Data & Politics

Trends of Digital Data Operations in Elections in Uganda from 2005 - 2020

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1   Introduction

While different countries in Africa and beyond have been rocked by shocking revelations of abuse of user data from popular social networks such as Facebook (re: Cambridge Analytica) and massive advertising exchanges such as Google's DoubleClick during electoral cycles, Uganda seems to have been spared.[1] This is not entirely surprising given such information is generally scant, however, it does not imply that Uganda does not or has not used data assets during elections in the past cycles. Neither does it show that Uganda will abstain from digital data operations in future elections, including the 2021 polls. In fact, as we argue in the text below, for long, Ugandan politicians and their political parties have exploited complex traditional systems of monitoring and communication to influence electoral outcomes. They are also using new and modern technologies such as mobile telephony to influence elections. In particular, the state's influence on the telecommunications industry has given it uninhibited access to large amounts of user data that could be used beyond state-sanctioned surveillance purposes.

It is evident, surveillance is a critical aspect of electoral machinery in Uganda—especially that which is controlled by the incumbency. While Uganda is a multi-party democracy with theoretically co-independent arms of the government i.e. executive, legislature and judiciary, the president's prominence within the country's day to day administration including within its security dockets cannot be understated. The state, through the presidency, has firmly established links within the Local Council (LC) system popular in rural and urban areas and is, indeed, an embodiment of "eyes on the street" phenomenon;[2] a vernacular form of surveillance and monitoring—and care—enabled by the local leaders in local communities. However, with the proliferation of mobile telephony, especially in the urban areas, the surveillance machinery builds on the pre-existing (vernacular) infrastructures of surveillance to advanced technology and data enabled surveillance that has been weaponized, mostly by the state, to steer the electoral process and the probable outcomes.

Meanwhile, it is almost impossible to talk about data and politics in Uganda without situating the conversation within the broader political history of elections in Uganda. Having attained its independence from the British colonial masters on October 9, 1962, Uganda's democratic journey has been characterised by violence and suppression. In fact, Uganda has never had a peaceful transfer of power from one leader to another since independence.[3] To crudely put it, political transition has often been a matter of life or death. Having ascended to power in January 1986 after a five-year guerrilla war campaign imputed to a rigged 1980 presidential poll, President Yoweri Kaguta Museveni has been at the helm of the country's leadership since then. Notably, the president has also overseen arguably the longest period of relative peace and stability, coupled with significant post-1986 socio-economic recovery and growth. Despite these achievements, they seem to be steadily eroding because of increasing oppressive legislation, harassment of critics and opposition, and the impunity of those in power.[4]

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[1] Christopher Wylie, "Mindf*ck: Inside Cambridge Analytica's plot to break the world," 2019. See also; Daniel Mwesigwa, "Africa in the Crosshairs of New Disinformation and Surveillance Schemes That Undermine Democracy," December 9, 2019, available at https://cipesa.org/2019/12/africa-in-the-crosshairs-of-new-disinformation-and-surveillance-schemes-that-undermine-democracy/. See also; VOA, "UK Data firm, Cambridge Analytica played roles in multiple African elections," March 22, 2018, available at https://observer.ug/news/headlines/57289-uk-data-firm-cambridge-analytica-played-roles-in-multiple-african-elections.html

[2] Kevin Donovan, Philippe Frowd and Aaron Martin, "ASR Forum on surveillance in Africa: Politics, histories, techniques," African Studies Review (p. 31-37), 2016

[3] Alon Mwesigwa, "Ugandan elections: 'It is time for President Museveni to move on'," February 17, 2016, available at https://www.theguardian.com/global-development/2016/feb/17/young-people-uganda-elections-time-for-president-yoweri-museveni-to-move-on

[4] Available at https://reliefweb.int/sites/reliefweb.int/files/resources/85C0E269BAF5E780C12577B300447BAD-Full_Report.pdf

In this report, we show the changing trends of use of data in electoral cycles in Uganda's modern history. Crucially, the report looks at the period between 2005 and 2020, a period characterised by the highest use of technology and data assets witnessed in Uganda yet.

2   Methodology

The study employed a qualitative approach including literature review, policy and legal analysis, and key informant interviews with purposely selected respondents. Literature review included various reports of previous studies, media reports, academic works, and government documents. The legal and policy analysis included a review of relevant laws, policies, proposed legislation, regulations, directives, case law and procedures and practices in the country. The review provided an understanding of the trend of (government) use of data assets and intelligence controls over the last decade.

The key informant interviews were conducted with staff of private companies (such as marketing agencies and opinion polling firms), public interest bodies such as media houses, social media users, human rights defenders and activists, consumers' associations, academics and lawyers.

3   Background

3.1   Elections under Museveni

Although the president promised that he would only rule for four years and hand over the country to civilian rule, Uganda held its first democratic elections in 1996, ten years after Museveni's successful guerrilla campaign.[5] According to article 105 of the Constitution of Uganda promulgated in 1995, a person elected for president holds the term for five years.[6] Since then, Uganda has held general elections every five years. From 1996 throughout the 2001, 2006, 2011, 2016 polls, the president has won in spite of being mainly challenged by his former personal physician and bush war fighter, Kizza Besigye. However, the elections have also been marred by irregularities that have ended up in arbitration at the Supreme Court of Uganda. In various election petitions following contested election results in 2001, 2006, and 2016, the Supreme Court ruled that the electoral anomalies were not substantial enough to annul the election outcomes in spite of contending to evidence of violence, voter intimidation and disenfranchisement.[7]

3.2   Data assets in elections in Uganda

In the early 2000s, the Internet's significance in civic and democratic processes was limited to elite sections of academia, civil society, business, government and international development.[8] However, the rapid growth of mobile communications and telephony was more nuanced post-2008 (marked by the entry of Warid Telecom). This change would significantly alter the nature of elections influence operations and the use of user data to inform political campaigning and strategy. In fact, the 2011 poll would be the first to experience the full force of digitalisation and changing demographics of tech savvy youth participating in the poll for their first time. To put this in perspective, in December 2009, Uganda had 9.38 million subscribers accessing the internet through mobile devices, however, the number had grown to 16.7 million by December 2011. Between 2010 and 2014, the number of mobile broadband

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[5] The president has had a fair share of controversy given he reneged major ideals he seemed to initially have stood for.
[6] Available at https://www.wipo.int/edocs/lexdocs/laws/en/ug/ug023en.pdf
[7] Haggai Matsiko, "Mbabazi's evidence on Museveni election," April 11, 2016, available at https://www.independent.co.ug/mbabazis-evidence-on-museveni-election/5/
[8] Ibid.

subscriptions grew by approximately 70% per year, the highest stretch of growth in the last 15 years.[9] In contrast, the fixed broadband penetration rate has averaged around 1%. In 2020, the number stands at 16.9 million according to a January 2020 market performance report by the Uganda Communications Commission—in a country of 41 million people.[10] While the internet usage figures seem low, mobile telephony, social media and the internet play a vital role in the country's electoral processes. Further, social media's role – especially WhatsApp, despite limited usage statistics – is crucial around electoral processes.[11]

3.3   Rethinking influence operations through indigenous media in Uganda

In his seminal 2003 paper, Aaron Mushengyenzi re-imagines traditional methods of communication in Uganda and their role in communicating [political] messages because "oralate societies are characterised by low literacy rates and low levels of technological development."[12] While the emergence of ICTs show demonstrable promise, "the bulk of the rural people are non-literate, poor and have little or no access to modern mass media such as the internet and email."[13] The author says Museveni's mastery of folk media polemics including the use of anecdotes, idioms, symbols and images already familiar to people has significantly contributed to his electoral successes. During the 1996 Presidential election campaigns, for example, Museveni compared leadership to carrying *olubengo* ('a grinding stone'); he talked of how the challenges of nation building and fighting poverty require each citizen to do his *olubimbi* ('the part of land cultivated for a day') and how past leaders are *olumbugu* ('couch grass', a type of weed common in gardens) because of their biased, sectarian politics.[14] Following the 1996 Presidential election victory, Museveni is quoted to have said, "I have no doubt that these [literary] images increased our support by anything up to 20 per cent, because they clarified people's perception of the problems."

3.4   Reality check: 'can you hear me now?'

In the build-up of the 2011 general elections in Uganda, the electorate woke up to robocalls by the president, Yoweri kaguta Museveni.[15] The president's use of robocalls was a surprise to the electorate who consider him hard to access. The message reminded the electorate of the "old man in the hat" – a signature symbol of the president – and the call to action: to be voted for in the February 2011 elections. It was a first of the kind and indeed swung the vote in the president's favour. Parallel to the one off robocalls to the unsuspecting mobile subscribers, the president had also composed a popular rap song that pundits thought endeared him to the young electorate.[16] However, an expert interviewed for this report said that Forum for Democratic Change's—a leading opposition party's—request to utilise the mobile subscribers database was not granted by the telecoms under the careful watch of the Uganda Communications Commission (UCC).

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[9] Rachel Alemu, "The Liberalisation of the Telecommunications Sector in Sub-Saharan Africa and Fostering Competition in Telecommunications Services Markets: An Analysis of the Regulatory Framework in Uganda," Vol. 6. Springer, 2018.

[10] Available at https://uccinfo.blog/2020/05/29/market-performance-report-shows-robust-growth-january-2020/

[11] Mathias Kamp "ASSESSING THE IMPACT OF SOCIAL MEDIA on Political Communication and Civic Engagement in Uganda," January, 2016, available at https://www.kas.de/c/document_library/get_file?uuid=95eec5bf-c11c-c4eb-f504-90a4e5a4d54d&groupId=252038

[12] Aaron Mushengyezi, "Rethinking indigenous media: rituals, 'talking' drums and orality as forms of public communication in Uganda," Journal of African Cultural Studies, 16:1, 107-117, 2003, DOI: 10.1080/1369681032000169302

[13] Ibid.

[14] Ibid.

[15] Reuters, "Ugandan leader stuns voters with robocalls," February 16, 2011, available at https://www.reuters.com/article/us-uganda-election-robocalls/ugandan-leader-stuns-voters-with-robocalls-idUSTRE71F5NR20110216

[16] Vision Reporter, "How did NRM win over the youth?," March 25, 2011, available at https://www.newvision.co.ug/news/1014250/nrm-win-youth

3.5   Contested relationship between revolutionaries and computational propaganda

In March 2019, the Observer newspaper in Uganda reported that the septuagenarian president declined three multi-million dollar public relations proposals from different groups consisting of National Resistance Movement (NRM) leaning members of parliament and cohorts from the government communication centre in the wake of anti-government hostility due to the contested 2017 constitutional amendment which lifted the 75-year age limit requirement for presidential candidates.[17] The president reportedly said he did not need any perception alteration and that he was a General of the revolutionary, National Resistance Army. However, for the past electoral campaigns, the president and his handlers have leveraged the services of public relations experts and data scientists. For example, in the 2016 elections, the NRM hired renowned Kenyan public relations consultant Cynthia Nyamai who had worked on previous winning branding and communication campaigns for presidents in Kenya and Nigeria.[18]

3.6   Prospecting 2021 and beyond

The imminent threat of computational propaganda tailored by domestic and international public relations and marketing firms based on personally identifiable data harvested from offline channels such as voter registers and psychographic data from sources such as social media, data exchanges and brokers is ever present. The market has seen entry of advanced upstarts and agencies such as Eskimi which entered Uganda in 2017.[19] It is reported that it has more granularly and more accessible data on local African markets than most international players including Google's DoubleClick.[20] However, Transsion, an Original Equipment Manufacturer (OEM), behind widely popular mobile phone brands such as Tecno, Infinix, iTel, has recently grown its organic advertising network named HippoAD which could also be used for targeted political advertising.[21] Other private companies and even some government agencies have in the recent past gained the apparatus to gather extraordinary densities of data on individual citizens which could be used to influence campaigns and outcomes.

The recent adoption of facial recognition in Kampala through the Huawei 'smart city' programme poses unique challenges to election-related surveillance activities. It is reported that the national ID and facial recognition databases will be integrated with databases belonging to other key agencies such as Uganda Revenue Authority (URA), National Identification and Registration Authority (NIRA), National Information Technology Authority of Uganda (NITA-U), and the Directorate of Immigration.[22] While the facial recognition systems operate on an institutional scale that requires significant capital resources to develop and maintain, the data collected by such systems are reproducible, exportable, and machine readable[23]—and therefore prime for manipulation by political actors.

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[17] Sadab Kitatta Kaaya, "Museveni rejects Shs 13bn PR cleanup," March 1, 2019, available at
https://observer.ug/news/headlines/60020-museveni-rejects-shs-13bn-pr-cleanup
[18] Martin Oduor, "Spotlight on Cynthia Nyamai: Former KTN anchor, PR guru who has helped presidents win elections and now a pastor," July 6, 2019, available at https://mzurii.com/spotlight-on-cynthia-nyamai-former-ktn-anchor-pr-guru-who-has-helped-presidents-win-elections-and-now-a-pastor/; Nyamai was allegedly at the centre of hiring (human) bots and trolls on social media during the Presidential debates and general elections. CIPESA's two reports analysing sentiment during these periods nicely shows who the bots were but is unable to show who was behind them.
[19] AS Wakama, "Eskimi programmatic platform set to launch service in Uganda," July 20, 2017, available at
http://www.itnewsafrica.com/2017/07/eskimi-programmatic-platform-set-to-launch-service-in-uganda/
[20] Victor Ekwealor, "Is programmatic ad buying the way to go for digital advertising in Nigeria?," January 25, 2017, available at
https://techpoint.africa/2017/01/25/eskimi-programmatic-dsp/
[21] Available at https://www.hippohit.com/. See also; https://www.linkedin.com/company/shalltry/
[22] Privacy International, "Huawei infiltration in Uganda," June 25, 2020, available at
https://privacyinternational.org/case-study/3969/huawei-infiltration-uganda

Meanwhile, in the first half of 2020, the Electoral Commission of Uganda pronounced that over one million first-time voters would not be able to register in time to vote for the 2021 poll because of logistical pressures on voter registration, yet this could have been widely seen as a move to curtail the youth vote, who appear sympathetic to the opposition.[24]

4   Country context

4.1   General context

Uganda is a landlocked country in East Africa bordering Kenya to the East, Tanzania in the South, the Democratic Republic of the Congo in the West and South Sudan in the north. Uganda's population has steadily grown from 22.9 million in the year 2000 to over 41 million by 2019. About 80% of Ugandans live in rural areas. Kampala, the capital, has a population of 1,659,600 compared to the next largest city at 365,000 people. The country has had a long reign of relative peace and stability in the past 34 years. Uganda is fairly a young democracy with a democracy index of 5.20, at the position of 99 out of 167, according to the 2019 Democracy Index.[25] Over time, the country has registered considerable socio-economic growth.

The liberalisation and deregulation of the economy in the 1990s saw the government open up formerly nationalised industries in communications, transport, health, education, among others to the private sector. This phase of economic reform led to economic growth averaging 7% per annum until recently when it declined due to a fall in commodity prices, political instability in Uganda's strategic neighbouring states such as the Democratic Republic of Congo and South Sudan, and pressures from demographic shifts.

According to the World Bank, Uganda's 2019 gross domestic product (GDP) per capita income stands at USD 794.[26] The services sector accounts for 51% of the GDP, while industry contributes up to 23%. Agriculture accounts for 25% of the GDP and it employs 69% of the working population.[27] More than 90% of the labour force employed in non-agricultural activities are in informal employment.[28]

4.2   ICT context

Over the last 15 years, there has been exponential growth of mobile telephony services coupled with dwindling costs of devices and internet bandwidth, and a favourable political and business environment for private sector investments.[29] Between 2010 and 2014, the number of mobile broadband subscriptions grew by approximately 70% per year, the highest stretch of growth in the last 15 years.[30] In contrast, the fixed broadband penetration rate has remained below 1%. In 2020, the number stands at 16.9 million according to a January 2020 market performance report by the Uganda Communications Commission—in

[23] Mark Andrejevic and Volcic Zala, "'Smart' Cameras and the Operational Enclosure," Television & New Media, December, 2019, available at doi:10.1177/1527476419890456

[24] Silja Fröhlich and Alex Gitta, "Uganda blocks a million first-time voters," February 29, 2020, available at https://www.dw.com/en/uganda-blocks-a-million-first-time-voters/a-52575191

[25] Available at https://www.eiu.com/topic/democracy-index

[26] Available at https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=UG

[27] Available at https://data.worldbank.org/indicator/NV.AGR.TOTL.ZS?locations=UG ; https://data.worldbank.org/indicator/SL.AGR.EMPL.ZS?locations=UG

[28] Available at https://www.ubos.org/wp-content/uploads/publications/03_2018labour_report0203.pdf

[29] Charles Byaruhanga, "Managing Investment Climate Reform: Case Study of Uganda Telecommunications," 2004, available at http://siteresources.worldbank.org/INTWDRS/Resources/477365-1327693758977/8397896-1327771331430/byaruhanga_uganda_telecoms.pdf

[30] Supra note 9

a country of 41 million people.[31] According to the GSMA, a global mobile operators' association, over 98% of Uganda's population is covered by 2G, 78% by 3G, and 23% by 4G.[32]

From 2010, the country has enacted numerous legislations aimed at regulating the ICTs and the digital space. The Constitution of Uganda emphasizes that the government through its agencies must guarantee security of persons and property. The issue of national security gives the government powers among other things to surveil, monitor and intercept communications, and track movement as it deems fit, in order to secure the country's security. Through different enforcement mechanisms, the government's mandate to facilitate state surveillance is enabled by the following select laws: the Anti-Terrorism Act (2002);[33] the Regulation of Interception of Communication Act, 2010;[34] Computer Misuse Act, 2011;[35] Electronic Signatures Act, 2011;[36] Electronic Transactions Act, 2011;[37] the Anti-Pornography Act, 2014;[38] the Communications Act, 2013 (amended 2017);[39] and the Data Protection and Privacy Act, 2019.[40] The laws have a significant bearing towards digital data operations during elections to the extent that they have often been considered a characteristic of regression in digital rights in Uganda.

5 Key Findings

5.1   National identification and the woes of biometric elections

The national voter registration has always been a site of contest. The opposition has long claimed that the national voter register is used to systematically disenfranchise the electorate in opposition strongholds.

As recently as the 1996 election, the voter register was handwritten and fraught with errors of omission and duplication. To address some of the concerns associated with the national register, the Electoral Commission of Uganda first introduced a biometric voter register in 2001 under the Photographic Voter Registration and Identification Systems (PVRIS) project, becoming one of the first adopters of biometrics in Africa, although the system was first successfully used countrywide in the 2006 elections.[41] For the 2011 elections, the Biometric Voter Registration system was introduced by using equipment acquired under the National Security Information System (NSIS) project.[42] However, in 2013, the need to centralize citizen registration across MDAs – such as Directorate of Citizenship and Immigration Control, the National Information Technology Authority Uganda, the Uganda Registration Services Bureau, the Uganda Bureau of Statistics and supporting agencies, including the Uganda People's Defence Force, the Uganda Police Force and the Uganda Prisons Service – and the need to mitigate the duplication of resources, the government kicked off the biometric voter registration alongside the national identification registration process with these overarching objectives:[43]

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[31] Supra note 10

[32] Available at https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2019/03/GSMA_Connected_Society_Uganda_Overview.pdf

[33] Available at http://www.ulii.org/ug/legislation/act/2015/2002

[34] Available at https://ulii.org/ug/legislation/act/2015/18-2

[35] Available at https://ulii.org/ug/legislation/act/2015/2-6

[36] Available at https://ulii.org/ug/legislation/act/2015/7-6

[37] Available at https://ulii.org/ug/legislation/act/2015/8-3

[38] Available at http://www.ug-cert.ug/files/downloads/The-Anti-pornography-act-2014

[39] Available at http://parliamentwatch.ug/wp-content/uploads/2016/10/The-Uganda-Communications-Amendment-Bill-2016.pdf

[40] Available at https://ulii.org/ug/legislation/act/2019/1

[41] Available at https://www.idea.int/sites/default/files/publications/introducing-biometric-technology-in-elections-reissue.pdf

[42] Ibid. However, this programme was being implemented by the Ministry of Internal Affairs

[43] Ibid.

- identify and register Ugandan citizens and issue them unique national identification numbers and national ID cards;
- register citizens 16 years of age and older for the purpose of producing a clean voter register in time for use in the 2016 elections;
- register resident aliens and issue them alien ID cards.

For the 2016 elections, the Electoral Commission extracted data from the NIRA national ID database to compile the national voter register. Fraught with inconsistencies and errors, the electoral body was called out by a team of activists for flaunting the voter register with 20,000 ghost voters.[44] As if that wasn't enough, an analysis in the voter register revealed that areas of stronger opposition in the previous elections could have been deliberately weakened through reduction of voter numbers in spite of the increasing demographics.[45]

5.1.1   Legal conundrums surrounding biometrics elections

In the 2016 election petition to the Supreme Court of Uganda, the court held that the Electronic Results Transmission and Dissemination System (ERTDS) first used in the 2011 elections and subsequently the 2016 polls, did not provide sufficient ground for nullification of the election.[46] Although the first petitioner (Amama Mbabazi, a former prime minister and 2016 presidential candidate), among other positions, argued that the Presidential Election Act (law governing presidential elections) did not cater for electronic transmission of the election results from various levels of polling which possibly exposed them to tampering, the Court held that while the law indeed did not provide for electronic transmission of election results neither did it explicitly prohibit it. In addition, it was argued that an improved version of the ERTDS was used in the 2016 elections and seen as a way of improving the electoral commission's efficiency.

5.1.2   How mandatory SIM card registration completes the biometrics equation

The UCC kickstarted the SIM card registration process in 2012, citing the Regulation of Interception of Communications Act (2010) which provides for registration of existing SIM cards.[47] The UCC justified the process citing it as necessary to "help law enforcement agencies to identify the mobile phone SIM card owners", "track criminals who use phones for illegal activities", "curb other negative incidents such as; loss of phone through theft, nuisance/hate text messages, fraud, threats and inciting violence", and "help service providers (network operators) know their customers better."[48] Without sufficient constitutional guarantees on data protection and privacy, the registration raised concerns within the public and media on mass surveillance and a threat to individual privacy.[49] Initially, in December 2013, the High Court declined to hear the case by Human Rights Network for Journalists-Uganda (HRNJ-Uganda) and Legal Brains Trust challenging the SIM card registration exercise. The Court argued that the SIM card exercise

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[44] Gaaki Kigambo, "Doubts still linger over accuracy, integrity of Uganda electoral body's list," February 13, 2016, available at https://www.theeastafrican.co.ke/news/Doubts-still-linger-over-integrity-of-Uganda-voter-list-/2558-3075122-view-printVersion-d9830nz/index.html

[45] Available at https://medium.com/@valanchee/is-electoral-commission-deliberately-weakening-opposition-strongholds-757f64d27d33

[46] Available at http://judiciary.go.ug/files/downloads/Final%20Reasons%20for%20the%20decision%20Edited%2025%20Aug%202016%209%2000%20pm.pdf

[47] Available at http://web.archive.org/web/20131201000000*/https://www.ucc.co.ug/data/smenu/23/SIM-Card-Registration.html

[48] Ibid.

[49] Edrine Wanyama, "The Stampede for SIM Card Registration: A Major Question for Africa," April 18, 2018, available at https://cipesa.org/2018/04/the-stampede-for-sim-card-registration-a-major-question-for-africa/

had ended on August 31, 2013 and that it would be futile to litigate retrospectively.[50] Further, in a High court ruling on May 18, 2017, judge Steven Musota dismissed another case filed by one Norman Tumumbise and a Human rights Watchdog, Trumpet Ug Ltd, seeking to block the UCC from deactivating all unregistered SIM cards by May 19, 2017.[51]

On April 12, 2017, the UCC issued a seven-day ultimatum for subscribers to update their SIM card registration details using National IDs to curb the recent wave of physical and cybercrime executed with the help of unregistered mobile phones.[52] The Uganda Law Society termed this ultimatum as illegal citing, among other things, that the Registration of Persons' Act allows valid identification documents issued by government agencies such as National identity cards, work permits, passports, driving licence, student Identity cards and voter's cards to be used for registration.[53]

On March 28, 2018, UCC issued a directive banning the sale of new SIM cards with new guidelines requiring telecommunications companies (telcos) to use National ID card readers to electronically verify registration data against the national ID register maintained by NIRA.[54] In April 2018, the Parliament resolved to extend the SIM card registration by not more than one year, however, Hon. Frank Tumwebaze, the Minister of ICT and National Guidance responded on Twitter that "Government notes and will address issues of Parliament in regard to the SIM-card verification period, the deadline stands."[55] UCC, however, lifted the ban after NIRA gave them 50 biometric machines to facilitate the capturing of user biodata.[56]

The unfettered access to the national ID database by different bodies, including security and law enforcement and private sector corporations such as telecom and technology service providers raises questions on the ability of arbitrary actors to abuse very sensitive personally identifiable information during electoral cycles.[57] For example, telecommunications companies such as MTN and Airtel have been leveraging national ID data not only for the mandatory purposes but also towards their profit driven imperatives.[58] In some cases, there have been major data breaches emerging from their special access to the national ID database.[59] Although the government has denied reports of security incidents, it acknowledges that citizens' biometric data has been shared with telecommunications companies, as part of the process of verifying SIM cards.[60]

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[50] HRNJ-Uganda, "Ugandan court declines to hear SIM card registration case," December 13, 2013, available at https://ifex.org/ugandan-court-declines-to-hear-sim-card-registration-case/
[51] Vision Reporter, "Sim-card registration case dismissed," May 18, 2019, available at https://www.newvision.co.ug/new_vision/news/1453570/sim-card-registration-dismissed
[52] Edrine Wanyama, "The Stampede for SIM Card Registration: A Major Question for Africa," April 18, 2018, https://cipesa.org/2018/04/the-stampede-for-sim-card-registration-a-major-question-for-africa/
[53] Stephen Kafeero, "New UCC Sim card registration directive illegal - Law society," April 15, 2017, available at https://www.monitor.co.ug/News/National/New-UCC-Sim-card-registration-directive-illegal-Law-society/688334-3890052-9ii9ai/index.html
[54] Sydney Mugerwa, "UCC bans sale of SIM cards with immediate effect," March 28, 2018, available at https://www.dignited.com/29103/ucc-directive-telecoms-uganda-stop-sale-of-sim-cards/
[55] The Independent, "Parliament resolves to extend SIM-card deadline to next year," May 18, 2017, available at https://www.independent.co.ug/uganda-parliament-extends-sim-card-deadline-next-year/
[56] Available at https://twitter.com/IBbossa/status/984857246566895617
[57] Claire Lee, "Dispute in Uganda over Mobile Money Monitoring Continues," March 15, 2018, available at https://dfsobservatory.com/content/dispute-uganda-over-mobile-money-monitoring-continues
[58] Daniel Mwesigwa, "'Cameras, mobiles, radios – action!': old surveillance tools in new robes in Uganda," November 2019, available at https://www.giswatch.org/node/6194
[59] Michael Karanicolas, "Serious Concerns Around Uganda's National Biometric ID Program," November 20, 2019, available at https://law.yale.edu/isp/initiatives/wikimedia-initiative-intermediaries-and-information/wiii-blog/serious-concerns-around-ugandas-national-biometric-id-program
[60] Ibid.

5.2   Election surveillance apparatus

The government notably increases its surveillance capabilities just before election periods. The use of surveillance and interception equipment is operationalised by The Regulation of Interception of Communications Act (2010). The law provides for the lawful interception and monitoring of communications in the course of their transmission through telecommunication media or postal services or any other service.[61] Section 2 of the Act bars unlawful interception of communication by any person save for where there is consent or an authorised warrant. Despite the protection guaranteed in section 2, section 3 establishes a monitoring centre for the interception of communications. For example, in the run up of the 2016 elections, a Privacy International report details how the government allegedly advanced stages of procuring a (social media) monitoring system assumed to increase surveillance efforts against persons opposed to President Museveni's candidacy, including journalists and civil society actors.[62]

Whereas the Computer Misuse Act (2011) aims to protect the safety of electronic and information systems, its provisions indicate that while privacy is provided for, it may be taken away under authorisation. However, the state through its internal security organs has conducted invasive operations against persons opposed to the President.

> "FinFisher fake access points were created in the Munyonyo neighbourhood and the leafy Kololo neighbourhood in central Kampala, as well as upmarket Lubowa and Kensington housing estates, according to the briefing document. Furthermore, 21 mostly high-end hotels in Kampala, Entebbe and Masaka were compromised as part of the spying operation. These hotels were specifically selected because they were known to be meeting points for politicians and journalists as well as hosting political events."[63]

The state has increased surveillance that are continually narrowing the civic and political spaces. This is coupled with government hostility towards the political opposition and online critics especially through arrests and arbitrary prosecution.[64]

If the above examples do not sufficiently illustrate direct surveillance practices during elections, then the state's covert technical and policy interventions could shade better light on the changing nature of surveillance and what the future holds. For instance, the government's acquisition of the so-called 'porn machine' in 2016, to fight against online pornographic content coincided with the state's July 2018 installation of Intelligent Network Monitoring System (INMS) on communications infrastructure owned by all mobile network operators, from where the communications regulator could monitor a range of real-time date including multi-vendor data, network performance, and customer experience records.[65] While the porn detection machine was never installed, the state's advances on the INMS were widely reported in the local press. In June 2019, it emerged that Uganda Telecom, the government-owned mobile operator, was the only one of five major licensed telcos that had not yet installed the INMS, thus posing a

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[61] Regulation of Interception of Communications Act, 2010. Long title.
[62] Available at https://www.privacyinternational.org/sites/default/files/2017-12/Uganda_Report_1.pdf
[63] Available at https://www.privacyinternational.org/sites/default/files/2017-12/Uganda_Report_1.pdf
[64] CIPESA, "Hunting Down Social Media 'Abusers' in Uganda as Elections Near," July 2015, available at https://cipesa.org/?wpfb_dl=190
[65] Available at https://cipesa.org/?wpfb_dl=338

"national security threat".[66] The telecommunications sector remains one of the key gateways of state surveillance during electoral periods.

5.3   Telecommunications and elections

The Uganda Communications Act regulates communication services in Uganda and provides for the establishment of the UCC,[67] whose functions include to monitor, inspect, licence, supervise, control and regulate communications services; receive, investigate and arbitrate complaints relating to communications services and take necessary action; establish an intelligent network monitoring system to monitor traffic, revenue and quality of service of operators; and to set standards, monitor and enforce compliance relating to content.[68] The UCC under section 6 of the Act has a range of powers which include *inter alia*, charging of fees, imposing fines, classifying communication services and licences and confiscation of communication apparatus.

5.4   Value-added services (VAS) and SMS services for elections

Content based SMS service providers are often busy around electoral times. These include traditional mobile network operators and third-party VAS, although the market is dominated by the latter. A Google search for "sms content providers uganda" returns about 1,510,000 results, while the same query on Yellow Pages returns 24 results.[69] The market for SMS based content services is incredibly large and has been instrumental during electoral campaigns. VAS and SMS platforms have most notably been used in 2011 and 2016 elections not only for polling exercises but also to influence the electorate. VAS and SMS platforms have been used in civic engagement such as checking for one's voting status.[70]

5.4.1   Scrappy SMS spammers

In 2015, the president through a third-party SMS content service provider, SMS empire, sent unsolicited campaign messages to Airtel Uganda subscribers. Sections from civil society demanded investigation from the communications regulator UCC into the perpetrators for breach of user privacy and financial loss given the SMS fees of UGX 220 were deducted from the subscribers.[71] While the UCC response was not adequate, such spammy behaviour from VAS and content based SMS providers and even mobile network operators is not uncommon.

In 2011, the Democracy Group, a coalition of four civil society organisations set up SMS and internet-based platforms for election monitoring in the presidential elections. A platform named UgandaWatch[72]— a web and SMS crowdsourcing platform— and a group of trained 6,000 election observers for bounded crowdsourcing and randomized mobile subscribers were targeted for the crowdsourcing exercise. In total, more than 10,000 messages were sent via SMS to 6090, reporting on various issues such as voter buying, registration hiccups, inappropriate campaign conduct, cases of violence, general complaints or positive feedback. The study found that effectiveness of SMS-marketing in the general public was low (4%) although this is largely attributed to cost of SMSs (UGX 100 per SMS) and the fatigue from SMS

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[66] Available at https://cipesa.org/?wpfb_dl=353
[67] Section 4, UCC Act
[68] Section 4, UCC Act
[69] Accessed on June 24, 2020; See also https://www.yellow.ug/category/sms-services
[70] TechJaja Staff, "How to check for your voting status via SMS," February 8, 2016, available at https://techjaja.com/check-voting-status-via-sms/
[71] Sadab Kitatta Kaaya, "Uproar over unsolicited Museveni campaign SMS," August 10, 2015, available at https://www.observer.ug/news-headlines/39174-uproar-over-unsolicited-museveni-campaign-sms
[72] Archived here https://web.archive.org/web/20110326143302/http://www.ugandawatch2011.org/

spam.[73] Further, it found that those who used *UgandaWatch* and also belonged to the election observer group responded better (averaging 30%) to the SMS-marketing demonstrating potential for the political participation of the ICT-savvy. More than 50% across the study's groups preferred [physical] public meetings as a method for democratic participation.

While the cost associated with responding to SMSs can be seen as minimal, the response to the SMS survey paints a different picture. Indeed, Uganda's 2018 social media tax (UGX 200 per day of access) can be viewed under the same lens – while it appears to be small, it constitutes nearly up to 50% of the USD 3.5 Average Revenue Per User (ARPU) of a basket of telecommunications services including voice, text and data. In fact, it is reported that Uganda had lost 5 million mobile internet subscriptions as a result of the social media tax by January 2019, the first six months of its implementation.[74]
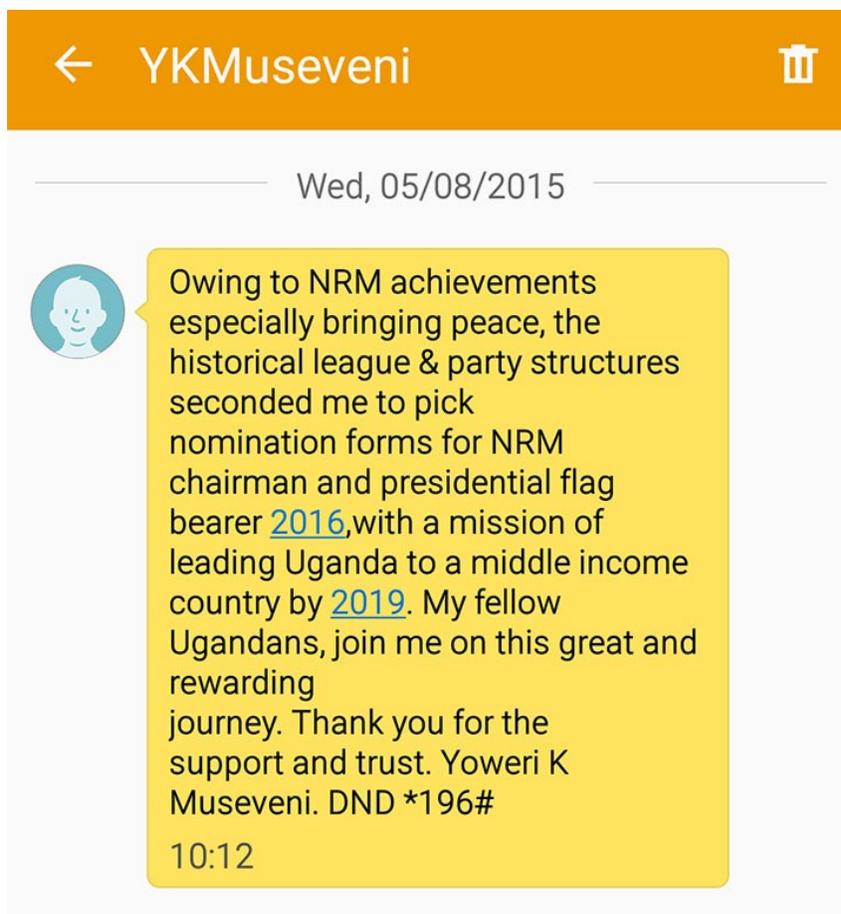

Image caption: screenshot showing unsolicited SMS from the incumbent YK Museveni [source: theObserver]

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[73] Johan Hellström and Anna Karefelt, "Participation through mobile phones: A study of SMS use during the Ugandan general elections 2011," In *Proceedings of the fifth international conference on information and communication technologies and development*, pp. 249-258. 2012.

[74] Juliet Nanfuka, "Social Media Tax Cuts Ugandan Internet Users by Five Million, Penetration Down From 47% to 35%," January 31, 2019, available at https://cipesa.org/2019/01/%EF%BB%BFsocial-media-tax-cuts-ugandan-internet-users-by-five-million-penetration-down-from-47-to-35/

5.4.2 Regulatory stranglehold on VAS and SMS providers

In February 2011, the UCC directed telecom companies to block and regulate text messages that could instigate hatred, violence and unrest during the presidential election period. The regulator issued 18 words and names, which mobile phone SMS providers were instructed to flag if they were contained in any text message. These words included 'Tunisia', 'Egypt', 'Ben Ali', 'Mubarak', 'dictator', 'teargas', *'kafu'* (it is dead), *'emundu'* (gun), 'gasiya' (rubbish), 'army/ police/UPDF', 'people power', and 'gun/bullet'. Two UCC spokesmen confirmed the directive to local media, saying the aim was "to ensure free, fair and peaceful elections."[75] Two months later in April 2011, UCC ordered the shutdown of access to social media platforms such as Twitter and Facebook in April 2011 during the "walk to work" protests led by the runner-up in the then presidential polls.[76] In the 2016 election period, Uganda blocked access to the internet twice in efforts to maintain "national security" as well as prevent the spread of "false information".[77] It was reported that the government would still perform the action if it felt there was a proportionate threat to the country's stability.[78]

Meanwhile, VAS providers are not licensed by the UCC and the requirement to obtain and maintain an SMS or USSD short code is limited to the payment of annual authorization fees.[79] This position pities VAS and SMS provider against well-resourced mobile operators while excluding them from typical regulatory protection. However, both VAS providers and traditional telcos have often breached the line of user privacy by facilitating SMS spam and invasive election targeting.

5.5 Growth of demand side platforms (DSPs) and Ad exchanges and networks

An ad exchange is a digital marketplace that enables advertisers and publishers to buy and sell advertising space, often through real-time auctions.[80] Google's DoubleClick is the world's largest and most comprehensive ad exchange and management platform.[81] However, a DSP is a piece of software used to purchase advertising in an automated fashion. DSPs incorporate what ad exchanges and networks offer including access to targeting capabilities and a wide inventory of adverts including mobile, video, web.[82] It is not clear to what extent politicians and political parties have used ad exchanges and platforms in the past elections to influence the electorate. In a keynote at the 2016 Konrad-Adenauer Stiftung Social Media Conference in Kampala, Daniel Kalinaki posited that most of the [political] engagements in Uganda were through hyperlocal media and internet platforms such as Google merely used to consume mostly international news and content.[83] While this does not imply an absence of precise targeting of internet users with local political adverts during, say, during the 2011 and 2016

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[75] Elias Biryaberema, "Uganda bans SMS texting of key words during poll," February 17, 2011, available at http://www.reuters.com/article/2011/02/17/ozatp-uganda-election-telecoms-idAFJOE71G0M520110217

[76] CIPESA (2016) State of Internet Freedom in Africa https://cipesa.org/?wpfb_dl=225

[77] CIPESA Write, "Ugandans Turn to Proxies, VPN in Face of Social Media Shutdown," February 18, 2016, available at https://cipesa.org/2016/02/ugandans-turn-to-proxies-vpn-in-face-of-social-media-shutdown/

[78] Kenneth Kazibwe, "Just like 2016 during polls, we will again switch off internet – UCC's Nyombi Thembo," February 18, 2019, available at https://nilepost.co.ug/2019/02/18/just-like-2016-during-polls-we-will-again-block-internet-uccs-nyombi-thembo/

[79] Acacia Economics and Macmillan Keck Attorneys & Solicitors, "Public Consultation Document: Support to the Uganda Communications Commission on USSD and SMS Services," *UCC,* 2017, available at http://www.ucc.co.ug/files/downloads/USSD_and_SMS_Market_Review_Short_Final_Report_171213.pdf

[80] Available at https://digiday.com/media/what-is-an-ad-exchange/

[81] Available at https://marketingplatform.google.com/about/

[82] Available at https://digiday.com/media/wtf-demand-side-platform/

[83] How social media [are] transforming Uganda's political and social landscape https://acme-ug.org/2016/07/20/how-social-media-are-transforming-ugandas-political-and-social-landscape/

elections on popular websites and channels, it highlights the limited use of such targeting during elections. In fact, Google's zeitgeist for Uganda in 2015 shows that Ugandans mostly searched for content on religious events (Roman Catholic Pope Francis visited in November 2015), entertainment, cooking, sex, and international politics.[84]

However, a digital marketing expert interviewed for this study highlighted the limitations of global ad exchanges and platforms in emerging markets such as Uganda. They often do not have granular data across demographics which undermines the efficacy of their reach. In recent time, many niche platforms and exchanges are sprouting in Uganda. Most remarkably is Eskimi business platforms which launched in Uganda in 2017. Eskimi boasts of a DSP and Data Management Platform which are robust toolkits that can be used for precise targeting. In fact, it is argued that Eskimi has greater reach in its markets in Africa including Uganda than global competitors. Meanwhile, Ad Dynamo, initially an Ad network started in 2009, has since specialised into bespoke services such as Twitter's advertising inventory of services in sub Saharan Africa including Uganda, Kenya, South Africa, Ghana, Tanzania, and Zambia.[85]

5.6 Elections and Pollsters

In the 15 years, election polling has grown into a cottage industry led by private corporations including Research World International (RWI), IPSOS, AfroBarometer, and GeoPoll. Indeed, polling collects vast amounts of data, both offline and online. For example, RWI does not use SMS polling because it could be exclusionary to those that do not have mobile devices,[86] however, companies such as GeoPoll have offerings including SMS polling. According to a key respondent interviewed for this report,[87] the president's party, the NRM does not appreciate the use of bespoke data services from renowned polling companies and agencies. However, they emphasized that the party relies heavily on intelligence gathering at the grassroots which largely informs day to day statecraft. As shown in this report, the incumbent utilizes existing intelligence gathering lines including ubiquitous mobile telephony to inform their manifestos and electoral activities.

Meanwhile, sections of the opposition have often times discredited opinion polls accusing them of being part of the government's tools to condition the electorate of pre-determined election results that are favourable to President Museveni.[88]

6 Conclusion

The use of data assets in Uganda is still limited. However, the state, and by extension, NRM's leverage of grassroots surveillance programmes and political stranglehold on the telecommunications market has given them a significant advantage in (mis)using user data as assets and intelligence during elections in Uganda. The development of niche and locally relevant advertising solutions through new advertising exchanges and DSPs means the nature of electioneering will fundamentally change. However, it should also be noted that rapidly advancing biometrics technologies will have several implications on elections in Uganda because they facilitate digital data operations at higher scales.

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[84] Google zeitgeist is a summary of annual popular internet trends and searches in a country. Google last published Uganda's zeitgeist in 2016. See more: https://trends.google.com/trends/yis/2015/UG/

[85] Gbenga Onalaja, "Addynamo Retires its ad Network to Focus on Twitter ad Sales in Africa," June 12, 2015, available at https://techcabal.com/2015/06/12/addynamo-retires-its-ad-network-to-focus-on-twitter-ad-sales-in-africa/; See also, Bob Koigi, "[Kenya] Ad Dynamo opens Twitter sales office in Nairobi," March 8, 2019, available at https://africabusinesscommunities.com/tech/tech-news/kenya-ad-dynamo-opens-twitter-sales-office-in-nairobi/

[86] Interview with RWI pollster

[87] Interview with statistician and pollster, Kampala, Uganda

[88] Nicholas de Torrenté, "Understanding the 2011 Ugandan elections: the contribution of public opinion surveys," Journal of Eastern African Studies, 7(3), 530–548. doi:10.1080/17531055.2013.810839. 2013