The Influence Industry
Data and Digital Election Campaigning in Kenya
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Kenya is a lower middle income country and East Africa's largest economy. It covers an area of 582,650 square kilometers and borders Somalia, Ethiopia and South Sudan to the North, Uganda to the West and Tanzania to the South. It has a population of 44.4 million people, over 70% of whom are youth below the age of 35 (Republic of Kenya 2013a).

The country is made up of over 43 ethnic communities who lived under separate systems of government before colonisation by the British towards the start of the 19th Century. It has been independent since 1963 and is a member of the United Nations, African Union, East African Community. Kenya is party to several trade agreements such as the Common Market for Eastern and Southern Africa (COMESA) and the Northern Corridor Transit and Transport Coordination Agreement. It has received significant development assistance from western democracies and international organisations. Around 2003, Kenya enhanced cooperation with China which has funded massive infrastructure development and is involved in energy projects (Xianfa 2018). Private Chinese companies have also partnered with the government in the ICT sector. For instance, PANG was awarded a sole Broadcast Signal Distribution (BSD) license during Kenya's digital migration in 2013 (Republic of Kenya 2014b). Telecommunications infrastructure company, Huawei signed a contract for hosting government cloud services in 2017 (Abuya 2017).

According to Kenya socio-economic atlas (Republic of Kenya 2014a) , most of the population is concentrated in urban areas along the Mombasa - Nairobi Railway belt. The electricity map shows that about 22.7% of the country is lit, again along the same belt. About two thirds of households own mobile phones. The socio-economic development is related to political occurrences from the past century.

Political context
In recent history, Kenya's major events include colonisation (1895), independence (1963), return of multipartysm (1991) and promulgation of a new Constitution (2010).

i. Colonisation and first registries

Kenya's ethnic tribes include Kikuyu, Embu, Meru and Kamba found in the central region and around Mount Kenya; Kalenjin, Maasai, Samburu,Turkana and Pokot in the Rift Valley; Somalis, Borana and Burji in the North; Luo, Luhya, Kuria and Kisii in Western Kenya; and Giriama, Pokomo, Taita and Digo at the Coast. A person's ethnicity can generally be inferred from their names.

Pre-colonialism, the majority of these groups had collective decision making mechanisms based on age groups. A few, such as Maasai and Kalenjin, also relied on special professionals such as seers to make decisions while very few, such as the Wanga in western Kenya, had kingdoms. When missionaries arrived in the 19th Century, they negotiated for land with the different tribes and where they were successful, set up their missions within the community. Prior to the missionaries,

Portuguese, Arabs and other traders had visited the country. Arabs settled at the coast and established a sultanate.

The colonisation of Kenya was closely tied to the British Empire's quest to control the source of the river Nile in Uganda (Kyle 2008). Hence from 1890, construction of a railway from Mombasa to Kampala, Uganda began, with labourers from Indian, who had carried out similar projects in India. Today, Kenya's most economically developed areas are along the railway line (The Elephant 2017).

In 1897, the British passed the East African Order in Council, importing general Indian and British law to Kenya. British and other Europeans were encouraged to settle in the country as farmers. Through the Crown Lands Ordinance (1915) the British government appropriated agricultural land and allocated it to settlers. This was principally in central highlands and parts of the Rift Valley. From 1926, native reserves were demarcated for separated settlement of different ethnicities who had been displaced by white farmers. These land delimitations formed the basis for administrative areas and political regions.

To raise revenue, the British introduced "hut" and poll taxes for black households in 1901. This effectively created a labour economy for settler farms as Africans had to work for taxes. Tax records created the first registry of Africans in Kenya. A births register for whites and Indian was kept from 1904 (World Bank Group 2016). The Native Registration Ordinance (1915) required mandatory registration of African male adults of over 16 years. They were issued with an identification paper that was used for tax records and surveillance of movement. The document, popularly known as *kipande,* was placed in a tin and worn around the neck*.* It was not until 1947 that registration of persons was extended to all races to include Indians and white settlers through the Registration of Persons Ordinance.

In 1948, the government undertook a general census. Prior to this, a 1921 census had reported less than 10,000 Europeans, of whom only 3500 were farmers. Indians were 22,822 and Arabs 10,102, while two and a half million Africans were recorded (Kyle 2008). The 1948 count identified sub-clans, clans and tribes of Kenya and mapped them in their geographical locations. It gave a more comprehensive picture than statistics from the Native Register which only accounted for males, and also covered people from all districts, including the Northern Frontier District at the border with Somalia. 5.2 million Africans were recorded. Another census was carried out in 1962 prior to independence after which seven regions based on various ethnicities of Kenya were demarcated (Morgan 2000).

ii. Independence and entrenchment of tribal politics

After fighting alongside the British during the two world wars, Africans founded political movements on their return. These political parties were initially ethnic and regional but later morphed into national parties and trade unions (Kyle 2008). Examples include the Young Kikuyu Association (1921) which later became East Africa Association; the Kikuyu Central Association (1925); North Kavirondo Central Association of the Luhya (1935); the Kavirondo Association (Luo), the Kalenjin Political Alliance; the Coast Pan-Africanist Party and later the Kenya African Union; the Kenya African Democratic Union; and the Kenya African National Union (KANU).

From 1944, a small number of Africans were included in legislative affairs in the colony. Meanwhile, the violent Mau Mau rebellion led to a state of emergency in 1952. There were three unsuccessful attempts at forming a constitution for Kenya in

1954, 1958 and 1960. In 1961, Kenyan representatives in London agreed on the Independence Constitution featuring a decentralised system of government with sub-national units known as *Majimbo*. *Majimbo* was a compromise between the smaller ethnicities and settlers who feared domination by the larger communities, particularly the Kikuyu and Luo. The first universal suffrage elections were held in 1961 and the country became self governing in 1963 with Jomo Kenyatta as the first Prime Minister (MDF and KAS 2012).

During Kenyatta's and KANU's reign from 1963 to 1978, the constitution was amended 17 times and effectivley turned Kenya into a centralised presidential one-party state. President Kenyatta died in office in 1978 and was replaced by Vice President Daniel Arap Moi, who continued with constitutional amendments. The 19th amendment introduced the infamous Section 2A to the constitution, effectively making Kenya a *de jure* one-party state. During this period, there was a massive crackdown on the opposition and its sympathisers. In August 1982, Junior officers of the Kenya Air Force unsuccessfully attempted a *coup d'etat*.

The state thereafter heightened repression against dissidents on the one hand and continued to centralise power on the other. Development projects were largely based on patronage leading to inequalities in regions perceived to be in opposition (SID 2004) to the government. Tribal leaders would swear allegiance to the president on behalf of their tribe in the hope of attracting the president's magnanimity. Eventually, local and international pressures led to the restoration of multiparty politics in 1991 and Moi was successful in leading KANU to victory in elections a year later. A small numbers of reforms to the constitution were made before the 1997 elections to ensure free and fair elections, which saw Moi and KANU win again. The country embarked on a major constitutional review from 1997 (MDF and KAS 2012).

The restoration of multiparty politics ignited aspirations for a plural society. However, the political parties which formed in the 1990s were largely ethnic and tribal based (Tade and Wahutu 2017)and the period was marked by inter-ethnic conflict. Furthermore, Moi's government oversaw the planning and execution of election-related ethnic clashes during the 1992 and 1997 general elections (Odhiambo 2010).

iii. New Constitution

Since 1992, there have been regular general elections held every five years. After winning twice in 1992 and 1997, President Moi was constitutionally barred from vying again. The 2002 elections were won by the National Rainbow Alliance Coalition (NARC) led by Mwai Kibaki. The coalition assumed the constitutional review process that had been initiated in 1997 and a draft of a new constitution was rejected through a rushed referendum in 2005 (MDF and KAS 2012).

By the next general elections in 2007, the country was deeply divided. The opposition framed their campaign as 42 ethnicities against the incumbent president Kibaki's Kikuyu community. Kibaki was declared winner against his closest opponent Raila Odinga, a Luo. The country witnessed heavy post-election violence which saw over 1,200 people lose their life and another 500,000 displaced (Kiai 2010). Following negotiations, a peace agreement known as the National Accord was signed in 2008 which set the country on a path of political reform and a new constitution was enacted in 2010. It features a national government and 47 devolved county governments, as well as progressive human rights laws. Informed by the experiences from the one-party state, the constitution sets a foundation for pluralism through detailed provisions for citizenship, elections, public finance, representation,

separation of powers, independence of institutions and national values and principles which include equitable development and public participation.

Initiatives to address ethnic tension and promote cohesion and inclusion include a truth, justice and reconciliation process, where a commission investigates historical injustices perpetrated since independence. Its report is yet to be implemented (Republic of Kenya 2013b). Another body, the National Cohesion and Integration Commission undertakes ethnic audits in public bodies and makes recommendations on ethnic minorities that require affirmation in those bodies (NCIC 2016). In pursuit of national representation, political parties are required to recruit members from more than half of the counties of Kenya.

In pursuit of the 2008 National Accord peace agreement, six Kenyans were indicted at the International Criminal Court (ICC) for mass atrocities related to the 2007 post-election violence. Two of the indictees, Uhuru Kenyatta and William Ruto (who are referred to collectively as *Uhuruto*) were nominated as contenders for President and Deputy President respectively by the Jubilee Alliance in the run-up to the 2013 general election. Their strongest opponent was Raila Odinga, with Kalonzo Musyoka as his running mate. Both had also been candidates in the 2007 elections.

iv. Post-2010 political campaign sophistication

The 2013 elections were hotly contested with the Jubilee Alliance branding itself as a symbol of national reconciliation while Raila Odinga presented himself as the reformer who had seen the country through the struggle for multiparty politics and the new constitution (EU-EOM 2013). Uhuruto engaged the services of British public-relations firm BTP which offered strategic advice on the campaign, liaised with international media and helped deflect negative reporting, particularly in regards to the indictments by the ICC (Mathenge 2013). "Team Uhuru", as it came to be known, ran a digital campaign that mobilised many first-time youth voters. The president's party was chaired by a 28 year old former student leader while the campaign secretariat was also staffed with young people. The campaign branded Uhuru as a youthful leader and used social media platforms to market him to the youth. In a 2014 newspaper article, Socialight Media explained how social media users were profiled according to issues that mattered to them. The youth, for instance, received messages about Uhuru tackling unemployment while older generations were messaged with content regarding the stability of the country (Were and Nyabiage 2014). One controversial campaign message, that was widely discussed on social media, was the "Tyranny of Numbers" ad. It claimed that with the unity of two big tribes (the Kikuyu through Uhuru and the Kalenjin through Ruto) in one political force (Jubilee Alliance) the election had already been won during voter registration (Maina 2013).

Odinga contested Uhuru's victory through a Supreme Court petition but the election was upheld. The new administration's focus in the first three years was fighting the ICC. Alongside the court battle at the Hague, resources were not spared in local and international public diplomacy. The Presidential Strategic Communications Unit (PSCU), which was set up in 2013, coordinated online messaging in support of the president. The ICC case against Uhuru was closed in December 2014 followed by the April 2016 dismissal of the the case against Ruto. Meanwhile, the opposition exposed a string of corruption scandals by the government and gained public sympathy from Kenyans, whose expectations following the new constitution had not been met. It has been argued that to a certain degree Kenyans were kept in campaigning mode from 2013 to 2017 (Kagwanja 2016).

The stakes in the 2017 elections were therefore even higher as it was seen as a repeat of the 2013 elections but fought on different issues and with evolved strategies. Uhuru Kenyatta and William Ruto defended their seat through a the newly formed Jubilee Party, which was formed through the official merger of 12 political parties that had supported the duo in 2013 (Ngala 2016). Raila Odinga and his running mate Kalonzo Musyoka re-branded their coalition of parties to National Super Alliance (NASA) but its constituent parties retained autonomy. While Uhuruto sought a second term to complete development projects, Odinga dubbed his campaign a search for electoral justice. From November 2016, his coalition led an election reform campaign that resulted in replacement of the electoral management body's commissioners and amendments to the election laws to provide for use of digital technologies in the electoral process, arguing that they would better guarantee the integrity of the vote. The campaign was widely publicised and discussed on social media with PSCU countering opposition narratives. Overall, NASA instituted more than ten court cases on different aspects of the electoral processes.

Jubilee won the bulk of parliamentary elections as well as the presidential election with about 54% of the vote. NASA petitioned the presidential election on grounds of irregularities particularly during the electronic results transmission. In an historic judgment, the Supreme Court nullified the presidential election results, paving way for a repeat in October 2017. With a majority in both Houses of Parliament, Jubilee immediately amended the election laws to elevate manual processes over digital ones. NASA boycotted the election terming it an unfair process. Uhuruto won at 97% with a turnout of under 34% (IEBC 2017). Raila Odinga, claiming the mantel of "the People's President" was inaugurated in a mock ceremony on 30 Jan 2018 (Kangai 2018) by his supporters. The country remained in a state of tension with social media users aggressively supporting one side or the other and a small group calling for implementation of the constitution. In a surprise move, Raila Odinga and President Uhuru Kenyatta reconciled in March 2018 and committed to unite in reforming the country (Oruko and Misiko 2018).

Digital Context
Kenya is East Africa's digital powerhouse, with the widest ICT penetration in the region. In the country's 2017 general elections, processes such as voter identification and results transmission took place over mobile internet. This was a culmination of developments in the ICT sector. An important aspect in Kenya's digital development is the evolution of the registration of persons.

i. The ICT sector

The World Bank's structural adjustment programmes of the 1990s contributed to Kenya's return to multiparty politics as well as market liberalisation. In the ICT sector, the government unbundled the giant Kenya Post and Telecommunications Corporation and privatised some of its functions. It also invested in several undersea cables and a national fibreoptic infrastructure. Two decades later, Kenya has mobile network coverage in over 75% of the country (Intelecon 2016). All in all, Kenya is currently among Africa's most connected countries with over 25 million internet subscriptions and internet penetration at 74.2 per 100 inhabitants (CA 2016). Over 99% internet connectivity is through mobile, with over 70% of mobile services being provided by one mobile network operator (MNO), Safaricom (CA 2017). Kenya hosts several digital innovation hubs for start-ups and is developing a technology city in Konza.

The country has an active social media scene. In 2017, private messaging platform Whatapp had the highest number of users estimated at 12 million per month, followed by Facebook at 7.1 million and Youtube at 8 million (BAKE 2018). Beyond communication services, mobile networks provide financial, address and identification services (GSMA 2017). The mobile phone has become a reliable means of identifying a person. In a country where national addressing is mostly non-existent, a mobile phone number serves the same purpose that a residential address would in a Western society.

PLATFORM	MONTHLY USERS
Whatsapp	12 million
Facebook	7.1 million
YouTube	8 million
Instagram	4 million
LinkedIn	1 million
Twitter	1 million
Snapchat	0.25 million

Social media platform users - Source: State of the Internet Kenya Report, 2017

There are many ICT use cases in both private and public sector. In the 2013 and 2017 general elections, digital technologies were used in biometric voter registration and identification as well as results transmission. Following the post-election violence of 2007, where ICTs were blamed for spreading incitements to commit violence (Waki Commission 2008), the government invested heavily in digital surveillance systems, such as the Network Early Warning System (NEWS), National Intrusion Prevention and Detection System (NIPDS), Device Monitoring System (DMS) and a social media monitoring system (Githaiga and Kapiyo 2014). According to Privacy International (2017), the social media monitoring system can capture and analyse open source traffic as well as map social media users' networks.

Another rationale for surveillance is the fight against terrorism which led to the launch of the street-based Integrated Public Safety Communication and Surveillance System (IPSCSS) in 2014. The Security Laws (Amendment) Act (2014) introduced surveillance and limitation to the right of privacy and freedom of expression in suspected cases of terrorism. In 2015, the government passed SIM card registration rules that require mandatory registration of SIM cards by MNOs. A device management system purchased by the communications authority in early 2017 would have had access to call data records and home location records but was scuppered following legal challenges (Republic of Kenya 2018). In addition, anti money

laundering regulations require banks and MNOs to enforce Know-Your-Customer (KYC) programmes where details such as ID card numbers and exact home address are collected and stored.

Biometric identification in the public sector was piloted in 2013 in a programme meant to rid the exchequer of so-called 'ghost workers'. The programme, dubbed Capacity Assessment and Rationalization of the Public Service (CARPS), was not well received due to security and discrimination concerns from government workers (Mwenesi 2014). It was, however, implemented by the National Youth Service, a paramilitary youth programme (NYS 2016), raising suspicion among opposition parties that it was a parallel voter registration exercise (Mwangi and Otieno 2017). The NYS biometric registration took place around the same time as the massive voter registration exercise in February 2017. In Nairobi county, residents claimed that the kits used by the NYS were in fact IEBC voter registration kits, a claim denied by NYS and government. The exercise was defended on the grounds that it was a means of eliminating fraud within the youth service (Patrick Vidija and Agutu 2017). Biometric registration of voters is carried out by the IEBC which is independent has more public support as it is viewed as a key component to ensure the integrity of the country's elections. In its first implementation prior to the 2013 elections, 14.3 million voters were registered. The number increased to 19.6 million in 2017 (IEBC 2017).

The private sector preceded the government in digitalisation. MNOs and banks, for example, collect personal data during transactions. Other private data collections include customer loyalty programmes such as the Nakumatt Smartcard that was issued by now flailing Nakumatt retail store. Along with ID card and phone number, the Smartcard programme collected shopping information with each use of the card. In 2013, as the company was upgrading the card to a pre-paid online debit card, it reported that it had over one million subscribers ("Nakumatt Globalcard" 2013). Other companies in the data economy include internet service providers, cloud based start-ups and digital marketing services. There has therefore been interest in getting more broadband in the country so as to support data-based innovation economy (Frankline Sunday 2017).

ii. Registration of persons

The Registration of Persons Act was amended in 1978 to include the registration of women while the age of maturity was raised to 18 years in a 1980 amendment. Section 4 requires the Registrar of Persons to collect the following data from citizens: registration number; name (in full); sex; declared tribe or race; date of birth or apparent age, and place of birth; occupation, profession, trade or employment; place of residence and postal address, if any; finger and thumb prints or, in case of missing fingers and thumbs, palm and/or toe prints; and date of registration. Additionally, a person is required to present their birth certificate together with their parent's ID card and a letter of introduction from their local chief. Persons from the country's border districts undergo further vetting by government officials and elders to prove their citizenship.

Identification documentation has evolved from a passbook to a wallet-size paper card before second generation electronically printed cards were introduced in 1995 (KNCHR 2007). Fingerprints are now stored in the Automated Fingerprint Identification System (AFIS) that checks against multiple registration (World Bank Group 2016). The identification card serves as evidence of citizenship. With the growth of large communities in urban areas, the document gained prominence in

society as a means of identification. It is produced when applying for other documents and has become a rite of passage as it is required in every process requiring identification. Lack of an ID card denies one rights of political participation, movement, ownership of property, social services such as education, employment and registration of marriage (Akeyo 2015).

However, the proliferation of the ID card in everyday life has made it prone to theft and forgery. For example, many refugees from neighbouring Somalia's civil war residing in the country acquired Kenyan ID cards by bribing elders and government officers (KNCHR 2007). Over the years, the document has also been increasingly politicised with the youth living in border districts and opposition areas experiencing more difficulties in acquiring it (KNCHR 2007). ID registration drives are common prior to elections and are often used by the government to enlist voters in its strongholds. (Barasa and Kimanthi 2017)

Attempts to digitise citizen identification procedures were scuppered, partly due to the 2010 Anglo Leasing procurement corruption scandal[1] until 2015 when the government launched the Integrated Population Registration System (IPRS) under which all government registries are to be centralised. IPRS is built on the eCitizen gateway containing digital profiles of all citizens (GoK n.d.). eCitizen was developed by private contractor, Webmasters Kenya Ltd who then contracted Goldrock Capital Ltd to collect fees on their behalf. The partnership is currently subject of a legal dispute and many Kenyans wonder about the security of their personal data (Franklin Sunday 2018). Systems that have been implemented under IPRS include TIMS for drivers' licences and motor vehicle registration, NEMIS for learners and schools and LIMS for lands registration. All Kenyan passport holders are required to apply for new passports before 2019 using primary documents such as birth certificates for re-verification (Daniels 2018). Media reports also indicate that plans are underway to collect biometric and DNA data during application for new IDs (Munda 2018).

As it stands, there is no published policy or legal framework for IPRS, therefore it is not clear how data it administers may be used. According to the World Bank country assessment (2016), IPRS' main purpose is to provide validation for identity documents by authorised entities. These entities include financial institutions and government agencies, such as the country's tax authority. While security of the database is maintained through tokens and firewalls, data is not encrypted. Although Article 31 of the Constitution guarantees the right to privacy, an explicit data privacy law is yet to be enacted (Makulilo and Boshe 2016). This provides a loophole where it is feasible for the ruling political party in government to have access to personal data that may be used for political activities, such as mobilisation or suppression of voters for registration, campaign rallies and voting.

Kenya has undertaken national census every 10th year since 1969 to more accurately count and demographically identify the population. During the constitutional review process, a case was made for equity based allocation of development funds and a formula that took into account the population of a county was developed (CRA 2016). Politicians have since taken more notice of the census process and the 2009 census results were annulled due to concerns that Kenyan citizens of Somali heritage had been over-counted (Weitzberg 2015).

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1   The Anglo Leasing affair was a series of contracts signed by the Kenyan government to replace its passport system. The contracts were awarded to the non-existent British firm Anglo Leasing Finance (Kimani 2010).

Political-Digital Context

The intersection of politics and digital identification can be summarised through trends observed in Kenya's national development since colonisation. The colonial period set the foundation for ethnicity as a basis for demarcation of administrative areas and identification of persons. The colonial government set up the first registries and started the practice of census and statics-based planning. It also facilitated corporations which would evolve to become state monopolies eventually providing ICT services. The independence government pursued nationalism where economic decisions were made in the capital Nairobi. Power was concentrated in the presidency and to maintain control over the vast country, information was tightly controlled.

The growth in the ICT sector can be credited to government policies of market liberalisation, investment in infrastructure and participatory policy making (Munyua 2016). Since the period of liberalisation, private service providers, such as MNOs and digital start-ups, have flourished and delivered rapid development. In the process, they have created new economic activities and made a business of collecting and utilising personal data as part of the global digital economy. The data economy can therefore potentially create work for the millions of unemployed youth.

In step with these developments, the government has sought access to data held by the private sector through legal frameworks requiring the keeping of identity registers, government - third party cooperation agreements and notifying law enforcement of activities of interest. In addition, it purchased digital surveillance systems that connect to third party systems, such as those operated by MNOs. The rationale for this is two-fold: to counter terrorism and control hate speech. However, the government does not report on the full nature or extent of its surveillance systems and past investigative reports have even linked extra judicial killings to these systems (Privacy International 2017).

The public has not been afforded the proper opportunity to discuss the social and political impacts of the data economy and there is little awareness on digitalisation and its effects. Following the experiences of their country's modern history, human rights, including the right to privacy, are highly valued by Kenyans and were thus entrenchment in the country's constitution. Digitalisation, with its social risks and opportunities is a defining project that should receive more public attention.

Post-liberalisation, the government is building its own advanced digital identification system. The current government's IPRS project aims to digitise and centralise all state-run registries. This has two consequences: firstly, it provides comprehensive, granular and previously unavailable information on every citizen and their network. For example, the government has historically had no large scale data on children as most did not have birth certificates or other documents normally obtained on interaction with the state. With the National Education Management Information System (NEMIS), this data is now being aggregated, giving the government insights into the largest demographic of the society - the youth. Secondly, as IPRS is built on one gateway (eCitizen) it tracks every individual. As explained by the interior Cabinet Secretary, a the security services could use the unique personal identifier from eCitizen to access a person' s address, driving history, family relations and more (ntv 2018). The system's potential use include big data analytics to observe, infer and simulate scenarios by individuals or groups. However, collecting, sharing and tracking data heightens the risk of harm in the event of a data breach.

Characteristics of post-liberalisation government-initiated digitalisation projects include:

a) Within government circles, the IPRS project is coordinated under the Ministry of Interior Coordination, which has taken over responsibilities of civil registries, such as birth, death and marriages, from the Attorney General's office. Outside of government circles, there is little public awareness of the project and its implications.

b) The government's style in implementation of the project is paradoxically voluntary and also mandatory. While citizens are not legally compelled to register an eCitizen account, the gateway has been made the only channel to receive services that fall under IPRS. Thus, by 2018 over seven million Kenyans had registered on the service for over eight million services (Sunday 2018).

c) IPRS is being implemented increasingly urgently and the importunity of the project has picked up significantly in Jubilee's second term. The NEMIS and the Land Information Management System (LIMS) were launched immediately after the 2017 election. Both projects are being pursued with little consultation or consideration of stakeholders or legal reform to clarify existing laws and align them to these digital processes. For example, the Law Society raised concern that the LIMS project had abandoned physical verification processes in land registration (Otuki 2018).

d) There is no policy or legal framework for IPRS. A bill seeking to overhaul the current registration framework was introduced in the last parliament but not enacted. This is in stark contrast to processes conducted by Kenya's East African neighbours, such as Uganda which enacted the Registration of Persons Act (2014) prior to a similar ongoing large-scale digital identification registration overhaul or Rwanda's Digital Disruption Policy (Ndemo 2017). In addition, there is no general data protection framework to give effect to the constitutional provision on personal privacy in Article 31 of the constitution. Two draft data protection bills were released for public consultation in 2009 and 2013 but neither has been introduced in Parliament.

e) Overall, government policies are shifting from market based system to more state involvement in provision of services. Examples of this include investment in public health and transportation since 2013. In its second term, the Jubilee government's Big Four Plan contains policies that will see direct government provision of housing and direct involvement in agricultural production (Kenyatta 2018). When it comes to state involvement in technology, the Ministry of ICT is set to recommend the use of distributed ledgers and Internet-of-Things in government (Murugi 2017) affairs. Market-based solutions are still sought for functions such as data acquisition and analysis but actors within Kenya's data economy are now increasingly spanning both the private and public sector. The need for a comprehensive data protection framework to promote and protect the dignity of citizens while also supporting the nation's ambitious data economy is becoming increasingly urgent.

2017 General Election

i. Personalised and targeted campaigning

During the course of a mass voter registration drive by the electoral management body, the Independent Electoral and Boundaries Commission (IEBC), in January 2017 many Kenyans received phone calls from their local chiefs seeking to know why they had not registered as voters. Chiefs act as administrative officers and represent the

national government locally and are the second lowest public service delivery unit (Republic of Kenya 2013). They work under the Ministry of Interior Coordination and the national government and their typical duties include communicating national government policy during local functionsm such as seminars and funerals; writing letters of introduction or reference for locals; assisting in the application and distribution of national identity cards and other government documentation; and alternative dispute resolution within the community (M. Mwangi and Njuguna 2017). When Kenyans shared their stories about the calls they received on social media, it appeared that those who received calls were largely based in counties in Central Kenya, North Rift and Kisii, which are all strongholds of the ruling Jubilee Party. The government described voter registration as a national priority directed available resources to boost numbers (Daily Nation 2017).

Months earlier in July 2016, twelve political parties dissolved and merged to form the Jubilee party. The constituent parties all mobilised key members of their parties from across the country to Nairobi to attend the national delegates conferences to formally approve the grand merger (Ngala Joshua 2016). Delegates, many of which had aspirations to run for seats in the upcoming elections, were asked to collect names and other details of their party members in their respective areas. Initially, their handwritten and typed lists were collated by the party and later deposited with the Registrar of Political Parties to comply with requirements for registration of the new political party. In early 2017, Jubilee launched a digital membership registration drive where aspirants and other party workers used electronic smart-cards through which they registered members (Jubilee Party 2017).

Jubilee's main competitor in the elections was the Coalition for Reform and Democracy (CORD) which was re-branded as the National Super Alliance (NASA) in February 2017 but did not register as a singular political party. Its main constituent party, the Orange Democratic Movement (ODM), carried out a membership drive that recruited about 3 million members (Ongiri 2017). The exercise was facilitated by a mobile app through which recruiters collected membership data, including name, date of birth, polling station details and phone number. Most of the recruiters were also aspirants for political office.

Starting in April 2017, Kenyan voters, particularly in urban areas, received personalised text messages via SMS, as well as private messaging apps, from political party aspirants seeking their votes. Aspirants organised their core supporters in WhatsApp groups and Telegram[2] channels through which communication and logistics were coordinated. Groups of supporters also formed WhatsApp groups to which people were added – often times without their consent and shared campaign messages within them. It was common for aspirants to collect phone numbers and voter details of groups of men, women and youth that they met in the course of campaigns. Their staff and supporters also joined many groups to gather political intelligence. They typically collected phone numbers and other voter information from these groups for future communications.

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2   Telegram is popular among urban Kenyans for user generated content such as traffic watches, entertainment news and political analysis.
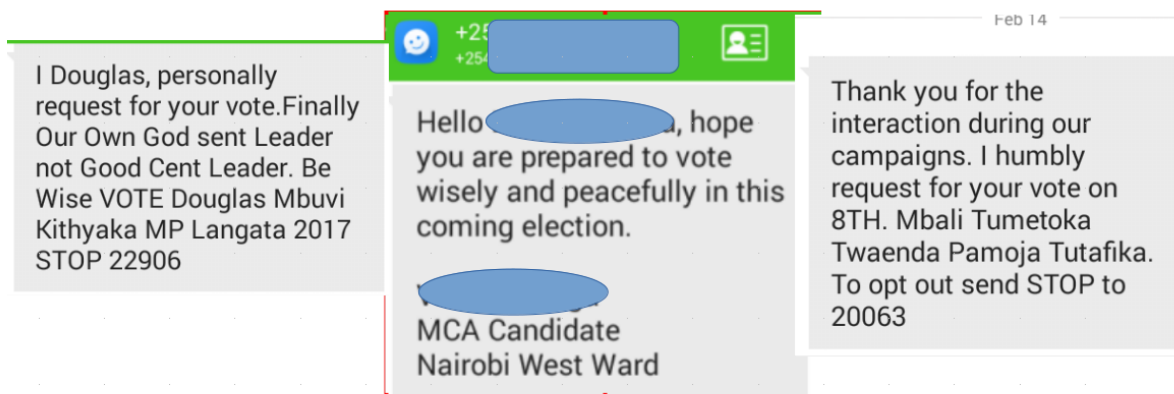
Examples of text messages received during the campaign period.

After the nomination proceedings has completed, campaigning became more intense. Voters received messages from the candidates in their areas with candidate and party information, such as campaign schedules, manifestos, religious inspirations and pleas for votes. The frequency of the messages would vary from weekly to daily and were delivered as bulk text messages and through WhatsApp and Telegram channels.

Many people who did not consider themselves politically active wondered how politicians and candidates obtained their names and phone numbers. In April when the Registrar of Political Parties published the political party lists online, as required by law, many citizens were shocked to find themselves registered as members of political parties without their knowledge (Wamathai 2017).

ii. An information ecosystem

Kenyan politicians are active on social media. During the 2017 campaign period, many had political social media sites that were run by their staff. Paid political ads on Facebook were commonplace and, at the same time, many candidates sent personal messages about their campaigns to their supporters on private messaging apps. Experts commenting on this trend view this as a taste of future elections where as more people get online, personalised political campaigns will be more common. They draw this conclusion by looking at campaigning developments since the 2013 election where online campaigns were targeted to a more general demographic, such as age. For example, Socialight Media, a local start-up, stated that in the 2013 campaign it used social media data to target youth voters with messages about solving unemployment and older generations with messages on national stability (Were and Nyabiage 2014).

The two main political parties and their candidates diversified their media strategies from the traditional billboards, radio, television and newspaper paid advertisements to more personalised and targeted methods. These included use of presenter and host mentions on radio and television talk shows as well as social media platforms. The government in 2015 created the as a s services. In 2017, the Government Advertising Agency (GAA), a 2015 entity established by the government to provide a service for centralised government communication, produced its own newspaper and significantly reduced traditional media houses' revenue (Peace Pen Communications 2017). The GAA employed a strategy of engaging with journalists in their personal capacity. A government media campaign dubbed *delivery.go.ke*, which showcased development projects under the Uhuruto administration, ran in both traditional and online media. Pointing to the significance of digital outreach, instead of attending a

televised presidential debate (Mosoku 2017), the incumbent used Facebook Live to speak to the nation and interacted with Kenyans on social media (PSCU 2017).

The opposition, particularly after the nullification of the presidential election, boycotted media stations they perceived as biased (NTV 2017). NASA supporters also attacked journalists considered sympathetic to government (Oruko 2017). All these developments were amplified in social media group discussions.

By May 2017, as campaigns approached the homestretch, WhatsApp groups, including non-political ones such as neighbourhood community groups, were flooded with negative campaign messages and fake news content. These took the form of impersonating legitimate news outlets, fake breaking news, leaked communications from state institutions, cherry picked and distorted facts from real news, fake screenshots of private communications, fake communication from institutions, pictures from old events with captions of current events, negative campaigning involving family and personal ties, use of parody accounts and campaigns against institutions (Dahir and Dahir 2017). Group administrators, particularly of non-political groups such as traffic or neighbourhood watches, had to develop rules on political posts as they would often result in heated debated that diluted the group's sense of purpose, creating a risk of discontent members leaving. In some cases, campaign staff who had sneaked into non-political groups were asked to leave.

Examples of fake news and misinformation circulated digitally during the election season.

Some of the messages from private messaging apps were also shared online. Towards the end of May, Kenyans on Twitter reported targeted ads on Google Search that painted the opposition candidate Raila Odinga in a negative light. Screenshots were extensively shared on private messaging apps. An apocalyptic video dubbed "The Real Raila" also made rounds on social networks. Investigations later found that it had been made by US political marketing and communications firm Harris Media (Michira 2018). It is alleged that the firm was contracted by a foreign consultant allied to the Jubilee campaign.
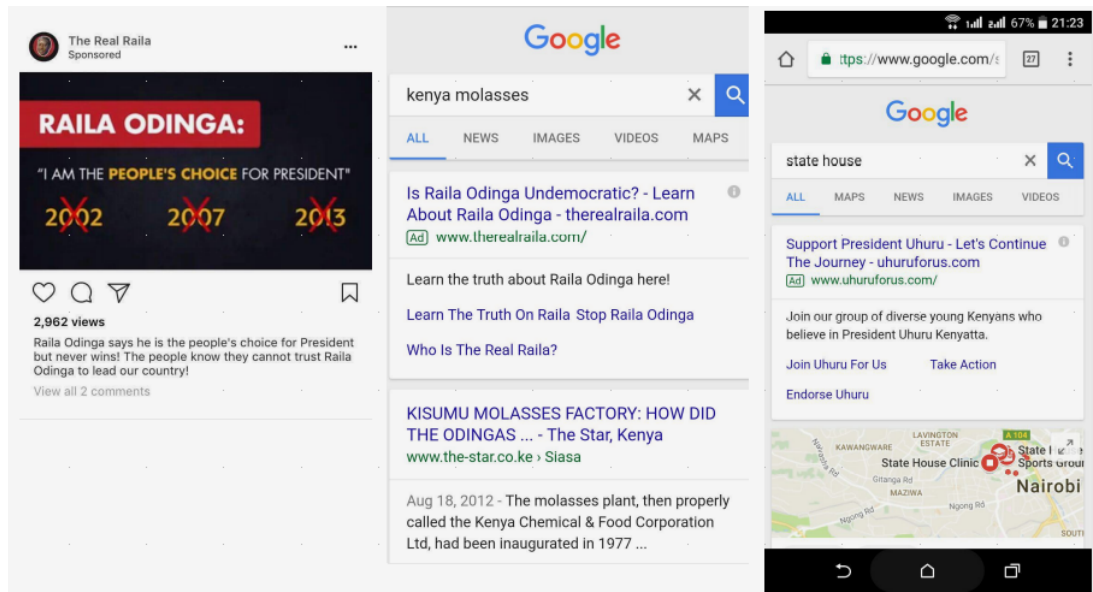
Examples of targeted online ads during the election period.

In July 2017, the communications regulator published guidelines regulating the sharing of political messages by text and online platforms (Communications Authority of Kenya 2017). The guidelines provide rules for language and tone, accuracy and accountability, truthful posting and publishing, hate speech, disclosure and independence, social media platform administration, social media platform providers and enforcement. The guidelines also prohibit the use of vernacular languages in bulk SMS messaging.

The major political forces, Jubilee and NASA, had featured dedicated communications teams while, the same time, individual candidates fielded their own campaign staff. Some of the features of information ecosystems among both parties include:

- A significant number of election focused social media groups are set up along perceived ethnic voting blocs. Discussions typically made sweeping assumptions on peoples' political leanings base on their names and ethnicity. This catalysed a binary segmentation of voters, where people were placed in either one of the two main political parties according to their perceived voting bloc. It also drowned those who had a non-binary point of view and moderate voices.
- The parties contracted various publicity consultants to keep their online presence alive and "lit". The most notorious were individuals associated with data mining companies Cambridge Analytica, which worked for the Jubilee Party (Keter 2017), and Aristotle, Inc which was hired by NASA. Both firms worked covertly until the news of Cambridge Analytica's presence was reported by a local journalist. Cambridge Analytica initially denied official involvement in the Jubilee campaign. However, an Instagram picture appeared online and linked individuals associated with the company with the party's campaign. Days prior the August election, the government deported two non-Kenyan Aristotle, Inc members of staff who were working at NASA's communication centre (Wanga 2017).
- Apart from the political data companies, other consultants were hired for various communication roles. These included public relations companies and

journalists from most major newspapers. Others were social media influencers and content creators who were brought into the campaigns to create memes and other graphics for social media circulation. In the above mentioned Instagram picture, which would circulate on Twitter and in WhatsApp groups, Cambridge Analytica's Alexandra Phillips was pictured with some of the journalists and influencers (O. O. Mwangi 2017).

- Besides consultants other professionals claim to have conducted pro bono work for the campaigns and volunteered for duties such as appearing on media and creating content that would be disseminated in blogs, vlogs and media. Some were later co-opted into the party structures as campaigners and agents while others served with expectation of future reward once the new government was formed. There was also a significant number of government employees who served as consultants and advisers (Ngige 2017). Their networks were key in distribution of messages through their social media accounts.

- Campaign secretariats had hierarchical structures. Agents, for example, were organised per county and constituency and ran WhatsApp groups for communication and coordination. These groups also served as channels for the dissemination of content such as memes, quotes, pictures and videos from their parties. The content was then forwarded to networks of groups and it was common for a voter to be added to a group without their consent. In this way, content was widely disseminated and discussed. Those without access to social media would often times hear about the content from their offline social networks or through traditional radio and television broadcasts.

- There were sustained online campaigns throughout the electioneering period with new content produced everyday. On Twitter, for example, hashtags[3] were created, amplified and sometimes hijacked by networks of social media accounts. The hashtags in turn generated memes that were shared widely on various private and party WhatsApp and Telegram channels. Content was largely polarising, leaving little room for moderate voices.

- Online campaigns also kept the election management body (IEBC) under perpetual public scrutiny. This began with widely publicised protests that led to a negotiated election reform package around January 2017. Thereafter, both the two political groups made accusations against the IEBC while the other defended it. The IEBC was exposed to sustained pressure with screenshots of meeting minutes going viral in WhatsApp groups before journalists had opportunity to verify them and internal memos and screenshots of WhatsApp conversations between commissioners circulating online. Some were dismissed by the commissioners as fake news.

- Social media campaigns were designed to fit into Kenyan society. They made use of existing social cultural structures such as religion, sensationalism, song, sermons, story-telling, humour etc to communicate. However, the professionalism with which political content was produced and promoted was a step up from previous elections.

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3   Examples of the popular hashtags during the period include #LipaKamaTender #DavidNdiiExposed #thePeopleAreSupreme, #WakoraNetwork #SocialLiteLawyer #SystemYaFacts #EvilSociety #Judicial Capture #UhuruChallenge #NasaFlagbearer #HoursToKeInternetShutdown #YouCantKillUsAll #VifarangaVyaKompyuta #DoctorsJailed #ElectionBoycottKe #KumiraKumira and refer to the health crisis in early 2017 when doctors were on a prolonged strike, trolling an opposition intellectual, attacks on the judiciary, a fun challenge featuring the President dancing that turned into a discussion on government scandals, a discussion on internet speeds a day before the election and election campaigns after nullification of the presidential election.

iii. Plausible Sources of Personal Data Used in 2017 Elections

There are numerous official and semi-officla databases and registries of citizen's personal data in existence in the country. These include government registries kept by the state in with the purpose of providing services; databases created in election processes and election campaigns, private and smaller scale databases in the hands of data traders.

a) Government Registries
Kenya has several registries that are horizontally and vertically decentralised. For example, national ID card services are available in about 600 locations and 290 Huduma centres[4]. Other offical databases are organised by the Birth, Death, National Social Security Fund, the National Hospital Insurance Fund, the Higher Education Loans Board, the Credit Reference Bureau, while registries are kept on immigration, passport and visas services, drivers licences, motor vehicle ownership, school leaving certificates, national examination certificates, refugees, taxes, marriage and lands registers. All these registries are maintained by separate agencies and they contain personal details such as a person's identity card details and residence.

An ambitious digitalisation project has seen the aggregation of some the databases. President Uhuru Kenyatta in 2015 launched the IPRS system, which centralises identity data from state databases (GoK 2015) in one place. The objective of the aggregation is to issue each citizen with one unique birth-to-death number through which they access all government services.

Several new systems have already been implemented under IPRS. They include the eCitizen, which is the platform that creates a gateway to other services, such as business, marriage and driving test registration (GoK 2018a). To use eCitizen first time users are required to log in with their ID card number. They then register their phone number for an SMS verification. By early 2018, over seven million Kenyans had registered on eCitizen (Sunday 2018).

Other new systems under this project are TIMS (NTSA 2018) for drivers licences and motor vehicle registration and NEMIS, under which all school children are currently being issued with unique identifiers (Ministry of Education 2017). Both systems are linked to the national ID. TIMS requires phone number registration while NEMIS collects data on residence.

Some of the recent trends found within government registry developments include:
- Mandatory shifting of services, such as tax returns, passports, drivers licences, business registration, to the digital systems. Access to these online services requires registration with the national ID, recent photo and phone number in the eCitizen portal.
- Government jobs require security clearance certificates which are only available by registering on the eCitizen portal.
- Private service providers such as banks and MNOs are increasingly required to register personal details under Know-Your-Customer (KYC) laws and are thus given access to the digital identification database to facilitate verification of ID documents presented to them by customers.

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4   Huduma centres are one stop shops for to access government services, such as issuance of duplicate national identity card; application for student loans; registration of welfare groups; issuance of police abstracts; community policing; stamp duty assessment and payment (World Bank Group 2016).

- Government itself is re-verifying its records, for instance through mandatory issuance of new passports where re-application requires citizens to submit primary documents such as birth certificate and their local chief's signature (Daniels 2018).
- Government registry services not under semi-autonomous parastatal jurisdiction, such as the birth, death and marriage registries, have all been placed under the Ministry of Interior for centralised co-ordination and administration (GoK 2018b). The then Cabinet Secretary for Interior, Hon Joseph Nkaiserry, oversaw government efforts during the voter registration drives in January 2017, where local administrators serving the Ministry made phone calls to residents in their jurisdiction and urged them to register as voters.

With the increased uptake of official government registration services and linkages among various databases, the state has a powerful surveillance tool. eCitizen for example can give granular views about an individual's education levels, wealth, dependants, residence, occupation and interests.

In addition to these registries, the state has several sophisticated surveillance systems, including the Network Early Warning System (NEWS); the National Surveillance Communication Command and Control System (NSCCCS) that features street-based CCTV surveillance; and the Device Monitoring System (DMS). These systems are capable of intercepting messages along communication systems. In July 2017 when a state agency briefed the public about 21 WhatsApp groups that were being investigated for hate speech, debate ensued as to how the encrypted content was detected. Some of the theories include infiltration of the groups by state workers and surveillance of information dissemination networks (KICTANet 2017b).

b) Election Databases

i. IEBC's voter register

IEBC carried out a mass voter registration exercise in January 2017. For registration, voters presented their national ID card and had their fingerprints and photo were taken. Other data recorded in the processes was polling station and phone number of the voter. This data was digitally captured and transmitted to IEBC database. Where there was no internet access, the data was captured for later transmission (IEBC 2018).

Kenyan electoral law requires publication of the national voters register for public scrutiny. In the past, this was done through printing copies of the relevant constituency register and posting a hard copy in a public space. Due to tight timelines and litigation during the 2017 election season, the register was not published eight months prior to the elections as required by law. This led to different stakeholders urgently demanding publication of the register. However, candidates were able to buy copies of the voter register for their respective constituencies. According to one aspirant, they were able to obtained copies of the register featuring full identification numbers, dates of birth, voter names and polling stations. In a post-election survey, IEBC states that identity card numbers were partly redacted to show only the first two and last two numbers and that data sold to candidates was limited in scope (Muthiri et al. 2018). The IEBC also refers to ICT regulations it developed prior to the elections that provide for personal data protection. These regulations were developed to provide for processes of proper disposal of biometric data after

questions were raised on improper disposal of biometric registration kits used in the 2013 elections.
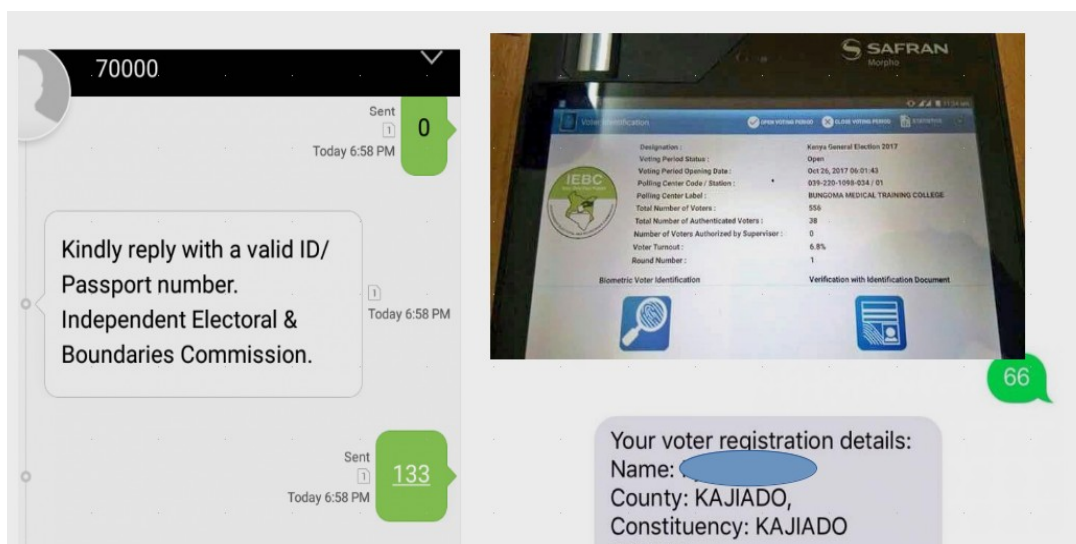
IEBC voter registration interface and verification mechanism.

The IEBC eventually in July 2017 published the official voters register online. Users were able to query the online database through a browser or through an SMS service. In browser-based requests, voters could enter an ID number on the IEBC portal and the database returned ID number, names, date of birth, gender, polling station code and polling station. However, several issues were noted with the web portal:

- There were many inaccurate entries found but very little time to clean up the register prior to the elections.
- Debate ensued on whether people's identity card numbers should have been published online. While the publication of the voter register is a requirement put in place to facilitate public scrutiny and transparency of the election process, an ID number is personally identifiable and used for numerous sensitive purposes, such as eCitizen services.
- The database was published without adequate security measures, opening it up for automated data harvesting (KICTANet 2017a).

For the SMS service, IEBC contracted a yet unspecified bulk SMS provider. Voters could query the register using the number 70000 to confirm registration details. Using the same service, IEBC would also send educational and informational messages to voters at no charge.

ii. Registrar of Political Parties & Membership Lists

Section 28 of the Political Parties Act requires that parties present a membership list before they nominate candidates for an election. Section 7 of the same law spells out the conditions for registration of a political party, which must include at least 1,000 registered voters in at least 24 counties. Parties are also required to have regional, ethnic, gender, minorities, marginalised groups and other diversity among its membership. Political party workers admit to profiling voters in the process of complying with this provision of the law. They analysed their membership lists to see how different tribes are represented and get more members from certain regions as necessary. They argue that the law is designed to profile voters to ensure diversity in political parties.

Following the introduction of this law in 2012, party secretariats began to collect and store voter data. In the 2013 election, grassroots mobilisers obtained data from M-Pesa[5] ledgers kept by M-Pesa agents (Atsiaya 2012). Most of the grassroots workers are part of the political ecosystem and serve as party agents and campaigners during elections. Many kept the data they had collected for future use. Some are also leaders in their community and are invited to local stakeholder meetings, such as women fund meetings, table banking and other public meetings, during which they collect data that is later used for political party membership lists.

Other than to comply with the law, memberships registration drives were strategic publicity tactics. Nevertheless, the drives were data oriented and recruiters would collect personal details such as voters phone numbers. In 2017, Jubilee and ODM (a constituent party in NASA) relied heavily on sitting leaders and aspirants to conduct party recruitment during these membership drives.

Jubilee Party

Jubilee party membership smart card - Source: http://jubileepartyke.com/index.php/member-registration/

Having brought together eleven parties, Jubilee sought to conduct an acceptable nomination processes to avoid fallout among its many constituent party members. In order to achieve this, procured a smartcard system where member and voter data such as name, identity card number, polling station and phone number were loaded. The cards were to be used for identification and voting in the April party primaries. The system was directly connected to the Registrar of Political Parties ostensibly to validate details and to protect against double registrations (Mathenge 2017).

The intention was that only registered members of the party would be able to vote during the party's primaries. Each member was theoretically required to pay a

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5   M-Pesa is a mobile phone-based money transfer, financing and microfinancing service, launched in 2007 by Vodafone for Safaricom and Vodacom, the largest mobile network operators in Kenya and Tanzania. Safaricom responded to the membership registration scandal by revising its M-Pesa procedures to in future anonymise M-Pesa data collected by their agents (Chege 2017).

membership fee of Ksh. 20 for the smartcard registration but in practice, aspirants and sitting parliamentarians bought the cards in bulk and then proceeded to recruit members (Team 2017).

The system quickly faced a number of challenges. Firstly, poor aspirants could not afford to buy as many cards as well-off aspirants, many of whom included incumbents. They therefore complained that the system amounted to buying of voters (Ndwiga 2017). Secondly, procurement of the system itself was opaque and aspirants were not assured of its security and hence did not trust it for voting (Lang'at 2017). Thirdly, the political opposition decried that Jubilee's registration system was enabled with direct access to the Registrar of Political Parties database and accused the processes of being a digital election rigging mechanism (Ochieng' 2017).

In the end, the system was not used for the nominations and anyone with a voter card was allowed to vote manually. However, the data already collected by aspirants and the party was kept.
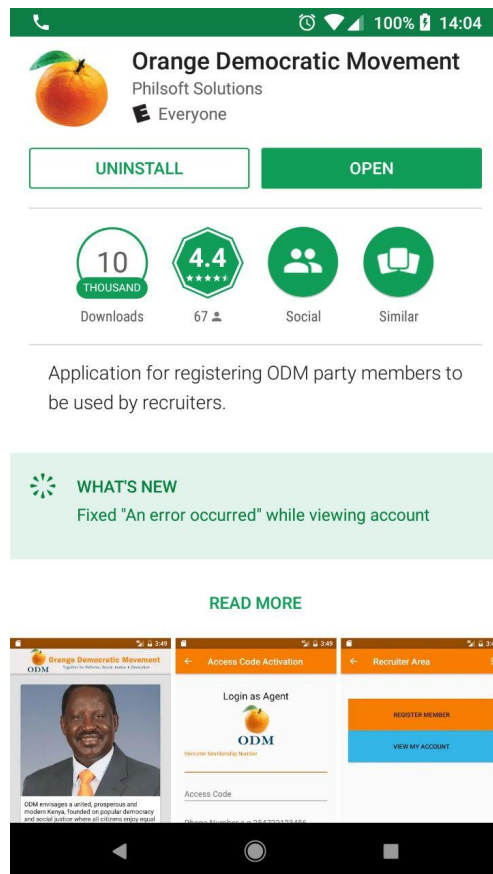
Orange Democratic Party (ODM)

Although the party has a large following, it has over the years faced criticism over its internal democracy. Aspiring to overcome accusations of favouritism, it began recruiting voters as early as August 2016. The party developed a mobile app which could be used by recruiters (such as party aspirants, grassroot party officials and volunteers) on the ground to register party members. The app used mobile money to collect membership registration fees. The recruiters could deposit funds into their accounts in the app, they would then get codes with which they could activate party membership cards after the recruitment of new members.

Some recruiters used their own agents to collect data from registered voters and through this recruitment drive the party managed to register around three million new members. Data collected in this process included names, date of birth, gender, county, constituency, ward, polling station and phone number. Once registered, the system sent a confirmation SMS with membership number as feedback to the member.

The membership data was delivered to Registrar of Political Parties in order to comply with electoral proceedures. However, due to similar challenges associated with rich aspirants recruiting more voters, the party decided against using the digital register for its nomination proceedigs. Instead, anyone with an ID card was allowed to vote.

With both parties, there were complaints from members of the public who found that they had been registered as party members without their knowledge. Aspirants and their agents were accused of using various non-consensual methods to register citizens as party members, including using pre-existing contact databases in their possession and/or compiling data from sources, such as building entry[6] or old mobile money ledgers.

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6   It is commonplace in Kenya to register into a physical ledger when entering a public building or office block. Security staff at the building entrance will usually require visitors to supply various pieces of information, such as name, phone number, ID card number and entry and exit times. There is no clear oversight as to how these records are maintained or secured.

Orange Democratic Movement party member recruitment app

c) Private Databases

Several laws require private service providers to maintain databases that contain personal information. Mobile Network Operators (MNOs) are required to register SIM cards on their network (Republic of Kenya 2015). Data collected during such registration includes a copy of ID card, phone number and residential address. This information is typically collected by sales agents and then verified through an internal system that is connected to the government eCitizen database (Mutegi 2017).

During mobile money transactions, customers are required to produce their ID card. The card number and transaction amount is recorded in a physical ledger and the agent keeps an associated note that features the customer's name. While MNOs have taken measures to anonymise personal data, many users speculate that MNOs share their contact data with bulk SMS providers which accounts for frequently receiving SMS advertising.

Other private enterprises that record extensive personal data include banks, many of which carry out Know-Your-Customer checks. Professional associations, such as the Law Society of Kenya (LSK) and Institute of Certified Public Accountants of Kenya, keep databases with members' information. It has become common practice for

candidates in association body elections to send campaign messages to their professional colleagues asking for their vote. They use contact information in the bodies databases to send these personalised messages. The most associations do not have mechanisms to protect such data from being used for other purposes once it is given to candidates. In conversation with one databroker, they explained that former candidates in a professional association election provided them with a database of about 6,0000 members for bulk SMS. Furthermore, a copy of the LSK 2016 register, containing name, LSK number, region and ID number is available online (LSK 2016) .

Another example of private sector data collection is Nakumatt, which was a leading retailer in the country in the past decade. It rolled out a loyalty card programme known as the Nakumatt Smartcard which gathered over one million subscribers. The programme later grew into a partnership with MasterCard and local banks to facilitate online shopping ('Nakumatt Globalcard' 2013). Nakummatt has since fallen into financial difficulties and in a recent press advertisement, one of its partner banks, DTB, announced termination of the online smartcard (DTB Kenya 2018). It is not clear however, how the personal and consumer data aggregated by this programme will be handled or secured.

Furthermore, state agencies have in the past requested access to private sector databases. Examples include the Communication Authority's directive to MNOs to grant access to its systems to a Device Management System (DMS) contractor; the revenue authority's request for mobile money data (Guguyu and Mutegi 2016); and Higher Education Loans Board request to access third-party data from professional bodies such as Law Society of Kenya (Aluanga-Delvaux 2014).

d) Constructed Databases

It is not uncommon to receive text message advertisements from services providers ranging from insurance, health, gastronomy and events. These are commonly sent through bulk SMS services that are regulated under Kenya's communications law. Under the Information and Communications (Consumer Protection) Regulations (2010), direct marketing services are designed to be opt-in. Nevertheless, complaints about unsolicited digital marketing messages are commonplace.

Kenya is in a state of advancing digitalisation with many public and private institutions changing their processes from analogue to digital. Data is actively collected and processed for commercial services, such as digital marketing, as is common practice in the global digital economy. For this report, a bulk SMS agent (SMS agents do not usually have a content service provider's licence under which they can directly provide bulk SMS services) describes how they built their databases from the many "opportunities" in this digitalisation processes. The agent gave an example where IT companies contracted to install databases on customer systems sometimes keep copies of the very same database and feed them into the agent's own relational database systems, which enables to them to build profiles on certain communities and demographics. Based on this data, an agent can then sell bulk SMS as a product to companies for digital marketing purposes. Apart from the law requiring that customers should opt-in to bulk SMS services, the bulk SMS agents interviewed did not believe that they were breaking any laws by collecting personal data and building the databases.

Significantly, these same practices are used in political work. Aspirants, especially new aspirants, understand the value of phone data in reaching potential voters. According to political workers interviewed for this report, there are various ways that

such data can be obtained. For smaller scale campaigns, such as Member for County Assembly (MCA), candidates and their campaign teams could scrape data by joining large Whatsapp and Telegram groups in the constituency of interest and collect contact details. These would later be used to send personalised messages to voters. Other techniques included obtaining data from election databases or from downtown Nairobi "traders", who claim to be able to provide data on most urban constituencies. These traders would target candidates who were late to the political races and sell bulk SMS packages that came with data, such as names and phone numbers, of voters.

Meeting market demand, bulk SMS agents build packages of voters data for many of the urban constituencies. One such agent claims to have acquired data on several Nairobi constituencies by capitalising on one of the moments when the IEBC was under pressure to publish voter registers. They acquired a constituency register with ID number, name and polling station for the constituency for candidates, which were then augmented with phone data from other databases.

In another example, a bulk SMS operator explained that they obtained data while providing communication services to a county government. In this example, they were contracted to send bulk SMS informing residents of issues, such as public participation meetings, in their localities. Since most of the phone numbers belonged to county residents they said they were able to link the data with the voter register already in their possession. As the election approached, the messages they sent included highlights of the projects that the county government had undertaken. Before the Communications Authority stepped in with its revamped guidelines on digital messaging, the operator had sent several targeted messages and even personalised them in the local language.

When interviewed about the effect of the guidelines on their business, the bulk SMS operator and agent viewed the new regulations, particularly the ban on using local languages in messaging, as inconsistent with current marketing practices of targeted messaging. One of those interviewed, however, thought that the guidelines introduced accountability by requiring a signed statement from the politician before the message was sent. Overall, they were of the view that in commercial marketing, personalised messages are a better value for the customer's time and client's money. Digital marketing has created jobs for unemployed youth and in their view, the data economy is a positive innovation - so long as it is not used for political manipulation.

Conclusion

There are many points from where one can collect personal data on Kenyan citizens by the personal data ecosystem in the country, from ICT service providers, receptionists at building entrances, political workers, local government officials, bulk SMS providers, MNOs, banks and the government. Increasing digitalisation of the public and private sectors has increased the volume and scale of personal data collection, analysis and implementation. While targeted digital marketing has been a staple of the commercial sector, the 2017 election season expanded this practice into the traditionally non-commercial political arena.

The government, through its IPRS reform project holds one of the largest and most comprehensive databases on current and future voters. During the 2017 election period, there were instances when the state was suspected of acting beyond its role as a policy implementer by also acting as a political entity. For example, during the

massive voter registration exercise tribal chiefs and senior government officials mobilised voters from their respective regions via direct phone calls and other data-driven methods. It is speculated that some of the phone numbers were obtained from government registries and third party databases. The government was also accused of misusing its position by advertising its accomplishments on www.delivery.go.ke during the campaign period (Apollo Mboya 2017). One can only speculate as to how data from state information surveillance systems, such as the social media monitor, was used to watch content and guide the ruling party's campaign. Transparency and accountability within these systems it not forthcoming.

Political parties disseminated campaign messages, including negative and fake news, through social media platforms and private messaging apps. Opinion remains divided on the effect of political data companies on the campaigns. However, there is a general sense throughout Kenya that the 2017 campaign period deeply polarised the nation.

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