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The Economic Impact

of Internet Disruptions in Sub-Saharan Africa

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Internet disruptions are increasingly frequent in Sub-Saharan Africa (SSA). Since 2015, at least 12 countries in the region have seen their internet disrupted. The disruptions take various forms – complete national internet shutdowns, regional internet shutdowns, social media shutdowns, and even an internet access curfew. The disruptions are usually initiated around election times, public protests, and during national exams. The longest shutdown was recorded in Cameroon, lasting 93 days beginning January 16, 2017, while the most recent was recorded in Togo in September 2017.

While it is clear how internet shutdowns affect users' fundamental rights, such as the right of access to information and freedom of expression, the impact of disruptions on a country's economy and citizens' livelihoods is rarely as clearly articulated due to a lack of verifiable data.

This brief presents a framework to calculate the economic impact of internet disruptions in SSA. Using the framework, the brief estimates the cost of internet shutdowns in 10 African countries.

1. Background

Human rights and civil society groups and the UN Special Rapporteur on freedom of expression, David Kaye, have condemned internet disruptions.

In March 2017, the Freedom Online Coalition (FOC), a group of 30 governments that advances internet freedom worldwide, said state-sponsored network disruptions undermine the economic benefits of the internet and disrupt access to essential services such as health care.

However, previous efforts to estimate the costs of internet disruptions have not focused on the SSA context, while some estimates of the costs of shutdowns lacked a rigorous method for arriving at the figures put forward.[1]

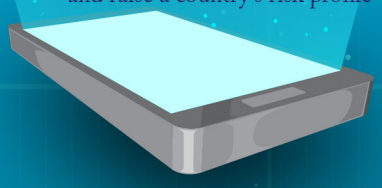
2. Framework for Estimating the Cost of Internet Disruptions

The framework goes beyond previous work by The Brookings Institution[2] and Deloitte[3], which primarily estimated the direct economic impact of a shutdown on GDP.

Over a combined period of 236 days, internet disruptions in 10 countries led to losses of at least US$ 237 million since 2015.

The economic cost of an internet disruption persists far beyond the days on which the disruption occurs because the disruptions unsettle supply chains and have systemic effects, harming efficiency throughout the economy.

Internet disruptions, however short-lived, undermine economic growth, disrupt the delivery of critical services, erode business confidence, and raise a country's risk profile



1 See for instance this report that gives a figure but does not state what informs it: Internet shutdown costs Cameroon $1.39m, http://www.theeastafrican.co.ke/business/Internet-shutdown-costs-Cameroon-dearly/2560-3817992-tw1s26/index.html

2 Darrell M. West, Internet shutdowns cost countries, https://www.brookings.edu/wp-content/uploads/2016/10/intenet-shutdowns-v-3.pdf

3 Deloitte, The economic impact of disruptions to Internet connectivity http://globalnetworkinitiative.org/sites/default/files/The-Economic-Impact-of-Disruptions-to-Internet-Connectivity-Deloitte.pdf

It calculates the direct loss of earnings in the ICT sector's contribution to GDP, plus the quantitative effects of loss of confidence in the digital economy stemming from government-perpetuated disruptions and the resultant loss of cost savings by businesses that are deprived of internet access. The framework can be used to estimate the cost of a complete internet disruption (national or regional), and a partial disruption targeting social media.

Table 1: Estimated economic impact of a total internet blackout and app shutdown per day in US$ as per the framework

Country	Economic effect of internet disruption per day[4]		Economic effect due to app disruption per day
Burundi	166,416		41,604
Cameroon	1,671,102		417,775
DR Congo	1,936,911		484,228
Ethiopia	3,499,741		874,935
Gabon	882,019		220,505
Gambia	53,383		13,346
Niger	415,566		103,891
Republic of Congo	433,526		108,381
Togo	243,507		60,877
Uganda	1,762,475		440,619

132.1m

With 36 days of complete national and regional internet shutdowns and 7 days of social media disruption, Ethiopia has suffered the most losses - US$ 132.1 million.

46m

The DR Congo, one of the pioneers of network disruptions in Sub-Saharan Africa, has lost at least US$ 46 million.

38.8m

Cameroon, which ordered a 93-day shutdown in Anglophone parts of the country, suffered a loss of US$ 38.8 million.

6.3m

If Kenya were to implement a total internet disruption, it would cost the economy more than US$ 6.3 million per day.

* The contribution of the ICT sector to the national economy cannot be disputed, especially in many African economies where the ICT sector's contribution to GDP is 5% on average, a contribution greater than in a number of countries in Europe and Asia.
* Internet disruptions are not a necessary and proportionate response to the situations for which they have been employed in Africa. Far from fostering stability, as governments may hope when they effect disruptions during protests, elections, or exam periods, they in fact undermine economic activity and prevent normal order.
* African governments should desist from ordering shutdowns because they have a high economic impact at micro and macro levels, adversely affecting the livelihoods of citizens, undermining the profitability of business enterprises, and reducing the GDP and competitiveness of countries that implement them.
* Intermediaries in Africa should add their voices to those speaking out against internet disruptions and increase their collaborations with civil society organisations to more effectively identify internet disruptions and quantify their impact.

4 For regional shutdowns, a ratio based on the % population affected can be used. However, this can only provide partially reliable results due to intricacies of calculating the ICT ecosystem in the affected region and its contribution to national GDP, and establishing the population affected. Given the nature of interconnections / network effects, the population affected goes beyond the residents of the regions where the disruption happens.