

# BUSINESS TRAMPLED

## Demystifying the Impact of Internet Shutdown on Start-up Businesses in Ethiopia

Research Report II  
By Yohannes Eneyew Ayalew  
August 2022



**CARD**

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CENTER FOR ADVANCEMENT OF  
RIGHTS AND DEMOCRACY

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## **ABOUT THE AUTHOR**

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Yohannes Eneyew Ayalew is a PhD Candidate at the Faculty of Law, Monash University, Australia. Yohannes is an Affiliate at the Castan Centre for Human Rights Law. His PhD project investigates how an appropriate balance should be struck between the right to privacy and freedom of expression on the Internet under the African human rights system. Prior to joining Monash Law School, he was a Lecturer in Law at the School of Law, Bahir Dar University in Ethiopia where he was teaching and researching on media law and human rights. Yohannes's research interest spans in the areas of international (human rights) law, digital rights, content governance, African human rights law and TWAIL.

## **ACKNOWLEDGEMENT**

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## **DISCLAIMER**

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The content, analysis, and recommendations of this report are those of the author alone, and do not necessarily reflect the views of CARD nor affiliated institutions.

## FOREWORD

The Center for the Advancement of Rights and Democracy (CARD) is a board-led, for-not-profit organization registered in Ethiopia under the Civil Societies Law 1113/2019 with registry number 4307. CARD acquired its legal personality on 24 July 2019.

CARD aspires to see Ethiopia where democratic culture flourished on human rights values and has been working with a mission to empower citizens and groups of citizens to ensure their ability to promote and defend human rights and build democratic governance in Ethiopia.

To this end, CARD is implementing multiple projects under five of its programs. The Digital Rights Program is one of them. The goal of the Digital Rights Program is to ensure the promotion of access to digital technologies as well as the safety and security of citizens who have access. Therefore, CARD advocates for increased accessibility of internet connectivity, on one hand, and for the safety and security of citizens online, on the other. The specific objectives of this program include the following:

Advocating for the free and all-inclusive accessibility of the internet to reduce the impact of the digital divide among the sections of Ethiopian societies,

Promoting and protecting the rights of online expression and access to information,

Promoting the protection of personal data, individuals' privacy, security, and safety of online citizens.

Supporting activities of online platforms improve their moderation efforts by raising the understanding of local contexts to protect the physical and psychological safety of their users.

In the past three years, the Digital Rights Program has benefited from financial support from Access Now and other partners. Access Now, a non-profit organization founded in 2009 with a

mission to defend and extend the digital civil rights of people around the world, is a major supporter of CARD's Digital Rights Program. This research on the impact of internet shutdowns on businesses, its publication, and dissemination was enabled by the financial support of Access Now.

CARD is also a member of the #KeepItOn coalition, a global coalition against internet shutdown by more than 240 organizations in 105 countries, led by Access Now. As part of its objectives, CARD has been running online campaigns to raise awareness of the state of internet accessibility in Ethiopia, as well as the need for safety and security of citizens online using the hashtags #KeepItOn and #KeepItSafe with the goal of stressing the need to balance for accessibility and safety online.

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## EXECUTIVE SUMMARY

Internet shutdown is a growing problem in Ethiopia. Internet Shutting down the Internet has become a normal vocabulary for the Ethiopian government whenever certain public calamities engulf the country. Yet, Internet shutdowns have been used by both democratic and authoritarian governments to stifle and debilitate human rights including the free flow of information, freedom of assembly and freedom of expression across the globe. These disruptions affect the overall image of a country by impacting its investment flow, slowing down economic growth, disrupting the value chain of the digital economy, and leading to political demobilisation and self-censorship.

While many conversations on Internet shutdown often centre around its impact on civil and political rights and civic space, shutdowns have grave economic repercussions, particularly, on Start-up businesses in many ways. For example, shutdowns affect the operation of digital business, transfer of remittances, and the smooth operations of technology-based gig economy. In addition to its impact on the gig-economy, small businesses that use online platforms for exchange, informal businesses are relying heavily on the Internet to conduct their business through social media networks like Facebook and Instagram Markets and messaging apps such as Telegram channels. Consequently, small businesses and tech start-up companies tend to be deeply affected by Internet shutdowns. Although governments' practice of imposing Internet shutdowns has been strongly condemned by civil society and academia or continues to receive condemnation from civil society and academia, the issue of Internet shutdown has not received the attention it deserves among policy makers and the broader public in Ethiopia.

The report found that Internet shutdown is an affront to digitalisation and digital economy. Importantly, the practice of shutdown violates the government's much-touted digital policy documents, including the Digital Ethiopia 2025 and the 10 Year Development Plan—A Pathway to Prosperity (2020–2030). Given the ever-increasing dependence on Internet

connectivity, the report notes that Internet disruption tramples down the activities of businesses and tech start-ups in Ethiopia. The report found out that while start-up businesses are burgeoning throughout the country, their activity continues to be marred by recurrent Internet shutdowns in Ethiopia. Using Netblock's measurement, for example, Internet shutdown costs Ethiopia \$8.3 million dollars per day. This suggests that Internet shutdown is antithetical for the national economy.

In sum, the report concludes that the Ethiopian government must end the practice of Internet shutdown and should create an enabling digital environment whereby business start-ups thrive and contribute to the national economy.

The Internet and digital media platforms have become useful tools for connecting people for reasons other than political action and economic transactions because of their ability to close geographical gaps. To this end, the United Nations Human Rights Council (UNHRC) passed a resolution on the promotion, protection and enjoyment of human rights on the Internet.<sup>1</sup>





## INTRODUCTION

Internet shutdown has a far-reaching consequence on human rights, businesses and the digital economy in a given country.<sup>2</sup> It shall be noted that the Internet and its ancillary digital media technologies have become increasingly embedded in people's everyday lives. As a result, it has become a key intermediary for economic, social and political transactions.

On July 2022, in the test case of *SERAP and Others v Nigeria (Twitter Ban case)*, the Economic Community of West African States (ECOWAS) Court held that access to social media like Twitter should be regarded as an essential component of freedom of expression and the unlawful and arbitrary suspension and shutdown of Twitter service in Nigeria violates human rights by extension its digital economy.<sup>3</sup>

However, some countries including Ethiopia have implemented Internet shutdown measures to disrupt connectivity.<sup>4</sup> According to Access Now, "Internet shutdown is an intentional disruption of the Internet or electronic communications, rendering them inaccessible or effectively unusable, for a specific population

<sup>1</sup> See The UN Human Rights Council resolution on the promotion, protection and enjoyment of human rights on the Internet, A/HRC/RES/20/8 (2012) para 1. The Resolution provides that the same rights people have offline must be protected online. There has since been a line of resolutions on this topic adopted by the UN bodies. For example, the Human Rights Council resolutions on the right to freedom of opinion and expression, in particular Council resolutions 20/8 of 5 July 2012 and 26/13 of 26 June 2014, on the promotion, protection and enjoyment of human rights on the Internet; resolutions 12/16 of 2 October 2009, on freedom of opinion and expression, 28/16 of 24 March 2015, on the right to privacy in the digital age; resolution 23/2 of 13 June 2013 on the role of freedom of opinion and expression in women's empowerment; resolution 31/7 of 23 March 2016, on the rights of the child: information and communications technologies and child sexual exploitation; Human Rights Council Resolution A/HRC/Res32/13 adopted on 1 July 2016 on the promotion, protection and enjoyment of human rights on the Internet, and recalling also General Assembly resolutions 68/167 of 18 December 2013 and 69/166 of 18 December 2014, on the right to privacy in the digital age, 70/184 of 22 December 2015 on information and communications technologies for development and 70/125 of 16 December 2015, containing the outcome document of the high-level meeting of the General Assembly on the overall review of the implementation of the outcomes of the World Summit on the Information Society. More recently, the landmark report of the UN General Assembly A/HRC/50/55, adopted on 13 May 2022.

<sup>2</sup> See generally the report of the Office of the United Nations High Commissioner for Human Rights, Internet shutdowns: trends, causes, legal implications and impacts on a range of human rights Un General Assembly A/HRC/50/55, adopted on 13 May 2022, paras 1, 34, and 63.

<sup>3</sup> The Registered Trustees of the Socio-Economic Rights and Accountability Project (SERAP) & 3 ORS v. Federal Republic of Nigeria (aka Twitter Ban case), Application No: ECW/CCJ/App/23, 24; 26&29/21 Judgment No: ECW/CCJ/JUD/40/22 (July 14, 2022) ¶¶ 68-71.

<sup>4</sup> See generally Yohannes Eneyew Ayalew, 'Rights Deplumed: Mapping the Human Rights Impact of Internet Shutdowns in Ethiopia (Research Report I, Center for Advancement of Rights and Democracy (CARD), 2021).

or within a location, often to exert control over the flow of information.”<sup>5</sup>

In Ethiopia, the main justification that the government provides for the repeated use of Internet shutdown is the security situation of the country. Ironically, experience shows that Internet shutdown did not help prevent violence from happening in reality in the past two years.<sup>6</sup> Since the conflict erupted in the Tigray region between federal forces and the Tigray People Liberation Front—which later spilled over to the neighbouring Afar and Amhara regions—has had a lingering effect on political and social conversations in the country. Almost all political actors have joined the race to set a narration on social media to influence the international community. Since November 04, 2020, there has been Internet blackout in the Tigray Region. Later on, the coverage of the blackout had been extended to two regions as the conflict got worse. Now parts of the Amhara and Afar Region, areas that are under the control of Tigray People Liberation Front have communication blackout.

A literature review on Internet shutdown shows various impacts and consequences of Internet shutdown.<sup>7</sup> Some studies focused on the social impact of Internet shutdowns, the spectrum of shutdowns,<sup>8</sup> specific context of shutdowns,<sup>9</sup> the role of non-state actors<sup>10</sup> in shutting down the Internet and the impact of Internet shutdown on human rights.<sup>11</sup> None of them have discussed the impact of Internet shutdowns on businesses in Ethiopia nor have specifically focused on the impact on the gig economy and start-ups in Ethiopia. Yet, as Report I explored the impact of shutdowns on human rights including its impact on the right to work and livelihood of start-

<sup>5</sup> Access Now, Internet shutdowns and elections handbook (2021) < <https://www.accessnow.org/internet-shutdowns-and-elections-handbook/> > accessed June 14, 2022.

<sup>6</sup> See CARD and Data4Change Story, The Digital Divide < <https://www.cardeth.org/digital-divide/> > accessed June 14, 2022.

<sup>7</sup> See Tomiwa Ilori, 'Life Interrupted: Centering the Social Impact of Network Shutdowns in Advocacy in Africa', Global Network Initiative (GNI) report (2021) 12.

<sup>8</sup> Eleanor Marchant and Nicole Stremilau, 'A Spectrum of Shutdowns: Reframing Internet Shutdowns from Africa,' (2020) 14 International Journal of Communications, 4327-4342.

<sup>9</sup> Ben Wagner, 'Understanding Internet Shutdowns: A Case Study from Pakistan' (2018) 12 International Journal of Communication 3918.

<sup>10</sup> Admire Mare, 'State-Ordered Internet Shutdowns and Digital Authoritarianism in Zimbabwe,' (2020) 14 International Journal of Communication 4244-4263.

<sup>11</sup> CARD research on internet shutdown (4).

up workers and business owners, this report mainly focuses on the economic and financial impacts of Internet shutdowns in Ethiopia. Therefore, this report seeks to demystify the impact of Internet shutdowns on start-up businesses in Ethiopia. Using qualitative and comparative research methods, the report examines the impact of the Internet shutdown on tech start-up businesses in Ethiopia.

This report is organised into five sections, including conclusion. Section one describes the historical accounts of Internet shutdowns in Ethiopia. The growing start-up businesses and their role in the digital economy, is discussed in section two. Section three examines the impact of Internet shutdowns on businesses and start-ups in Ethiopia. In doing so, it presents how Internet shutdown affects start-up workers and business owners. The tools to measure the cost of Internet shutdown such as Netblock's tool are illuminated in section 4. The final section concludes and offers some recommendations to confront Internet shutdowns in Ethiopia.



## A brief history of Internet shutdown in Ethiopia: trends and justifications

Although Ethiopia had telephone services a century ago, officially since 1894, the history of the Internet in Ethiopia with limited accessibility was introduced only in 1997.<sup>12</sup> The advent of the Internet in Ethiopia seems a very nascent phenomenon that was introduced two decades ago.

Unfortunately, the government has been controlling the Internet shortly after its introduction in the country through various censorship and shutdown measures. The pursuit of information led people to download and print news, commentaries and political manifestos, turning them into leaflets to be distributed to those without access to the Internet.<sup>13</sup> Most importantly, mobile phones, and especially SMS, were used to mobilise people in real time and to disseminate calls to action that had first emerged on other platforms.<sup>14</sup> In the post-2005 election, when the Ethiopian People's Revolutionary Democratic Front (EPRDF) realised it had suffered greater losses than it was ready to accept and people started protesting over the delay in issuing the results, some of the channels used to mobilise protesters were shut down.<sup>15</sup> In the aftermath of the first wave of a series of demonstrations, on 6 June 2005, SMS service was suspended and was only restored some two years later.<sup>16</sup> Following the closure of SMS messaging service, the Ethiopian government went on to shut down other communication channels so as to prevent protesters from disseminating alternative information and narratives.<sup>17</sup>

Internet censorship and SMS shutdown measures had received push backs from the international community. While the government sought to justify these actions as being necessary

<sup>12</sup> Kinfe M Yilma and Halefom H Abraha 'The Internet and Regulatory Responses in Ethiopia:Telecoms, Cybercrimes, Privacy, E-commerce, and the New Media',(2015) 9 Mizan Law Review 109.

<sup>13</sup> Iginio Gagliardone, 'New Media and the Developmental State in Ethiopia,' (2014) 113 African Affairs 279-299.

<sup>14</sup> Ibid

<sup>15</sup> Ibid

<sup>16</sup> US Department of State (2006) Country Report on Human Rights Practices 2005: Ethiopia, US Department of State, Bureau of Democracy, Human Rights, and Labor < <https://www.refworld.org/docid/441821851.html> > accessed June 15, 2022.

<sup>17</sup> US Department of State (n16).

to control violence, no official justification was given for shutting down SMS services and censoring the Internet. Instead, these moves were presented simply as technical glitches, rather than deliberate measures undertaken to defend national security.<sup>18</sup>

The digital space has become an alternative platform for opposition voices after the government consolidated its power and shrank the civic and political space. This led opposition voices to effectively challenge the government by taking up the online spaces. After the contested Addis Ababa City Integrated Master-plan, the Oromo youth took to the streets to oppose the government's action in 2014. From 2014–2016, the youth in Oromia and Amhara regions were challenging the actions of the government through forming various social movements, offline and online. Thus, in order to subdue these protests mobilised online, the government had ordered Internet shutdowns.<sup>19</sup>

In addition, various justifications were given for shutting down the Internet in Ethiopia since 2016. For example, the government invoked national security concerns, keeping the integrity of school exams, public order, armed conflicts and insecurity and deflecting cyber-attacks as official justifications to shut the Internet off. Since 2016, Internet shutdown has been implemented more than twenty times in major events happening in Ethiopia, such as in the wake of high-profile assassination in Bahir Dar and Addis Ababa, during armed conflict in Tigray, as well as insurgency in Wollega.<sup>20</sup>

Tellingly, while the digital divide—where individuals and communities experience uneven distribution of access to the Internet and digital technologies—remains very high in Ethiopia, Internet access has grown exponentially over the past decade, from 1.1% in 2011 to 21.1% in 2022. As per Ethio telecom's annual report in 2022, there are around 25.6 million Internet subscribers in Ethiopia, comprising 21.1% of the total population.<sup>21</sup>

Although the government of Ethiopia has launched a national 'Digital Strategy' (2020–2025), which aspires to Ethiopia's digital transformation by the year 2025, it is ironic that the government

<sup>18</sup> Gagliardone (n13)

<sup>19</sup> Yohannes Eneyew Ayalew, 'The Internet shutdown muzzle(s) freedom of expression in Ethiopia: competing narratives,' (2019) 28 Information & Communications Technology Law, 208.

<sup>20</sup> CARD research on internet shutdown (3).

<sup>21</sup> Ethio telecom (2021/22) Annual Business Performance Summary Report (July 28, 2022) < <https://www.ethiotelecom.et/ethio-telecom-2014-efy-2021-22-annual-business-performance-summary-report/> > accessed 2 August 2022.

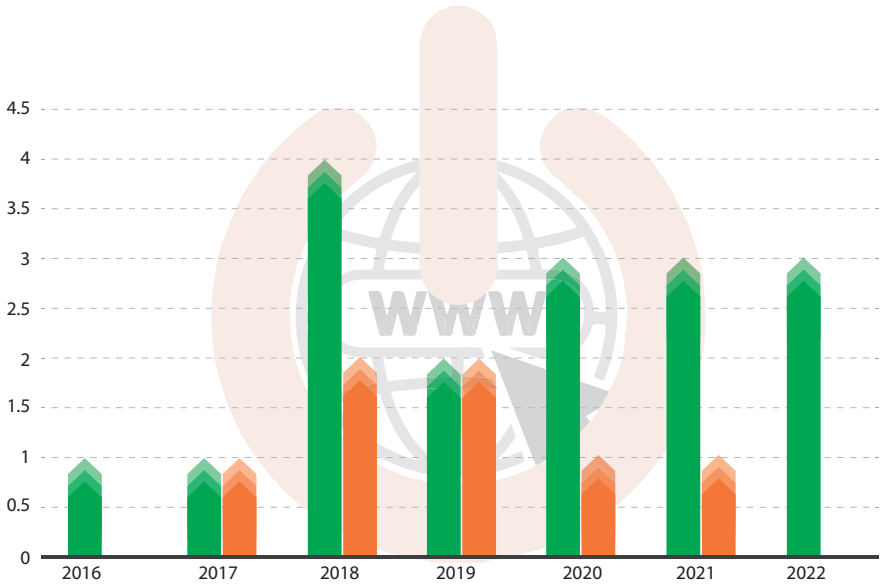


Figure 1: Trends of Internet shutdown in Ethiopia (2016-2022)

justifies Internet shutdowns propagating a narrative that access to the Internet is ‘neither water nor air’.<sup>22</sup> Prior to the announcement of the national ‘Digital Strategy’, the Ethiopian Prime Minister Abiy Ahmed made a controversial statement at a press conference addressing the issue of recurrent Internet shutdowns in Ethiopia. The Prime Minister announced: “As long as it is deemed necessary to save lives and prevent property damages, the Internet would be closed permanently, let alone for a week. Ethiopia will cut the Internet as and when, it’s neither water nor air”<sup>23</sup>

Indeed, there was a supportive environment for online space in the early stages of Abiy’s administration; the government has since 2018 imposed multiple Internet shutdowns across

<sup>22</sup> Digital Strategy in Ethiopia 2025. < <https://www.pmo.gov.et/media/other/b2329861-f9d7-4c4b-9f05-d5bc2c8b33b6.pdf>> accessed 2 August 2022.

<sup>23</sup> Africanews, Ethiopia will cut internet as and when, ‘it’s neither water nor air’ - PM Abiy (2 August 2019) <<https://www.africanews.com/2019/08/02/ethiopia-will-cut-internet-as-and-when-it-s-neither-water-nor-air-pm-abiy/>> accessed June15, 2022.

the country. As a result, Internet shutdown has become a go-to tactic used by the government to respond to any violence happening in the country. In June 2019, when high-level army and Amhara regional officials were assassinated, the government imposed a week-long total Internet shutdown that left millions of people with no access to information.<sup>24</sup> In June 2020, following the assassination of artist Hachalu Hundessa, a country-wide Internet shutdown was imposed to control the violence that left hundreds killed in the Oromia region.<sup>25</sup>

When conflict erupted between the Ethiopian National Defence Forces (ENDF) and the Tigray People's Liberation Front (TPLF) in November 2020 after the TPLF allegedly attacked the ENDF's Northern Command, supporters of both parties used the online space to misinform and set contradictory narratives. Distorted images with false contexts were shared online. Since that time, the ongoing conflict has resulted in a total communication blackout in Tigray region and partial Internet shutdowns in the neighbouring Afar and Amhara regions.<sup>26</sup>

Although there is a repeated litany of complaints from digital rights activists and academia, as well as pushback from civil society organizations, the issue of Internet shutdown has not got enough attention among the broader public in Ethiopia.<sup>27</sup> Successive governments have implemented Internet shutdown as a tool to muzzle freedom of expression in Ethiopia.<sup>28</sup> Consequently, Internet shutdown has become the hallmark of the Ethiopian government. Beyond its human rights

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<sup>24</sup> Elias Meseret 'Internet Restored in Ethiopia 10 Days After Assassinations', (ABC News, 2 July 2019) < <https://abcnews.go.com/Technology/wireStory/internet-restored-ethiopia-10-days-assassinations-64082330> > accessed June 15, 2022.

<sup>25</sup> Max Bearak, 'Ethiopia protests spark Internet shutdown and fears of high death toll after popular singer killed', Washington Post, 1 July 2020 < [https://www.washingtonpost.com/world/africa/ethiopia-protests-spark-internet-shutdown-and-fears-of-high-death-toll-after-popular-singer-killed/2020/07/01/ff18e5de-bb76-11ea-97c1-6cfc116fe26c\\_story.html](https://www.washingtonpost.com/world/africa/ethiopia-protests-spark-internet-shutdown-and-fears-of-high-death-toll-after-popular-singer-killed/2020/07/01/ff18e5de-bb76-11ea-97c1-6cfc116fe26c_story.html) > accessed June 15, 2022.

<sup>26</sup> Access Now, 'What's Happening in Tigray? Internet Shutdowns Avert Accountability', 29 July 2021 < <https://www.accessnow.org/tigray-internet-shutdowns/> > accessed June 15, 2022.

<sup>27</sup> Access Now, '#KeepItOn: The Ethiopian government must end internet shutdowns to quell protests (2 July 2020)' < <https://www.accessnow.org/keepit-on-ethiopian-government-must-end-arbitrary-internet-shutdowns/> > accessed 18 July 2022. See also Human Rights Watch, Ethiopia: Communications Shutdown Takes Heavy Toll (March 9, 2020) < <https://www.hrw.org/news/2020/03/09/ethiopia-communications-shutdown-takes-heavy-toll> > accessed 18 July 2022.

<sup>28</sup> Ayalew (n18).

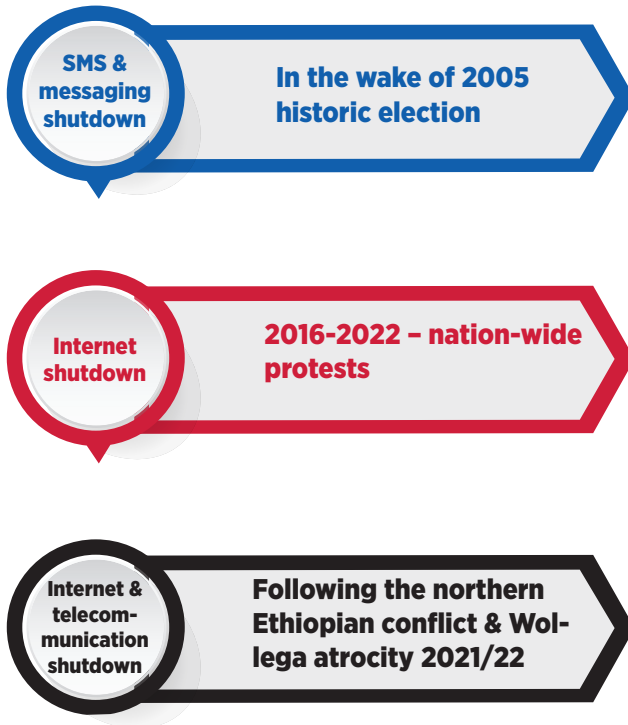


Figure 2- maps the brief history of Internet shutdown in Ethiopia (2005–2022)

implication as demonstrated in Report I, Internet shutdowns continue to affect the growing start-up businesses thereby hindering their contributions to the emerging digital economy in Ethiopia. The next section examines the development of start-up businesses in Ethiopia.



## The upsurge of (Start-up) businesses in Ethiopia's digital economy

Due to the development of digital technologies and Internet connectivity, tech start-ups and businesses are burgeoning in metropolitan and major cities in Ethiopia. Crucially, digital technologies and Internet connectivity would help foster economic development and growth since usage of these technologies stimulates the economy by facilitating communication, empowering individuals, creating employment, and spurring innovation.<sup>29</sup>

To provide a policy framework, the government has adopted a national policy and plan that seeks to foster the digital economy. Digital Ethiopia 2025 is a new roadmap and strategy for a digital economy under the Prosperity Party led government. One of the aspirations of Ethiopia's Digital Strategy is to build robust connectivity to catalyse a digital economy.<sup>30</sup>

The Digital Strategy is anchored in a four-part digital economy framework comprising of infrastructure, enabling systems, applications and the broader ecosystem.

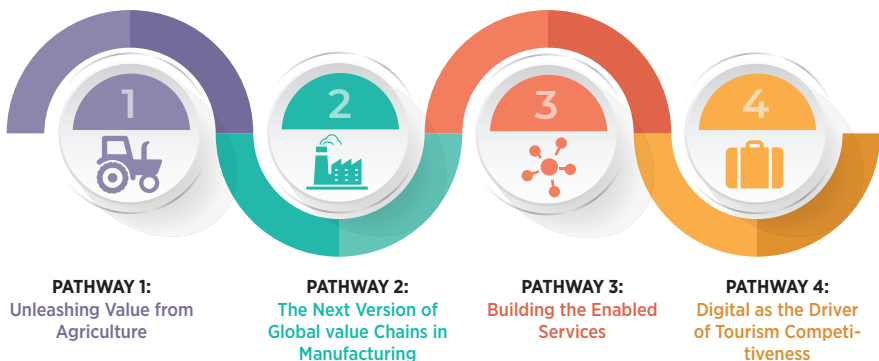


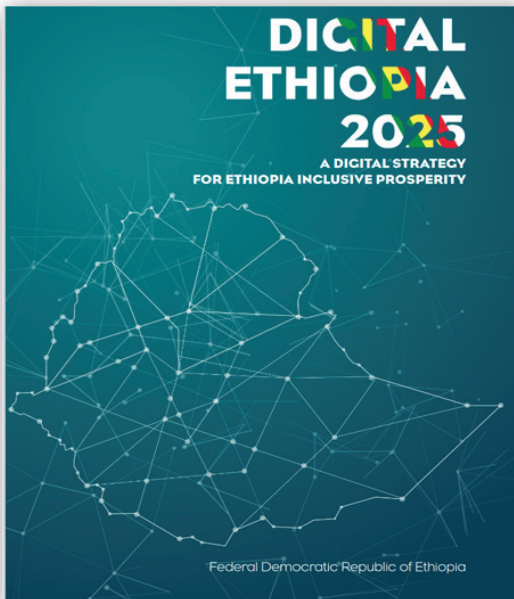
Image 1: The four pillars of the Digital Strategy

<sup>29</sup> Edna MaeyenSolomon and Aaronvan Klyton, 'The impact of digital technology usage on economic growth in Africa', (2020) 67 Utilities Policy 101104.

<sup>30</sup> Digital Strategy (n22), section 5.

The Ethiopian Digital Strategy has directly drawn inspiration from the University of Oxford's the Pathways for Prosperity (P4P) Commission project.<sup>31</sup> The four pillars of the Digital Strategy were directly copied from the P4P project. For example, the Strategy overlooked pressing structural issues such as bridging the digital divide and misplaced priorities in the digital economy. This makes the Ethiopian Digital Strategy as an amorphous, copy-cat policy document that is detached from the national context. While the strategy seems a noble plan, it nonetheless became a lofty ambition of the government as there were frequent Internet shutdowns in the country.

Ethiopia is yet to approve the Start-up Business Proclamation which is meant to regulate the operation of start-ups and



## SECTION 5.1:

Connectivity is a foundational element of digital transformation and can drive socio-economic development. Robust connectivity enables citizens and businesses to participate in the digital economy by having access to affordable and high-quality Internet, through which they can engage in information sharing and online transactions. Improved connectivity also brings socio-economic development in multiple ways. A 10% increase in Internet penetration, for example, can improve the country's GDP by 0.9%-1.5%.

Image 2: Digital Ethiopia 2025

<sup>31</sup> Pathways for Prosperity Commission (2018) Charting Pathways for Inclusive Growth: From Paralysis to Preparation. University of Oxford, UK. < <https://pathwayscommission.bsg.ox.ac.uk/charting-pathways-report> > accessed 24 June 2022.

ecosystem players in the country.<sup>32</sup> Accordingly, Start-up business is defined as a newly established business or a commercial company which has obtained the Start-up Business Label by the law as provided under article 2(12) of the draft bill. The conditions for acquiring the Start-up Business Label are specified under article 17 of the draft bill. First, the company's product, process or service must be innovative and disruptive of the existing production, service or market structure.



Chapter 6.4 of the 10 Years Development Plan in Ethiopia seeks to build a national data centre that would help increase economic and social benefits through the creation and consolidation of a digital economy; enhance institutions' use of public services through online systems by improving Internet connectivity and use; introduce a standardized national system of addresses; develop computational technologies and national databases; and enhance the use of electronic means for accessing public services.

By 2030, the Plan specifically aims to: Increase access to mobile and Internet services from 37.2% and 18.6%, respectively, to 100%; Provide support to 3,000 selected tech start-ups with high economic and social impacts and, of these, promote the most promising 2,100; Raise the share of private sector jobs in the areas of technology and digitalization from 50% to 80%.

Image 3: 10 Years Development Plan – A Pathway to Prosperity

<sup>32</sup> See Start-up Businesses Proclamation 2020 (Draft).

Second, the business-model of the company must have a growth potential and scalability. Third, the entrepreneurs should hold at least 25% of the company's capital. Besides, the modality of the organisation should be in the form of a micro, small or medium enterprise and must last for not more than five years.<sup>33</sup>

While this draft bill has no explicit provision that discourages Internet disruption, it seeks to create an innovative eco-system which is able to effectively and efficiently promote innovation and job creation in Ethiopia. This means when Start-ups are incubating rapidly, it is inevitable to see that the trend of Internet shutdown wane. Thus, the Draft Start-up Proclamation would have a potential to keep the Internet on if drafters explicitly recognise the importance of Internet infrastructure and connectivity. In other words, lawmakers should acknowledge the importance of connectivity in the texts of the law and put clear provisions that discourage Internet shutdown.

In practice, start-up businesses are growing from time to time in Ethiopia. According to a study by Cepheus, there are at least 570 businesses offering a wide range of digital finance, ecommerce, transport, sector-tech, and ecosystem services in 2021.<sup>34</sup> However, most companies operating in the digital space are still largely sub-scale in nature in that very few 'digital disruptors' have emerged so far with widespread market acceptance, a large customer base, and meaningful revenue generation.<sup>35</sup>

Digital finance otherwise known as fin-tech is being offered by a flurry of banks, micro-finance institutions and start-up businesses. The main service providers include at least 17 commercial banks and the largest micro-financial institutions (MFIs). The provision of 'digital finance' in this context has involved banks and MFIs facilitating a move towards digital channels (ATMs, POS devices, Internet banking, mobile banking) to provide services that were normally delivered via branch services and/or via traditional means. The type of services these start-ups offer range from payment to credit provisions. It could be in the form of digital/mobile wallets such as Amole, Awash

<sup>33</sup> Shega, 'Ethiopia to Enact a Start-up Act,' (28 August 2020) <<https://shega.co/post/ethiopia-to-enact-a-startup-act/>> accessed August 2, 2022.

<sup>34</sup> See CEPHEUS Research and Analytics, Ethiopia's Digital Economy report, USAID (2021) 1.

<sup>35</sup> Ibid

M-wallet, CBE- Birr, HelloCash, Telebirr etc; remittance services like CashGo, MelaPay (Kifiya); Credit services such as Airtime credit, Amole, HelloCash; payment processors like Flow Cash, Mastercard, Visa, YenePay, Alem Pay, etc.



Image 4: Digital Start-ups in major sectors in Ethiopia. Source: CEPHEUS report (2021)

The other growing sector is e-commerce. In this sector, a lot of start-up businesses have been providing services to the customers covering marketplaces (i.e, buying/selling among individuals and merchants) and Business to Customer (B2C) business where businesses are directly engaged in direct product sales to the customers. For example, general digital marketplaces include, AfroTie, Asbeza, Besh Gebeya, Buy Sell Ethio, Delala, Ethiopia shopping, Qefira etc. Whereas B2C includes Agafari, Addis Mart, Addis Merkato, etc. More broadly, e-commerce service providers include start-ups that are engaged in job postings service, real estate, booking/billing, tenders, gift services, and digital air time distribution.

Transport and logistics are the other important sectors that digital businesses permeated. The main service actors in this area are ride-hailing and delivery service providers. There are more than 40 ride-hailing service providers in Ethiopia in 2021.<sup>36</sup> The major ones include RIDE, Feres, Seregela, Taxiye, and ZayRide. In regard to delivery services, the providers include Deliver Addis, Derash Express, Eat Addis etc.

Besides, start-ups are engaging in sector-tech business activities utilising digital tools, channels, and platforms to deliver services across various traditional sectors such as media, health, education, and agriculture. Within this space, digital media is among the most successful digital business cases, along with sports betting, and telecom-based value-added service.<sup>37</sup> At the same time, digital and/or technology solution providers to companies in the education, health, agriculture sectors have been emerging but appear to be showing more limited uptake.<sup>38</sup> Addis Insight, Addis Standard, Addis Zeybe, Dire Tube etc. are examples of digital media that could fall in the ambit of sector-tech business. In the entertainment and digital streaming sector, Awatar Media, Hope Entertainment, Minew Shewa, Sodere etc. are case in point.

A final area of digital businesses, which is also known as 'Ecosystem Services', provides the underlying infrastructure and support services critical to the operations of a thriving digital economy.<sup>39</sup>

<sup>36</sup> CEPHEUS report (n34) 23.

<sup>37</sup> Ibid

<sup>38</sup> Ibid

<sup>39</sup> CEPHEUS report (n34) 27.

These include infrastructure services, incubators/accelerators, associations, investors, software companies including BPO service providers, and e-Government services. For example, ICE Addis, Hahu Cloud, Cloud Ethiopia, iCOG Labs, 1888EC etc. are among such businesses.

In sum, start-up businesses are snowballing in the country while the growing digital start-up businesses are transforming the lives of millions in Ethiopia. However, Internet shutdown continues to cripple the positive dividends of the Internet and the digital economy in Ethiopia, as the next section presents.



## The impact of shutdowns on Start-up businesses in Ethiopia

Due to the ever-increasing connectivity and dependency on Internet and mobile technologies, economic activities are being transacted through the Internet. When Internet shutdowns are implemented to serve competing “alleged public interests” without accountability and oversight, they trample down the activities of businesses, which in turn have a severe impact on the enjoyment of human rights, not only of the business owners but also the people more broadly. Thus, Internet shutdown negatively impacts the activities of businesses and the economy, as lessons from other countries such as Nepal show. Following the cutting off of mobile telecommunication network in Nepal in 2005, the country found itself in economic regression as the Internet shutdown had a negative impact on the economy and the resultant social alienation led to the eventual downfall of the reigning king.<sup>40</sup> A similar study on Pakistan examined the shutdown in Islamabad and Rawalpindi in March 2015.<sup>41</sup> Although the study does not report the estimated economic loss as a result, it uncovers a wide range of impacts including safety, access to emergency services, disruption to education, impact on small businesses and availability of e-services.<sup>42</sup> In Ethiopia too, Internet shutdown costs the economy dearly.<sup>43</sup>

For instance, following the October 2016 nation-wide protests, Ethiopia declared a state of emergency which saw it impose certain measures that included telecommunications, media and Internet shutdowns along with travel restrictions on diplomats and a dusk-to-dawn curfew. The state of emergency that lasted for 10 months since 08 October 2016, came as a result of about five hundred people killed by government forces in protests in the Oromia region surrounding the capital Addis Ababa and

<sup>40</sup> See Peng Hwa Ang et al, ‘Shutting Down the Mobile Phone and the Downfall of the Nepalese Society, Economics and Politics,’ (2012) 85 Pacific Affairs, University of British Columbia 3, 547-561.

<sup>41</sup> Security versus Access: The Impact of Mobile Network Shutdowns, Case Study: Telenor Pakistan, Institute of Human Rights and Business, (2015) 29-34.

<sup>42</sup> Ibid

<sup>43</sup> Tefo Mohapi, The Internet Shutdown in Ethiopia Costs the Country approximately 500,000 a day in lost GDP (28 October 2016) < <https://cipesa.org/2016/10/the-internet-shutdown-in-ethiopia-costs-the-country-approximately-500000-a-day-in-lost-gdp/> > accessed July 10, 2022.



other parts of Ethiopia since 2015. As a consequence, Internet shutdown had cost the country approximately US \$500,000 a day in 2016, according to the Global Network Initiative.<sup>44</sup> The report explains that, in dollar terms, it is estimated that for the average highly-connected country, the per-day impact of a complete Internet shutdown would amount to US\$23.6 million per 10 million people. For the average country with medium and low levels of connectivity, the estimated GDP impact amounts to US\$6.6 million and US\$0.6 million per 10 million people, respectively.<sup>45</sup>

The report found out that, while Ethiopia has a low Internet penetration rate, the impact is still quite high given how the Internet is used in various economic activities.<sup>46</sup> In a related study, the Brookings Institution's report estimated that Ethiopia lost US\$8.5 million per month in 2016.<sup>47</sup> However, the report suggested a possibility of various economic impacts based on a range of factors including the size of the country's GDP, the duration of the disruption (in number of days), and the percentage of the population affected by the disruption.<sup>48</sup> In addition, the report noted that additional determinants such as whether each disruption was of the entire Internet, the mobile Internet, or of specific applications and services such as social media, search, video, or messaging platforms should be considered.<sup>49</sup>

Beyond its impact on the digital economy, the Internet shutdown is also felt at individual level. In a focused group discussion (FGD) with start-up owners and developers, the report found that the Internet shutdown substantially affected their business and work. Crucially, the respondents shared their stories and concrete examples of experiencing an Internet shutdown, as presented below.

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<sup>44</sup> The Global Network Initiative (GNI), "The Economic Impact of Disruptions to Internet Connectivity," (October 2016) 17. < <https://globalnetworkinitiative.org/%e2%80%8bnew-report-reveals-the-economic-costs-of-internet-shutdowns/> > accessed July 10, 2022.

<sup>45</sup> Ibid

<sup>46</sup> Ibid

<sup>47</sup> See Darrell M West, "Internet Shutdowns Cost Countries \$2.4 Billion Last Year, Centre for Technology Innovation at Brookings" (2016) 8. <<https://www.brookings.edu/research/internet-shutdowns-cost-countries-2-4-billion-last-year/>> accessed 10 July 2022.

<sup>48</sup> Ibid

<sup>49</sup> Ibid

These stories help us understand how the impacts of Internet shutdown are real and devastating on the lives of start-up businesses. Importantly, the shutdown makes their life difficult if not total closure of their business. As stated above, one respondent highlighted how Internet shutdown is harmful to their business by creating the analogy of a factory, in that the Internet is an élan vital to run their business as power is for a factory.

"It's an online shop platform so if the internet is down specially for several days, the number of customers texting or calling to order our products will be less. Also, it gone make it hard for us to reply for our email or any social media accounts and reply for our customers if we have any request."

"Imagine you run a factory with heavy machinery - and don't have the power to run the machines. So too for the internet. When it's cut, it tramples down our business!"

"Our digital media work is totally depending on internet availability. Even if we gather information without using an internet, we need connectivity to upload our stories, pictures and videos. During the internet shutdown after Hachalu Hundessa's death, we were not able to post our regular news and updates on our website and social media platforms."

"Since most of my work as a fact-checker rely on online resources and tools it made my work difficult when there was an internet shut down during the university entrance exam in 2021. We stopped working for a couple of days. In addition to that a very slow connection also makes my work difficult."

In terms of daily losses, the economic impact of Internet shutdown is very huge by distressing the livelihood of those engaging in this field. On an individual level, workers and independent contractors of start-ups highlighted that they lose up to an estimated 5,000 birr (USD \$94 as of 1 August 2022) per day.<sup>50</sup> For example, this means that if an independent contractor working for a transport service loses an estimated 5,000 birr per day, it means she/he will lose 150,000 birr (USD \$ 2820) per month. For start-up owners, the impact is much worse in terms of financial loss. For example, one start-up owner has indicated that they lose up to an estimated 50,000 birr (approximately USD \$930) per day, which means they will lose 1.5 million birr (approx. USD \$28,195)<sup>51</sup> per month. Similarly, a start-up owner in local delivery service has estimated that they lose up to 10,000 birr (approximately USD \$ 188) per day, which translates that they lose up to 300,000 birr (approx. USD \$5,639) per month.<sup>52</sup>

While the findings of the report could be disputed on the basis of the methodology, they still have an important implication in understanding the practical impacts of Internet shutdowns on start-up businesses in Ethiopia. Although the economic implication of Internet shutdown on every start-up is not gainsaid, the level and degree of the impact depends on the size, nature/type of the business, popularity and goodwill of the start-up. Thus, when an assessment on the economic impact of Internet shutdown on start-ups is made, factors such as the type of business, customer base and other economic variables should be considered. The next section explores the tools used to calculate and measure the impact of shutdowns on the national economy.

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<sup>50</sup> Interview with a transport Start-up worker, 27 July 2022, and their name is withheld for anonymity.

<sup>51</sup> Interview with an e-commerce owner, 28 July 2022 and details are withheld for anonymity.

<sup>52</sup> Interview with a food delivery owner, 28 July 2022 and details are withheld for anonymity.

## Measurement and calculations of income loss at national level

Measuring and calculating the income loss of Internet shutdown is an arduous task. Thus far, attempts have been made to assess and measure the income loss of blackouts.<sup>53</sup> But none of them have offered a comprehensive tool other than the NetBlocks approach. This report presents what the NetBlocks approach means and how it works.

The Netblocks approach is a technical, structured methodology to measure and calculate the economic impact of Internet shutdown. NetBlocks is a non-profit organisation created in 2016 to harness technology to map Internet freedom. NetBlocks has partnered with the Internet Society to create a new tool, Cost of Shutdown Tool (COST) that will cover social media and key content platforms, as well as full Internet blackouts.<sup>54</sup> The COST tool has been in a beta mode since 2018 but it will move towards precision. For example, NetBlocks estimated a loss of £23.7 million from the March 2018 Sri Lankan Internet shutdown that took place in response to violent riots.<sup>55</sup>

The Netblocks approach seeks to spread awareness about the true costs and effects of Internet shutdowns by prompting citizens to put pressure on authoritarian governments who are most responsible for online control and censorship.<sup>56</sup> Indeed, traditional advocacy around freedom of expression doesn't always make the impact it should, but financial figures make authorities listen, so that measuring the cost of Internet shutdown really matters.

Technically, the Cost of Shutdown Tool (COST) is a data-driven online tool to quickly and easily estimate the economic cost of Internet disruptions.<sup>57</sup> Based on economic methodologies devised by the Brookings Institution and CIPESA, COST estimates

<sup>53</sup>GNI (n44) and West (n 47).

<sup>54</sup>Gillian Trudeau, 'NetBlocks tool tracks cost of internet shutdowns' <<https://www.indexoncensorship.org/2018/12/netblocks-tool-tracks-cost-of-internet-shutdowns/>> (Index on Censorship, 10 December 2018) accessed July 11, 2022.

<sup>55</sup>Ibid

<sup>56</sup>Ibid

<sup>57</sup>The NetBlocks Cost of Shutdown Tool (COST), <<https://netblocks.org/cost/>> accessed July 11, 2022.

The NetBlocks [Cost of Shutdown Tool \(COST\)](#) estimates the economic impact of an internet disruption, mobile data outage or app restriction using indicators from the World Bank, ITU, Eurostat and U.S. Census.

**NETBLOCKS®**  
MAPPING INTERNET FREEDOM

Affected country or region

Country... | v

Whole region | v

The regions affected by a subnational shutdown (not available)

Services restricted, throttled or unavailable in partial shutdown

Total shutdown | v

Or none in case of a total shutdown

Days: 1 | ^ | v

Hours: 0 | ^ | v

The duration of the disruption

**\$0**  
TOTAL COST IMPACT

Figure 3: the Netblock's Cost of Shutdown Tool (COST) tool

economic cost of Internet shutdowns, mobile data blackouts and social media restrictions using regional indicators from the World Bank, ITU, Eurostat and U.S. Census.<sup>58</sup> The tool will cover shutdowns affecting social media, key content platforms and full Internet blackouts using key indicators relating to the global digital economy. COST was officially launched on 10 December, 2018.

How does it work? One should choose a certain country and look for the type of shutdown (total or partial) and the number of days, the COST tool immediately calculates the cost of the shutdown. For example, the total cost of Internet shut down for a single day in Ethiopia will be ETB 392, 963, 432 Ethiopian birr (US \$8,316,686).

This implies that the economic impact of the shutdown is enormous. If that country loses US\$8.3 million per day, one can

<sup>58</sup>ibid

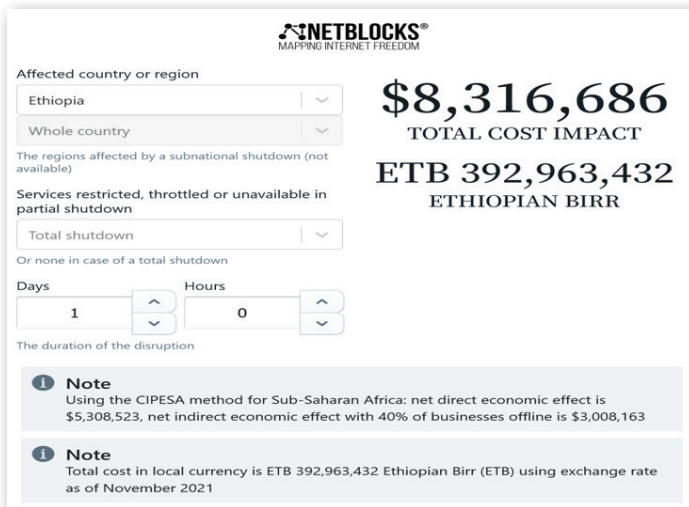


Figure 4: Netblock's cost estimate for a single day Internet shutdown in Ethiopia

imagine how it will be crippling the national economy when it is implemented for months. Notably, the calculation bases a one-time exchange rate, not a market-based daily exchange rate. Ultimately, the cost of shutdowns on the economy will be much higher if factors such as inflation are considered.

## CONCLUSION AND RECOMMENDATIONS

This report looked at the impacts of Internet shutdowns on start-up businesses and the people involved in this field in Ethiopia. In understanding the impacts shutdowns on start-up businesses, the major finding of the report is that Internet shutdowns considerably affect start-up businesses both at individual and corporate level, in addition to the Human Rights implications of shutdowns that is shown in Report I. The report has demonstrated how the cost of Internet shutdown is high for the national economy using NetBlock's measurement. For instance, Ethiopia loses US \$8.3 million when it shuts down the Internet for a day. This suggests that Internet shutdown has a deleterious effect on the national economy.

Using qualitative and comparative research methods, which include reviewing relevant literature on Internet shutdowns and their impacts on businesses, this report found out that the impact of Internet shutdown tramples business start-ups in Ethiopia. Unfortunately, the Ethiopian government has been using different narratives, which now includes a proposed law, to justify Internet disruptions.<sup>59</sup> By shutting down the Internet, the government is placing a colossal bump on the road towards digital economy and aspired prosperity in Ethiopia.

Therefore, the report makes the following recommendations in order to effectively resist the practice of Internet shutdown in Ethiopia:

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<sup>59</sup> See The Computer Crimes Proclamation 2020 (Draft) Article 24 "Measures aimed at internet shutdown, blocking, or filtering should only be made when necessary in order to protect national security, public order, public health and public safety."

- The Ethiopian government must end the practice of Internet shutdown, and stop normalising Internet shutdowns, as well as abide by international human rights standards, as highlighted in Report I.
- Business start-ups along with civil societies working in Ethiopia should challenge the actions of the government before national and international courts through strategic litigation.
- Overall, while the practice of Internet shutdown is rife in Ethiopia, the government should refrain from shutting down telecommunications and Internet services so that business start-ups positively contribute to the national economy.

