the sharing of exam papers online.[15]

The restructuring of ICT institutions has also been included in the Syndicate's advocacy agenda. The military has dominated the telecom sector, including the revenue generated from telecom services. In August 2019, as part of institutional reform, the Ministry of Information and Communications Technology was disbanded, giving the president of

11 Bezuidenhout, L., Karrar, O., Lezaun, J., & Nobes, A. (2019). Economic sanctions and academia: Overlooked impact and long-term consequences. *PLOS ONE, 14*. https://doi.org/10.1371/journal.pone.0222669

12 UNCTAD. (2019). *Digital Economy Report 2019. Value Creation and Capture: Implications for Developing Countries*. https://unctad.org/system/files/official-document/der2019_en.pdf

13 Ibid.

14 Drury, A. C., & Peksen, D. (2014). Women and economic statecraft: The negative impact international economic sanctions visit on women. *European Journal of International Relations, 20*(2), 463-490. https://doi.org/10.1177/1354066112448200

15 SMEX. (2020, 12 November). Military-Controlled Telecom Sector and Internet Shutdowns in Sudan. https://smex.org/military-controlled-telecom-sector-and-internet-shutdowns-in-sudan

the Sovereignty Council, Abd El-Fatah Elburhan, the authority to govern the Telecommunication and Post Regulatory Authority. In December 2019, the Syndicate submitted memos to the council to advise on the necessity of reforming the Ministry of Telecommunication and reforming communications laws so that they would be brought in line with digital rights.

Recently, the Syndicate interviewed the head of the Sudanese Consumers Protection Association, Yassir Mirghani. The association had volunteered alongside the lawyers' union to file a case in court against telecom companies that blocked the internet during the military coup. Mirghani said that the association was working to save citizen rights and that it would advocate for digital rights alongside citizen rights. Currently, the Syndicate is working to strengthen partnerships with different associations and entities to ensure the digital rights of Sudanese citizens are in place.

To conclude, the imposition of US sanctions – especially on technology – had a significant impact on the underdevelopment of Sudan as a nation, as well as on civil society and public institutions. Specifically, the sanctioned items on the CCL led to an increase in the digital divide. This includes the lack of access to technology, a slow uptake and penetration of internet technologies, the suppression of digital rights and spaces to express democratic rights, and the increased exposure of citizens and companies to cyber attacks given their reliance on open source software.

Action steps

The following actions are recommended for Sudan:

- The UN Security Council, the EU and the US should investigate countries and US companies selling surveillance systems to the NISS and the military junta, and instead of broad-based restrictions, target government leaders, the military and militias in Sudan with personalised sanctions.

- The US should remove BIS authorisation of items under the CCL, to facilitate the following:

  - Allow US companies to support small-to-medium-sized companies, startups, and the private sector in general so that they can grow their digital capacity.

  - Encourage the use of e-commerce platforms in Sudan.

  - Assure that Sudanese citizens have the freedom to access information and academic and technology resources and platforms without restrictions.

  - Encourage Sudanese academic research participation globally, and expand the operation of the UNESCO office in Sudan.

DIGITAL FUTURES FOR A POST-PANDEMIC WORLD

Through the lens of the COVID-19 pandemic, this edition of Global Information Society Watch (GISWatch) highlights the different and complex ways in which democracy and human rights are at risk across the globe, and illustrates how fundamental meaningful internet access is to sustainable development.

It includes a series of thematic reports, dealing with, among others, emerging issues in advocacy for access, platformisation, tech colonisation and the dominance of the private sector, internet regulation and governance, privacy and data, new trends in funding internet advocacy, and building a post-pandemic feminist agenda. Alongside these, 36 country and regional reports, the majority from the global South, all offer some indication of how we can begin mapping a shifted terrain.

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