AN ANALYSIS OF TWITTER DIGITAL CIVIC PARTICIPATION IN KENYA
AS DEMONSTRATED BY THE HASHTAG #BIG4AGENDA USERS’ IDENTITY,
INFLUENCE, CONVERSATIONS AND RELATIONSHIPS.

By

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A Thesis Submitted to the School of Communication, Cinematics and Creative Arts
in Partial Fulfillment of the Requirement for the Degree of
Master of Arts in Communication Studies

UNITED STATES INTERNATIONAL UNIVERSITY

SUMMER 2019
STUDENT’S DECLARATION

I declare that this thesis is my original work and has not been presented by any other person in any other institution of learning.

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DEDICATION

To the socially conscious, politically engaged Kenyan. To the digital communication strategists using technology to solve social and political issues. We have the tools to bring about transformative change.
ACKNOWLEDGEMENTS

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<td>Communications Authority of Kenya</td>
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<td>SPSS</td>
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OPERATIONAL DEFINITION OF TERMS

Twiplomacy (Twitter diplomacy): It is the use of the social network and microblogging website, Twitter, by heads of state, leaders of intergovernmental organizations (IGOs), and their diplomats to conduct diplomatic outreach and public diplomacy (Keleman, 2014). Twiplomacy is used in this study to give context to the current use of Twitter for diplomacy and to further demonstrate opportunities for the use of Twitter to advance public communication.

Twitter: Which was originally called twttr, is an American social media site created by Evan Williams, Jack Dorsey, Biz Stone and Noah Glass in March 2006 and went public on July 15 of the same year (Comm & Taylor, 2015). Twitter is the preferred channel for this study because its elements have made it a unique and important part of building relationships, turning it into a critical aspect in reaching the masses (Stat Counter, 2018). The Kenyan government is also already using Twitter for public communication and the study seeks to build on this.

Democracy: It is a specific method of decision making, in which elected representatives are accountable to the citizens through regular elections (Porta, 2013). Kenya uses the democratic system of governance; therefore, this study seeks to explore the contribution of digital media in advancing democracy in Kenya.

Big Four Agenda: This refers to Kenya’s five-year development plan under four key pillars: Food security, affordable housing, manufacturing, and affordable healthcare for all, launched on December 12, 2017 by President Uhuru Kenyatta, the fourth president of Kenya (The
This study has selected the Big Four Agenda as the focus of the content given that it is Kenya’s current development agenda and priority of the current national government. This makes the study timely, relevant and useful in informing current policy and practice.

Public participation: This is the involvement of individuals and groups that are positively or negatively affected by—or that are interested in—a proposed project, program, plan, legislation, or policy that is subject to a decision-making process (Nairobi County Public Participation Bill, 2015. p. 4). This will be used in this study to mean the same as civic participation and is the dependent variable for the study. The study will analyze how public/civic participation is influenced by the users of the hashtag #Big4Agenda and actions taken on the content shared.

Engagement: In this study, this is defined as communication which offers a relevant, conceptual, and applied context to understand and respond in meaningful ways to real-world problems. (Johnston & Taylor, 2018). This study mainly focuses on participation from citizens on the content linked to the Twitter hashtag #Big4Agenda and will only refer to engagement when discussing the Kenyan government’s public communication approaches.

Citizen engagement: This is a “type of collaboration between government and citizens and can be viewed from different perspectives: Citizens as voters, sharing government information with citizens, the demand of government accountability by citizens, public opinion consultations, dialogue between government and citizens, involving citizens in government decision-making processes, and shared governance” (Chun et al., 2011. p. 667).
Citizen engagement will not be delved into detail in this study but it informs the context in which the study is conducted, where the Kenyan government is already putting efforts through the PSCU to enhance their engagement with the citizens in all development matters.

**Hashtag:** A hashtag is a tag used in a variety of social networks as a way to annotate a message. A hashtag is a word or phrase preceded by a “#” used to categorize information and make it easily searchable for users. (Stec Carly, 2018). The hashtag #Big4Agenda is the unit of analysis for this study; it therefore forms an integral part of the study. This has been selected because it allows the researcher to collect information on a specific topic, in this case Kenya’s current development agenda, the Big Four Agenda.

**Level of influence:** Influence refers to the capacity or power of persons or things to be a compelling force on or produce effects on the actions, behavior, opinions, etc., of others (dictionary 2019). Level of influence has been used in this study to refer to the measure of the magnitude of influence by the users of the hashtag #Big4Agenda.

**Top influencer:** This refers to the users with high levels of influence as identified by the Crimson Hexagon API tool.

**Content:** This refers to the posts, links, images, and messages shared by users of social media platforms. In this study, content has been used to refer to the tweets shared using the hashtag #Big4Agenda.
**Content themes:** According to the Merriam-Webster Dictionary, information refers to what is communicated or conveyed by a particular arrangement or sequence of things. In this study, “content themes” has been used to refer to the type of content posted using the hashtag #Big4Agenda.

**Sentimentality:** Social media sentiment is the perceived positive or negative mood being portrayed in a social media post or engagement,” according to Nick Martin, Hootsuite’s own global social engagement specialist (Tran, 2019). Sentimentality has been used in this study to refer to the positive, negative, or neutral feeling and emotions assigned to the tweets posted under the hashtag #Big4Agenda.

**Geotag:** A geotag is the directional coordinates that can be attached to a piece of content online (Stec, 2019). In this study, “geotag” has been used to refer to the location of the users of the hashtag #Big4Agenda, specifically the tweet’s tags Kenya.

**Network Actions:** This refers to the Twitter elements that help users build relationships. These are: Likes, replies, retweets, mentions, hashtags, links, and lists (Comm & Taylor, 2015). Network actions will be analyzed as one of the independent variables by analyzing the actions taken by users on the Twitter hashtag #Big4Agenda and how this relates to digital civic participation.
ABSTRACT

Active and meaningful civic participation is a distinguished feature of democratic societies. Effective civic participation can be measured by analyzing the extent to which a government creates effective participation spaces, including digital spaces, for citizens to hold them accountable on their promises. This study examined digital civic participation in Kenya with a focus on the country’s development goal, the Big Four Agenda, using the government-generated hashtag, #Big4Agenda, initiated on December 31, 2017. The study analyzed the Twitter hashtag #Big4Agenda between July 1, 2018 and December 31, 2018, the first half of the fiscal year 2018-2019. The Honeycomb social media functional model by Kietzmann, Hermkens, McCarthy, and Silvestre theoretical framework guided this study, and used content analysis to purposively mine tweets for analysis. Crimson Hexagon, an artificial intelligence-powered consumer insights tool, was used to mine tweets under the hashtag #Big4Agenda. SPSS 24, Microsoft Excel and Word cloud tools were used to analyze the data and also calculate the chi square correlations. The study established a significant use of Twitter for digital participation in Kenya as 986 tweets connected to the hashtag were posted from 645 users. The study established that Kenyans on Twitter (#KOT) were 37.78 per cent at the top of social influencers of the content linked to the Twitter hashtag #Big4Agenda,; these were followed by media personalities and media houses, each scoring 13.33% per cent, followed by government officials at 11.11 per cent were. Official government office accounts, private institutions, and nonprofit organizations each scored 6.67 per cent. The study also established that the hashtag users mainly used it for general information sharing (30.08%) followed by issue discussion (19.92%), then citizen comment and complaints (15.45%). The findings of this study led to a recommendation for the Kenyan government through the PSCU to devise ways to improve digital civic participation by using Twitter to have meaningful conversations with citizens at the intersection of people, technology, and public communication. Specifically, the focus is on sharing content and engaging citizens from a point of knowledge. The study also recommends further scientific research looking specifically at the impact of digital civic participation with the appreciation that social media channels such as Twitter can improve government communication with the public and enhance public participation. Twitter’s privacy setting where demographics data was not available limited this study’s findings and therefore recommends more research using big data to give in-depth analysis on digital civic participation on Twitter.
CHAPTER 1

INTRODUCTION

1.1 Twitter Digital Civic Participation

Twitter digital civic participation combines the gains of digital revolution and ongoing civic participation epitomes. Using digital platforms easily available to citizens, governments are providing information to the citizens about public services and policies (Lee, Chang, and Berry, 2011). Using platforms such as Twitter and other social media platforms, governments are better positioned to provide extensive access to information and relate with citizens (Clift, 2003). In this regard, Lipschultz (2018) posits that Twitter is the most public social network platform. These digital platforms such as Twitter, Facebook, and WhatsApp, among others, are used by governments and political players in pushing the political and government agenda.

A 2017 Twiplomacy analysis reveals that Twitter is the social media that is most used by governments and heads of state. It is used by up to 176 heads of state in 178 countries, representing 92% of all United Nations (UN) member states (Business Today, 2017). Twitter is followed by Facebook, as identified by the Twiplomacy study. However, these are not a straightforward innovation (Dubow, Axelle, Christian, & Catriona, 2017). The digital revolution, which brought social media tools such as Twitter, has a played a major role in giving citizens a voice—boosting participation between citizens and their governments (Ssozi, 2016). This has brought into existence the concept of digital civic participation in different countries (Qureshi, Younus, & Greene, 2016). Digital civic participation refers to the way in which, or degree to which, people are involved in civic
issues and politics through the available digital platforms (Krishna, 2014). Increasingly, social media has continued to provide a platform for citizen participation regardless of social status, and therefore acting as an effective tool for civic participation (Dalton, 2008).

This study aimed to examine the user’s identity, influence, conversations and relationships of users of the hashtag #Big4Agenda on Twitter towards digital civic participation as one of the key democratic pillars in Kenya.

Evidently, digital media has accelerated and transformed how governments deliver on their role (Misuraca, 2012). Citizens increasingly demand greater accountability, essential service delivery, and more liberal governance approaches (Brett, 2003). At the same time, Brummette, DiStaso, Vafeiadis, and Messner (2018) noted that the 2008 U.S. presidential elections turned social media sites such as Twitter into crucial spaces for mobilizing and organizing work involving politically-engaged social media users, politicians, and interest groups. United States presidential candidates made digital civic participation a reality when they evidently used Twitter to have conversations with voters, enabling people to have real-time data and also respond in real time (Qureshi, Younus, & Greene, 2016). In addition, Segado-Boj, Diaz-Campo, and Lloves-Sobrado (2015) state that former president Barack Obama’s 2008 victory was significantly attributed to his use of digital media to connect with voters and mobilize volunteers. Regionally, with the growing Internet penetration and mobile telephony access, citizens are using social media to drive change. The 2011 Arab uprising in Tunisia and Egypt indicates the extent to which citizens can participate in civic issues using Twitter by ensuring their opinions are listened to and not censored (Al-Jenaibi, 2016).
A survey by Smith (2013) on civic participation in the digital age notes that when it comes to the 60% of American adults who use social networking sites such as Facebook or Twitter, political participation is more balanced between lower and higher-income Americans.

In Portugal, a study by Mariana (2018) on digital media and technologies for civic participation had sought to identify, classify, and evaluate initiatives that promote citizens’ e-participation at the local level. This was done through a combination of automated text analysis and manual coding of the social media posts of each municipality. The findings of the study indicated that accounts on social networking sites can be created and regularly updated to serve as a means of disseminating news, case studies, and good practices in the area (Mariana, 2018).

In Kenya, popular hashtags on Twitter have been used to fuel civic participation (Tully & Ekdale, 2014). The Kenya government has also been referred to as the tweeting government in a number of media and social media posts, an indication of its adoption of the use of Twitter in civic participation. Simon, Goldberg, Aharonson-Daniel, Leykin, and Adini, (2014) noted that social media makes provision for a two-way information flow between citizens and the government, which in turn strengthens civic participation. Kenyans on Twitter, popularly known as #KOT, join forces using these hashtags to call out the government on corruption, participate in development agenda, engage in global dialogues, and also share jokes (Tully and Ekdale, 2014).

Even as the use of Twitter continues to provide a digital platform for digital civic participation, it is important to explore the extent and different ways in which it is used.
This study sought to examine the nature of interactions of users of the hashtag #Big4Agenda on Twitter and their role in digital civic participation.

1.1.1 Kenya’s “Big Four Agenda” launched in December 2017

On December 12, 2017, the fourth president of Kenya, Uhuru Kenyatta, launched the Big Four Agenda in his Jamhuri Day speech: Food security, affordable housing, manufacturing, and universal health coverage (Presidency, 2019). President Kenyatta in his address said that his administration will dedicate its time, resources, and energy in the delivery of the Big Four to create jobs with the aim of enabling Kenyans to meet their basic needs (Presidency, 2019). The president demonstrated zeal on civic participation when, in his speech, he made an invitation to Kenyan citizens, the national government, county governments, local and foreign investors and development partners to work with his administration in the implementation of the five-year development plan that is intended to fast-track Kenya’s Vision 2030.

Since then, the Big Four has been a major headline in Kenyans’ social media and mainstream media conversations. A Google search gives 60,300 results on the Big Four Agenda. This content varies from government progress reports to media scorecards and stakeholder analyses and opinions.

1.1.2. Twitter Hashtag #Big4Agenda

The Twitter hashtag #Big4Agenda was first used on December 31, 2017 at 8:26 p.m. by @vision254, a retweet from the president of Kenya. The tweet was geotagged Nairobi, Kenya with a positive sentiment. The contents of the first tweet were:

“President Uhuru Kenyatta end year message to Kenyans & Africa. ‘.... remarkable
The hashtag has since then been used to post content related to the delivery of the Big Four Agenda. Keyhole, a social media analytics platform, indicates that there are 30,000 to 31,000 posts containing #Big4Agenda from December 12, 2017 to February 28, 2019. The study retrieved tweets from July 2018 to December 2018; this is the first half of Kenya’s 2018-2019 financial year (The Treasury, 2019) and forms the period of study.

Tweet Binder, a social media analytics tool, was used to run a one-week analysis of #Big4Agenda. The results for seven days starting February 17, 2019 at 23:10:04 ending February 27, 2019 at 15:50:57, indicated that there were 403 tweets and retweets posted with the hashtag. Out of the 403 tweets, 16 were posted as text tweets, 310 were retweets, 16 replies and 66 had links and pictures. The hashtag had 315 total contributors, with 70 of these being original contributors. Tweet Binder further indicated that the contributors had an average of 3,360 followers per contributor and each contributor posted an average of 1.28 tweets. Further analytics using Tweet Binder indicated that the hashtag had a potential impact of 1,781,988. This is the number of times somebody could have seen the tweets and a potential reach of 1,058,484 attained, which is the potential number of unique users who could have seen the hashtag during the seven-day period.

According to Hashtagify, a social media management tool, the top influencers using the hashtag are @uhurukenyatta, @statehousekenya, @Alykhansatchu, and @wmnjoya. The social media analytics tools further indicate that the related hashtags
used together with #Big4Agenda are: #Manufacturing, #FoodSecurity, #Kenya, #Vision2030, and #tech, among others.

This data gives a preliminary indication of the level of digital civic participation in Kenya’s current development agenda, making it a relevant unit of analysis for this study as well as demonstrating digital civic participation where Kenyans and their leaders are using Twitter to have civic conversations.

The birth of the Presidential Strategic Communications Unit (PSCU) came in with over 10 social media accounts on Twitter, with an agenda to reach 40 million Kenyans—but specifically those who are connected to the platform (Chepkemoi, 2016). Citizens could now make informed decisions due to additional means of participation through the use of computers as well as mobile devices, unlike previously when decision-making was exclusively based on information available through traditional media. PSCU created a
platform where citizens and the state could now interact through timelines, thus demystifying the presidency.

1.2 Statement of the Problem

While digital tools are increasingly making it possible to have a more effective citizen-powered democracy, digital civic participation is not a straightforward innovation (Dubow, Axelle, Christian, & Catriona, 2017). As stated by Dubow et al. (2017) in their publication on how digital technologies underpin citizen-powered democracy, the authors highlight one major gap that needs to be addressed to strengthen the relationships between citizens and the state to ensure citizens have direct influence on democratic processes.

Active and meaningful civic participation is a distinguished feature of democratic societies (Kanyinga, 2014); however, existing studies show low citizen participation in the country’s development agenda (Oxfam, 2018; World Bank, 2015). According to Oxfam (2018), there is low public participation in government processes due to an inefficient government approach of engaging its citizens. Currently, public participation approaches involve the traditional town hall (group) meetings that take place on weekday mornings (Sambuli, 2016). A 2018 Oxfam report that surveyed 393 people on public participation around the budget-making process indicated that 80% of the people were aware of the need for public participation but only 45% have participated. The top three barriers to participation cited by the respondents were: Lack of timely and sufficient communication on the budget process and timelines (43%); lack of information on when and where the forums would be taking place (41%); and lack of awareness (39). Other reasons for non-participation included lack of confidence in the forums; domestic responsibilities;
inconvenience and inaccessibility of current participation platforms; and work commitments, since the forums took place on weekday mornings (Oxfam, 2018).

The Constitution of Kenya (2010) makes provision for citizen participation as a means to enhance democracy. Effective civic participation is a crucial aspect of a functioning democracy (Kanyinga, 2014). This makes it crucial for institutions to ensure there are effective spaces and approaches to enhance civic participation. Additionally, effective civic participation can be measured by analyzing the extent to which a government creates effective participation spaces for citizens to hold them accountable on their promises (Kanyinga, 2014).

The high Internet penetration and use of Web 2.0 technologies presents Kenya with an opportunity to open up more spaces for effective participation through digital public participation in governance and civic processes for enhanced democracy (Sambuli, 2016). There is, therefore, a need to assess and explore the use of alternative spaces and approaches to communicate with citizens on civic participation. The aim is to have the people drive the social, economic, and political agenda, making Kenya a truly democratic country. Digital media presents possibilities of strengthening citizens’ voice in politics, which in turn enhances accountability by the government to its citizens (National Democratic Institute for International Affairs [NDI], 2013). Twitter facilitates relations in today’s online world (Business Today, 2017) creating opportunities for governments to use social media to achieve political objectives, as noted by Ramiro Prudencio, CEO of Burson-Marsteller Europe (Twiplomacy, 2017).
This study examined a major development agenda branded the Big Four Agenda by the Kenyan government. The study aimed to examine the two major aspects of the communicative process—the participants and the content they churn—so as to draw a suitable perspective to digital civic participation, content and sentimentality.

1.3 Purpose of the Study

The purpose of this study was to examine users’ identity, influence, conversations and relationships linked to the hashtag #Big4Agenda on Twitter towards digital civic participation in Kenya.

1.4 Objectives of the study

The study aimed to address the following objectives:

i. To identify the users’ identity of Twitter hashtag #Big4Agenda towards digital civic participation in Kenya.

ii. To highlight the users’ influence of Twitter hashtag #Big4Agenda towards digital civic participation in Kenya as demonstrated by users’ influence.

iii. To study the users’ conversations linked to Twitter hashtag #Big4Agenda towards digital civic participation in Kenya.

iv. To explore the users’ relationships on Twitter hashtag #Big4Agenda towards digital civic participation in Kenya.

1.5 Scope of the Study

Democracy is the pillar under which Kenyan citizens can enjoy a good quality of life. Sika et al. (2014) highlight the importance of having engagement between the people
and the government to drive a country’s development agenda. The Big Four Agenda is Kenya’s current development agenda with the aim of improving the lives of the people.

This study therefore sought to understand the role of digital media, specifically Twitter, in civic participation. The study had a national geographic focus because the Big Four Agenda is a national agenda by the national government and Twitter is a social media platform used nationally.

The study also had a digital focus because digital tools present the country with opportunities to communicate with citizens virtually, in a timely manner and also reach more people at significantly lower costs.

Specifically, the study looked at Twitter because of its ease of use and accessibility. Twitter is also the platform most used by heads of state and for diplomacy (Twiplomacy, 2019). Twitter was preferred for this study because of its elements that have made it a unique and important part of building relationships, turning it into a critical aspect for reaching the masses (Stat Counter, 2018). This study does not look at other social media platforms such as Facebook, WhatsApp, or Instagram, but only focuses on Twitter—the platform most used by government officials as identified in the Twiplomacy study. Therefore, this study did not look at any other social media platforms such as Facebook, which the government and citizens use.

As a unit of analysis, this study focused on the hashtag #Big4Agenda. A hashtag helps curate content around a specific topic; it helps build communities who unite around a topic. This made it an ideal focus of the study, because it helped narrow down the conversation to the Big Four Agenda. The hashtag curates content from different users—
which would not have been achieved if the study focused on, for instance, the presidential delivery unit Twitter account.

This study narrowed down the focus to Kenya’s first half of the 2018-2019 financial year. According to *The Treasury*, Kenya’s financial year ends June 30. Therefore, this study focused on the first half of the 2018-2019 financial year. The study period was therefore July 1 to December 31, 2018, a period of six months. This was intended to give deeper insights given that it is the second financial year in the implementation of the Big Four Agenda.

As a digital study, this study took a content analysis research design, and used a quantitative research approach in terms of methodology. The study also only harvested tweets using one application, Crimson Hexagon, even though there are other social media historic tweet-mining tools. The author used the most affordable and accessible tool during the time of study.

The author reviewed literature from scholars in the field of digital civic participation and Twitter use. The study also reviewed industry literature to ensure relevance and timeliness of the ideas shared in relation to digital civic participation. Additionally, the author only used literature not older than seven years; only one dated literature was used to demonstrate theory growth. Geographically, literature reviewed was international, regional, and national.

Therefore, this study analyzed digital civic participation in Kenya linked to the hashtag #Big4Agenda users’ identity, influence, conversations, and relationships. The study analyzed the users’ influence levels and the content shared using the hashtag.
#Big4Agenda on Twitter. This aimed to help both the government and citizens to understand the use of Twitter to enhance and increase effective digital public participation in governance and civic processes for enhanced democracy (Sambuli, 2016).

1.6 Rationale of the study

This research assessed the extent to which Twitter has been used for digital communication between citizens and the government in the delivery of the Big Four Agenda in Kenya. The current low participation, which limits civic education and public communication on the country’s development agenda, indicates a need to change the way public participation is done (Oxfam, 2018). This study explored the extent to which Twitter can be used as an additional tool to enhance civic participation in Kenya by looking at the intersection of communication, participation, technology and people. Specifically, the study explored how Kenyans on Twitter and the government interact and converse on the Big Four Agenda by analyzing the content posted using #Big4Agenda on Twitter.

The study also contributes to the field of digital communication by investigating the applicability of honeycombs theory and the groundswell model as new media theories that inform and guide a framework for digital civic participation in governance and democratic spaces. This was guided by the work of Li and Bernoff (2008), which seeks to explain how power is shifting online from traditional institutions to the people through the use of Web 2.0 technologies such as Twitter. This theory is described by Forrester Researchers as a trend that is here to stay. They further make recommendations on how institutions (with a focus on profit-making companies) can use the groundswell trend to their advantage.
Johnston and Taylor (2018) have presented a unified conceptualization of participation as communication, where they argued that engagement will continue to be influenced by culture, technology, world events, and public expectation. Therefore, this study aimed to contribute towards filling the gap of limited academic research on honeycombs model and groundswell in government communication. The study further explored how the government can use Web 2.0 technologies such as Twitter to engage more citizens in decision-making processes through enhanced public participation and public communication.

In context, this research thus also makes recommendations for more studies to be conducted by scholars on the use of Twitter in citizen movements and increased digital civic participation.

1.7 Significance of the Study

This study is relevant because it helps the government understand what Kenyans think of the delivery of the Big Four Agenda based on the content themes, conversations, and sentimentality of the #Big4Agenda conversations on Twitter. The study also helps Kenyans understand how they can best participate in civic issues at their convenience and real time. The findings of this study can be used to inform the public participation constitutional provision on ways to open up conversations past the traditional physical meetings between citizens and leaders. The findings will be used to make recommendations to PSCU on ways to improve digital civic participation by using Twitter to have meaningful conversations with citizens at the intersection of people, technology and public communication.
For Kenya to improve transparency and accountability in government and increase public participation in political and development processes using digital media and technology, Otieno and Omwenga (2015) state that government transparency and open access to public information through technology are necessary. The focus is for citizens to become fully engaged in democratic processes and proactively help end corruption, drive the development agenda, and engender accountability in leadership.

The study helps both private and public organizations to connect with citizens in various aspects, including the projects they are involved in. Therefore, people can use this trend to create powerful citizen-driven movements. A good example is Kenyans on Twitter, popularly known as #KOT; #TeamCourage led by activist Boniface Mwangi; and Wanjiku Revolution led by activist Mutemi wa Kiama, among others. Therefore, the study helps governments to revolutionise how they communicate with citizens by demonstrating the role digital tools play in amplifying conversations on civic issues. While Twitter is not unique, Comm and Taylor (2015) describe it as the most powerful microblogging media based on its simplicity and critical mass, which made it the platform of choice for this study.

The growth of social media has created new avenues for research, especially at the intersection of public affairs and social media use (Terblanche, 2011) and government activities (Waters & Williams, 2011). Notably, there is a rise in studies looking at government civic participation through social media (Perlman, 2012). However, a majority of existing studies do not focus on local-level citizen participation (Larsson, 2013).
Waema and Ofwona (2011) noted that there is little research on the impact of digital civic participation even with the appreciation that social media channels such as Twitter can improve government communication with the public and enhance public participation. Therefore, this study contributes to scholarly literature on how governments can use social media to enhance democratic and governance processes and also recommends further research to be conducted on the impact of digital civic participation to measure the actual link between digital civic participation and improvement in service delivery by the government. Chun, Sandoval, and Arens (2011) highlighted the benefits to citizens of digital civic participation, such as the contribution of real-time participation, to more awareness in public services and development issues. However, the authors also noted that there is need for more research on citizens’ experiences on how the government incorporates their opinions in policy formulation and implementation processes (Mergel, 2013).

1.8 Assumptions of the Study

The study assumed that the Presidential Strategic Communications Unit within the Office of the President desires to effectively engage the public in governance and civic education matters. It also assumes that PSCU has the capacity to use Twitter in an engaging manner and not just to churn out messages. The study assumes that the Twitter handles are meant to communicate the government position on important issues and that the motive is to engage the public and get their views on important issues of public interest.

The other assumption is that the followers are Kenyan citizens and therefore their opinions on various public issues are valid. There was also an assumption that the Kenyan
public uses Twitter to discuss public affairs and matters that affect them either directly or indirectly.

The study also assumes that the theory used is appropriate for public communication in line with the existing studies on the theory where it has mainly been used in business communication.

1.9 Chapter Summary

This chapter set the stage for the study by describing the problem, purpose and objectives of the study, research questions, rationale of the study, and the significance of the study to various possible beneficiaries. The chapter also talked about the scope of the study, the target audience, and the assumptions made.
CHAPTER TWO

THEORETICAL FRAMEWORK AND LITERATURE REVIEW

2.1 Introduction

This study, which is situated in the field of digital communication, explored how the Kenya government Presidential Strategic Communications Unit used Twitter to encourage digital civic participation for enhanced public participation on civic issues. In line with the purpose of the study, this chapter looked at the theoretical framework and previous studies related to social media and civic participation.

To back the study, the 2011 Kietzmann honeycombs theory was used to explain how social media, and particularly Twitter, can be used to create effective platforms for citizens to engage with the government. The honeycombs framework was also triangulated with the groundswell model, which speaks to how people connect horizontally through technology and use these relationships to get things from each other instead of from traditional institutions. The study also explored empirical literature on civic participation in civic engagement, the use of the Internet and Twitter in public communication, concepts of influence on Twitter, and sentimentality towards content shared using the hashtag #Big4Agenda. This chapter also explains in detail the conceptual framework developed from the honeycombs theory.

2.2 Honeycombs Theoretical Framework

The study adopted the honeycombs social media building blocks framework in the context of communication research to explore how users and content of Twitter’s hashtag #Big4Agenda contribute to digital civic participation in Kenya.
The honeycombs framework was first proposed by Kietzmann, Hermkens, McCarthy, and Silvestre (2011). The framework has since been used by scholars in the communication field such as Ouirdi, M. E., El Ouirdi, A., Segers, and Henderickx (2014) to explain social media in the context of its users, content, and functions. Voorveld and Noort (2014) also posit that social media messaging results in more favorable cognitive responses. The framework defines social media using seven functional blocks: Identity, conversations, sharing, presence, relationships, reputation, and groups. In their propositional document, the authors aimed to help organizations understand social media, its various forms, and how to engage with it. Kietzmann et al. (2011) argued that the honeycomb model was a critical model on which to ground further research on social media in public services, including government activities, by providing a suitable theoretical view. They were forced to do research driven by interesting social media developments, which started to impact on the intersection of public affairs and social media marketing (Terblanche, 2011), and online communities (Jones et al., 2004; Bateman et al., 2010). In order to provide a managerial foundation for understanding these new services, consumers and their specific engagement needs, a honeycomb framework sought to come up with a sound research agenda for social media in public affairs and for identifying and combining appropriate theoretical lenses.

Social media has, over time, democratized communication, with power shifting from those in the communications profession to individuals and communities who create, share, and consume social media content (Kietzmann et al., 2011). Studies indicate that the Internet has created space for people to connect, be bold, and draw power from each
other (Li & Bernoff, 2008). This theory will be used in this study to explain how the functional blocks contribute to digital civic participation.

Figure 2.1: The Honeycombs Model of Social Media (Kietzmann et al., 2011)

These building blocks do not always have to be present in explaining social media use. For this study, the author, narrowed down on four constructs most prominent in Twitter: Identity, presence, conversations, and relationships.

2.2.1 Identity building block
This refers to people disclosing their identities—for instance, their real names, age, gender, geographic location, or profession. Kietzmann, Hermkens, McCarthy, and
Silvestre (2011) go on to note that many individuals use their real names when setting up social media platforms, which is important for users who want to build an online community and connect with it. While the users give their personal information online, they expect the owners of the platforms to manage their data in a manner that ensures privacy (Kietzmann & Angell, 2010). Identity was crucial for this study by helping understand the influence of participants of the Twitter hashtag #Big4Agenda.

2.2.2 Presence building block

This aspect speaks to the need to know if other users are present or accessible at a particular time, as evidenced by features such as online, active, check in, and trending. Presence is essential because it is influenced by immediacy and intimacy brought about by the relationship model. Kaplan and Haenlein (2010) state that in most instances, higher levels of presence are likely to make conversations influential. Therefore, in line with this, this study will use the construct influence to represent the presence honeycombs model.

2.2.3 Relationships building block

Relationships construct explains the extent to which users relate, connect, and converse with other users. This, in turn, affects how information is exchanged among users. Users will associate and relate for a variety of reasons. Li and Bernoff (2008) state some of the reasons as: Keeping up friendships, making new friends, succumbing to social pressure, paying it forward, altruistic (selfless) impulse, prurient impulse, creative impulse, validation impulse, and affinity impulse. Kietzmann et al. (2011) stated that relationship is not crucial in a platform such as Twitter. However, when triangulated with the arguments of groundswell, this connection between users shifts power from the institutions to the people connecting or relating over a specific issue, such as a trending
hashtag on leadership in Kenya. A good example of this is Kenyans on Twitter, popularly referred to as #KOT, who come together over specific topics to the extent of making it in global trends such as with the #SomeOneTellCNN trend.

2.2.4 Conversations building block

This refers to the level to which social media users communicate with other users, for a variety of reasons. People engage to make new friends, to find love, to contribute to a trending topic, or even to engage in political debates (Beirut, 2009). According to the groundswell model, people engage for a variety of reasons depending on their mood, motivation, and objectives. The underlying factor remains the need to connect (Li & Bernoff, 2008) and be part of a community. This makes it a critical construct for this study, which focuses on Twitter, a platform that is focused on conversations (Kietzmann et al., 2011). In understanding the implications of these conversations, institutions need to track the triggers on when a conversation starts and ends, the steer, the people pushing the conversation, and their intentions, and then make a plan to engage from a point of knowledge.

2.2.5 Sharing building block

Sharing, according to Kietzmann et al. (2011), refers to the extent to which people distribute, exchange, and receive content. Organizations should therefore put into consideration the connections between people and what brings them together—the content that works for a specific community.
2.2.6 Reputation building block

This refers to levels of trust and levels of standing of others. According to Kietzmann *et al.* (2011), reputation is essential to how institutions engage with social media. Social mention platform allows organizations to measure a variety of metrics that speak to reputation, such as strength indicated by the number of times an individual is mentioned, sentiment depicted using the ratio of positive to negative mentions, passion, how often a person is talked about, and reach measured by the number of users mentioning an organization. The Presidential Strategic Communications Unit has increased its presence and use on Twitter through individual and organizational Twitter handles to engage with the public. This has seen Kenyans on Twitter discuss various political, social, and economic issues that affect them directly or indirectly such as the Big Four Agenda.

2.2.7 Groups building block

This element of the honeycomb’s framework represents the extent to which users form communities and sub-communities in the communication network (Kietzmann *et al.*, 2011). Social media allows users to form large groups, for instance the case of lists in Twitter discussed later in this study, using the groundswell model.

2.3 Honeycombs Theory Growth

Honeycombs frameworks have been used by a variety of scholars, who have theorized or explained the social media phenomenon. It provides a valuable approach that explains how to engage with social media (Kietzmann *et al.*, 2011). The honeycombs framework is grounded and coined from the combined work of bloggers—namely, Gene Smith (2007); Matt Webb (2004), author of interconnect.org; Stewart Butterfield (2003)
of sylloge.com; and Peter Morville (2004) of semanticstudios.com, who developed the user experience honeycomb (Kietzmann et al., 2011).

Smith (2007), one of the bloggers who contributed to the growth of honeycombs, argues that social media sites do not focus on just one block but primarily incorporate three to four blocks. Kietzmann et al. (2012), while writing on, “Unpacking the social media phenomenon: Towards a research agenda,” opened up the honeycomb as a useful model that can be used in research to advance people’s understanding of community relations, political strategy, and other sectors. This study sought to advance research in the area of social media and democracy.
<table>
<thead>
<tr>
<th>Author</th>
<th>Year</th>
<th>Constructs</th>
<th>Focus</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peter Morville</td>
<td>2004</td>
<td>Useful, usable, desirable, findable, accessible, credible, valuable.</td>
<td>Findability</td>
<td>Technical blog (artificial intelligence)</td>
</tr>
<tr>
<td>Matt Webb</td>
<td>April 2004</td>
<td>Identity, presence, relationships, conversations, groups, reputation, sharing</td>
<td>Groups</td>
<td>Technical blog (information architecture)</td>
</tr>
<tr>
<td>Gene Smith</td>
<td>Apr 2007</td>
<td>Identity, presence, relationships, conversations, groups, reputation, sharing</td>
<td>Sharing, presence, conversations</td>
<td>Consultancy</td>
</tr>
<tr>
<td>Jan H. Kietzmann, Kristopher Hermkens, Ian P. McCarthy, Bruno S. Silvestre</td>
<td>2011</td>
<td>Identity, presence, relationships, conversations, groups, reputation, sharing</td>
<td>All</td>
<td>Academic journal (propositional paper)</td>
</tr>
<tr>
<td>Jan H. Kietzmann, Bruno S. Silvestre, Ian P. McCarthy and Leyland Pitt</td>
<td>2012</td>
<td>Identity, presence, relationships, conversations, groups, reputation, sharing</td>
<td>All</td>
<td>Academic journal</td>
</tr>
</tbody>
</table>
2.4 Study Theory Constructs

This study will use identity, influence to represent presence, conversations, and relationships constructs based on the modified work by Smith (2007) that elaborated the initial honeycomb model by Peter Morville to illustrate a Twitter blocks model.

![Diagram of Social Software Honeycomb by Gene Smith (2007)]

2.5 Groundswell Phenomenon

The Internet has created space for people to connect, be bold, and draw power from each other. Li and Bernoff (2008) defined groundswell as a social trend in which people
use technologies to get the things they need from each other, rather than from traditional institutions like corporations. This is a trend that institutions cannot ignore, but must come up with strategies to engage with increasingly-connected and powerful citizens.

This groundswell concept was used to complement the honeycombs theory in examining the link between social media and digital civic participation. Fleckenstein (2009) maintains that exploring the groundswell creates a template that can be used to explain the very nature of civic participation in any era, thus enriching peoples’ understanding of civic participation. Di Gangi and Wasko (2016) define engagement as a user’s state of mind that warrants heightened involvement and results in a personally meaningful benefit. Fyfe (2009), in his review of the groundswell, reiterates the need for organizations to think of their users as communities that should be strengthened and maintained if they are to survive the impact of the groundswell movement.

In the context of this study, groundswell theory was used to explain how Kenyan citizens have created an online movement on Twitter that is shaping narratives. Notably, Li and Bernoff (2008) do not particularly look into detail on the impact of Web 2.0 on government. Fyfe (2009), in his review, states that most of the groundswell lessons would be useful for governments and organizations to use the existing online citizen communities on social media. Parmar (2017) emphasizes that states (particularly the United States in this case) have moved from the days of “no alternatives” seen in the 1980s to the current state, where power is shifting to the people, leading to traditional institutions losing some of their power. He continues to state that groundswell is still relevant and powerful in the U.S., and encourages those organizing to resist Trump by developing alternatives to keep doing it.
This goes on to validate the need for governments such as Kenya to listen to the people who are now organizing online in search of alternatives. Increasingly, citizens want governments to listen to them. The question is whether they are listening and whether they are engaging. The present study, therefore, sought to answer some of these questions while making recommendations on whether digital media, particularly Twitter, can be used to enhance civic participation and if so, in what ways. Evidence from old literature by White (1983) suggests that a considerable groundswell of opinion can have some influence upon public policy, and those particular cases of maladministration or abuse of position can be readily corrected in this way. Li and Bernoff (2008) stated that groundswell comes from a collision of three forces—people, technology, and economics.

Outstandingly, groundswell remains relevant in the current context, where online relationships have only grown stronger (Li & Bernoff, 2008). On his part, Bulik (2008) described groundswell as a theory that explores the idea that people’s growing web participation and engagement has given them the power to make, break, create, and cripple brands and institutions at large.

The honeycomb framework explains how a firm can recognize and understand its social media landscape using the honeycomb framework (building blocks of presence, sharing, relationship, identity, conversation, group, and reputation); develop strategies that are aligned with, or suited to, different social media functionalities and the goals of the firm; develop curating strategies for their own social media interactions and content; and finally, use the honeycomb structure as a tool to evaluate constantly-changing social media activity (Comm & Taylor, 2015). The best example is to consider how the activities and
content of LinkedIn, Foursquare, YouTube, and Facebook all vary—the darker the color of a block, the greater this social media functionality is within the site.

2.6 Empirical Literature Review

2.6.1 Digital civic participation in civic engagement

The rapid rise in the integration of technologies in everyday life has complemented citizens’ political participation (NDI, 2013). Social media applications, built on Web 2.0 technologies, offer governments wide-ranging approaches to engage citizens, with an aim of efficient provision of essential services (Jayakanthan, 2011). This new engagement space allows governments to enhance civic participation (Bertot, Jaeger, & Grimes, 2012).

Digital media has transformed citizenry models from duty-based citizenship to active participation (Dalton, 2008). This can be attributed to the global rise in the use of digital technologies to enhance traditional participation processes. Mandarano, Meenar, and Steins (2010) posit that new media has opened new dialogue spaces, turning digital participation into a sociocultural practice, a new normal (Literat, Kligler-Vilenchik, Brough, & Blum-Ross, 2018). This is evident in the continued use of digital media such as Twitter in civic processes (Heeks, 2012), turning and altering civic participation patterns.

Bohler-Muller (2016) maintains that digital technology has an important role to play in enhancing South African democracy. Political participation in Kenya has been fueled by social media use, where people are actively taking part in various conversations. This has also been incorporated both as a development communication tool and most
importantly political persuasion tool, which has paved the way to citizen involvement (Oser et al., 2013).

Digital media space has led to an increase in civic participation between the public and governments across the world, putting more pressure on the adoption of different technologies, including social media, to improve government-citizen dialogue (Meer, Gelders, & Rotthier, 2014). In fact, Hermida (2010) notes that the Internet has great potential to address democracy deficits, such as low civic participation, by offering networked interactivity.

As communication advances through the rise and acceptance of technology, the application of social media platforms in areas of politics, public communication, and civic participation is increasingly having a greater impact (Stieglitz, Stefan, Dang-Xuan, & Linh, 2014). In an interconnected world, Jafferson (2013) states that Web 2.0 and social media platforms such as Facebook, Twitter, and YouTube fulfill the role of “public sphere” by facilitating social interactions as well as civic and political participation. Governments globally must keep up with digital trends and develop and update communication policies for the constructive use of digital platforms. These must be informed by citizen needs and democratic principles of openness, transparency, and accountability (Mariana, 2018).

In view of the impact of social media and other Internet tools in recent events in the Middle East and Africa, Twetty (2017) notes that there is a need for a dialogue on the lessons learnt. That dialogue will include how digital technologies, and the Internet in
particular, are emerging as important tools for political change—and not just for commerce, communications, and information exchange.

The normative form, or direct participation as used in civic participation, refers to processes where citizens actively engage in planning, policymaking and decision-making. These processes are believed to engender a sense of community, to enhance social cohesion, and to enrich democracy. Therefore, citizen, civic, and community participation processes need to take into account the ways in which new media platforms such as Twitter can be used to entrench a culture of normative or direct participation by the people (Smith, 2013).

Increasingly, social media continues to offer an alternative platform for public communication by the government. Utz (2009) pointed out that social media has enhanced the loyalty of the people to particular dialogues, since the more they look for information in these sites, the more devoted they become as their needs are met (Pinkleton et al., 2010). Social media has since been used strategically to win support, communicate, and interact with citizens.

Sika et al. (2014) highlights the importance of having engagement between the people and the government. Meaningful participation is geared towards the delivery of essential public services by the government so as to improve the quality of life of the citizenry. Consequently, citizens are now increasingly expecting governments to engage using social media channels (Omar, Stockdale, & Scheepers, 2014).

A study by Toni, Van der Meer, Gelders, and Rotthier (2014) found that governments mainly use web-based technologies to send out information, thus lacking the
two-way communication factor. The authors noted that despite technology offering opportunities for interactivity, there is still little responsiveness from the government. The study pointed out that this could partly be attributed to citizens showing low interest in participating in government processes, as is indicated in the kind of content citizens interact with on government web-based platforms—jobs, directions, and reports. Howard (2011) presents an argument that governments should by now be delivering value using social media. Bertot, Jaeger, and Hansen (2012) note that social media has great potential to enhance participation and transform democratic processes.

Existing literature suggests that if governments were more citizen-centric in their approach towards engaging citizens, then civic participation levels would tremendously grow (Bonsón et al., 2012). This can potentially enhance civic education by improving the citizen-government dialogue. People online can change behavior as soon they are offered something different (Li & Bernoff, 2008), which they perceived to be better.

Technology improvement and development of social media continue to provide ease of communication and contribute to increased civic participation in government matters. Terblanche (2011), while holding the position that one cannot “run or hide from social media—ask a politician”, highlighted the newfound power of social media where citizens can voice their concerns. The evidence for this is readily available from Tunisia, Egypt, and Libya, where social media played a critical role in enhancing political revolutions.

While some efforts have gone towards the implementation of the Public Participation Bill in Kenya, questions remain on how effective it is. Currently, as noted by
Nanjira (2016), newspaper advertisements on public participation are placed at the back of the newspaper and are also published late in the day, therefore not allowing enough time for citizens to attend town hall meetings. Nanjira (2016), a digital spaces advocacy specialist, challenged the government in a 2016 blog to adopt digital participation as a way of ensuring that more citizens participate in democratic and governance processes. Toni et al. (2014) also stated that the Internet provides a platform to enhance good relationships between the government and its citizens by creating a two-way communication platform. Katz & Halpern (2013) noted that the use of social media for civic participation creates an environment conducive for citizens to form powerful social networks and communities.

Even though social media channels such as Twitter can improve government communication with the public and enhance public participation, the impact of this technology and how these sites can be leveraged for good governance remains under-researched (Waema & Ofwona, 2011). This study sought to contribute to research on how technology—and particularly Twitter—can be used to enhance governance and democracy, thus reducing the research gap.

The national government is now more inclined towards using technology in different levels of government. This includes the use of Huduma centers, GOK Delivers web platform, the president’s website, county government websites, and social media to encourage and enhance public participation.

According to the latest sector statistics by the Communications Authority of Kenya (CAK) covering July to September 2018, there are about 42.4 million Internet users in Kenya (CAK, 2018). The figures by the CAK are an indicator that there is an increased
uptake of broadband Internet, in particular, which has gone up by 14.3% in the period ending September 2017. Mobile data remains the key contributor to data/Internet subscriptions at 99%. Additionally, the 2019 Global Digital Report titled, *We are Social* and *Hootsuite*, indicates that there are now more than 4.3 billion people using the Internet globally, making this a 57% penetration. Of these, more than three billion are on social media, with nine out of 10 accessing their content via mobile devices. The report further indicates that the fastest growth was seen in Africa, with an increase of more than 20% year-on-year.

Technology advancement has in the past couple of decades led to remarkable transformation in political, social and economic systems (Williams, 2014). This has in turn created a variety of opportunities for an active citizenry and political activism, while enhancing government accountability (NDI, 2013). Digital tools complement citizens’ political participation and shift power dynamics between citizens and public institutions (NDI, 2013).

This study examined digital civic participation on Twitter by analyzing content posted using the hashtag #Big4Agenda. The 2010 Kenya constitution makes provision for public participation under articles 1(2), 10(2), 35, 118, 174(c) and (d), 196(2) and 232(l)(d) as one of the national values alongside democracy, national unity, and rule of law, among others. Recent scholarly work shows growing prominence in digital participation as a result of the use of technology in every aspect of modern-day lives (Literat, Vilenchik, Brough, & Ross, 2018). IHub Research, in its study, “ICT and Governance in East Africa: A Landscape Analysis in Kenya, Uganda and Tanzania 2014,” says that public participation remains critical to democracy and democratic governance. Katz and Halpem
(2013) observe that the current use of technologies focuses more on the status quo rather than the creation of effective spaces for citizen participation.

The Nairobi County Public Participation Bill defines participation as “the involvement of individuals and groups that are positively or negatively affected by, or that are interested in, a proposed project, program, plan, legislation, or policy that is subject to a decision-making process (Nairobi County, 2018). Public participation can best be attained through civic education, which is defined as the provision of information and learning experiences to equip and empower citizens to participate in democratic and governance processes. This process involves communication between the citizens and their government, allowing for effective and progressive participation to take place.

However, the reality on the ground is different. A 2018 survey by Oxfam indicates that a majority of Kenyan citizens are unable to participate meaningfully and effectively. Additionally, the report notes that this inadequate participation is also contributing to a rise in gender inequality as the existing participation is often gender blind. Therefore, the current mode of participation fails to address the varying needs of women, who are then unable to access basic services like healthcare and education, and to obtain financing. A UN Women (2017) report on women in leadership indicates that the participation of women can make a great difference by contributing meaningfully to gender equality. Unfortunately, women remain underrepresented in decision-making processes due to various cultural and social norms and practices (Oxfam, 2018).

It is crucial to note that section 9(1) of the Nairobi County Public Participation Bill states that the notice to the public inviting them to a public participation forum must be
published in at least two newspapers with national circulation. The announcement should also be published in the official website of the county government and broadcasted through a radio within reach in the county. This is to address the fact that information has not been reaching the people, thus limiting their participation in governance and democratic processes.

### 2.6.2 Use of Twitter in digital civic participation

Twitter has been described in different technology platforms and blogs as the platform that sets the pace for microblogging. Over the years, Twitter has grown significantly because of its ease of use and accessibility. Li and Bernoff (2008) describe Twitter as “free and open, connects people, and gives them power.” As of 2015, Twitter had over 250 million active monthly users globally (Comm & Taylor, 2015). According to 2019 data from We Are Social and Hootsuite (2019), there were almost 4.4 billion Internet users globally and 3.5 billion social media users worldwide at the start of 2019. Statista (2019) indicates that there were 326 million active monthly Twitter users globally by the end of 2018 sending 500 million tweets every day. We Are Social (2019) further indicates that Twitter is the seventh most used website globally.

Twitter, which was originally called twttr, is an American social media site created by Evan Williams, Jack Dorsey, Biz Stone, and Noah Glass in March 2006 and went public on July 15 of the same year (Comm & Taylor, 2015). The platform was officially launched in October 2006, and later became a buzz in March 2007 when tweets displayed live during the South by Southwest (SXSW) Web Award (Comm & Taylor, 2015).
2.7 Contextual Literature Review

2.7.1 Digital civic participation and use of Twitter

While Twitter remains a platform that people use to access their news, the use of social media has evolved, and so has Twitter’s influence. In most countries in Africa, politicians use Twitter during elections to communicate with the public. African Twitter conversations have continued to influence elections in the continent over the past year. A study by Watkinson (2018) on How Africa Tweets 2018, pointed out that exceptionally in Rwanda, one in three influential handles is a political account—the highest figure across all countries in Africa analyzed.

A 2017 Twiplomacy study that analyzed 856 Twitter accounts of heads of state and government, and foreign ministers, in 178 countries with a combined total audience of 356 million followers reported that Uhuru Kenyatta was then Sub-Saharan Africa’s most followed leader, with 2 million followers (Business Today, 2017). Currently, Uhuru Kenyatta has a Twitter following of 3.4 million as of January 2019; however, this following does not translate into participation. President Kenyatta mostly uses the Twitter profile to broadcast and share information and not to have conversations with Kenyans on Twitter. This is evidenced by lack of replies to #KOT questions and concerns, and limited use of hashtags and low retweets with an average of 200 per tweet.

According to the State of the Internet in Kenya 2017 Report published in February 2018 by the Bloggers Association of Kenya (BAKE), there are over 1 million active monthly Twitter users in Kenya. Nendo, (2018) further indicates in an infographic that Twitter has 1.5 million active monthly users in Kenya, and goes on to state that the data is accurate as of May 2018. An article published in the Soko Directory in February 2018
echoes this activity, saying that Twitter is considered a powerful platform for pushing agendas and articulating issues. “Kenyans have widely used Twitter to hold government accountable, condemn injustices, or comment on various issues”, stated the Soko Directory article.

Figure 2. 3: Top Stats in Kenya from Nendo Digital Agency

Comm and Taylor (2015) highlight simplicity and critical mass as the two things that distinguish Twitter from other social media networks. This, combined with its ease to sign up and its ability to easily interface with mobile gadgets, has made it an essential part of groundswell in comparison to other social media platforms. Twitter is also big on presence, conversations, relationships, and identity as depicted in the honeycombs model (Smith, 2007). Additionally, Twitter users expect institutions to listen and engage them,
and not just broadcast. It is described as the “simplest, most powerful social tool that can be used” (Li & Bernoff, 2008).

2.7.2 Twitter use in Kenya to facilitate digital civic participation

Twitter users in Kenya account for 9.36% of social media users as of February 2019 (Stat Counter, 2019). This makes it the third most popular social media platform in Kenya, with Facebook leading at 67.42% followed by Pinterest at 17.65%. According to the State of the Internet in Kenya 2017 Report published in February 2018 by the Bloggers Association of Kenya (BAKE), there are over one million active monthly Twitter users in Kenya. Nendo (2018) further indicates in an infographic that Twitter has 1.5 million active monthly users in Kenya as of May 2018. A further analysis by Sochin Ltd published by Business Watch (2017) using geotagging, shows that of 728,074 tweets, 85% indicated Nairobi as their location, 6.1% Mombasa, and 3.8% Nakuru, while 2.5% referenced Kisumu.

Soko Directory, (2018) echoes the view that Twitter is indeed a powerful platform for pushing agendas and articulating issues. Kenyans have used Twitter widely to hold government accountable, condemn injustice, or comment on various issues, stated the Soko Directory article.

The BAKE State of the Internet in Kenya 2017 Report highlights some of the major hashtags that have had the greatest impact in Kenya as: #KenyaDecides, #ElectionsKE, and #DigitalGenderGap. This is a clear indication that politically active citizens are digitally engaged and using Twitter to reach out to the government. A notable gap is the lack of participation from the government, which mainly uses its platforms to broadcast
information with no engagement. This means that PSCU can take advantage of these massive numbers to inform and educate the citizenry on the projects and the agenda that the government is pursuing. With most people using their smartphones to access Twitter, the information reach is even wider and faster—at the click of a button (Stat Counter, 2018).

Brummette, DiStaso, Vafeiadis, and Messner (2018) highlighted the rise in critical participation between politically involved social media users and political movements using a case of the U.S. 2008 general election. Twitter is the preferred channel for this study because its elements have made it a unique and important part of building relationships, turning it into a critical aspect in reaching the masses (Comm & Taylor, 2015).

### 2.6.3.1 Followers on Twitter

Twitter allows people to follow anyone, unless in the few occurrences where one has been blocked. This allows for instant connections, resulting in some people becoming influencers based on their large followings, such as President Uhuru Kenyatta with 3.3 million followers as of September 18, 2018 (@UKenyatta, 2018). Twitter is a very dynamic social network because people tweet at anytime from anywhere.

### 2.6.3.2 Hashtags and searches

By virtue of Twitter profiles being public, one is able to search for what they want. As a citizen, it is easy to see what the government is doing by following their Twitter profile. Hashtags have also revolutionised how people curate information. By following
#StateOfTheNation or #Big4Agenda, one can easily engage in relevant conversations as they happen. This phenomenon has helped create communities who unite around a topic.

Another good example is #MyDressMyChoice, a hashtag used by Kenyans to organise a protest held on November 17, 2014 (Santos, 2015) against the stripping of women by men on the streets of Nairobi. Through hashtags, Twitter gives users “trending topics” of the day, or hour, based on one’s geographical location. This has made hashtags an important part of our discourse as well, becoming a significant part of our culture (Comm & Taylor, 2015).

2.6.3.3 Mentions and retweets

Retweeting makes it easy for users to share and pass along messages. The play it forward impulse was highlighted as one of the reasons people participate. This makes ideas go viral very fast and builds a community around a topic in no time (Li & Bernoff, 2008). Mentions allow users to respond to a message, for instance if one wanted to respond to a post by the presidency on #StateOfTheNation, by adding the @ sign to the presidents’ Twitter name (handle) @UhuruKenyatta, the message will go straight to the president, thus making participation easier by removing the controls and barriers that occur in traditional institutions (Li & Bernoff, 2008).

2.6.3.4 Links used with tweets

These add power to the short 140 and now 280 characters of a tweet. A link allows one to direct users to more information about a post. For instance, the president can direct citizens to the proposed Finance Bill or Big Four Agenda for citizens to give their input (Li & Bernoff, 2008). A live link is basically an active text or graphic link that is found on
a web page. When one clicks on the link, it redirects them to another web page, document, or even an image. Live links are often placed in emails, which allows the recipients of the mail to immediately access the website (Utz, 2009).

There are many ways that users such as PSCU can use Twitter to promote live links, but it is important to always ensure that the link one is tweeting is viably of interest to the reader. It is also important for PSCU to know the right times to tweet live links so that people can see them. With the government being active on Twitter, this is important because it encourages people to trust them as a reliable source of information, and is especially the case when they are posting high quality content (Krishna, 2014).

2.6.3.5 Lists on Twitter

A feature added to Twitter in 2010 allows people to create lists of like-minded people and institutions. This goes a long way in improving user experience. If on a particular day one wanted to see posts on Sustainable Development Goals, for instance, this feature makes it easier for one to create a list of the most influential institutions and individuals posting about SDGs, such as the United Nations, and clicking the list allows one to see the most recent conversations (Comm & Taylor, 2015).

Traditionally, a Twitter user “follows” other users by clicking on the “Follow” button of the Twitter profile in question. This relationship is public, as the initial Twitter user will be listed as a “follower” of that person’s Twitter profile, and it will also be noted on their own profile under the “following” tab. On the other hand, a Twitter List is another method with which one can “follow” Twitter users on the microblogging website (Twetty, 2017).
2.6.3.6 Apps and tools

Twitter has mobile apps on Apple, Blackberry and Android stores that make it easy for users to download and personalise their experience. In addition, because the content is free and open, third party user tools can tap into the power of Twitter to enhance user experience; TweetDeck, for example, makes it easier for users to manage their Twitter feed. Li and Bernoff (2014) noted that around 10% of social media influence comes from Twitter, even though it has fairly fewer users than Facebook. The analysts further indicate that more than 70% of “Twitterers” of US origin talk about things that interest them to their friends. Twitter users are more optimistic about technology and are better educated than other people online. These are people close to “power” as we know it (Li & Bernoff, 2008), and have great influence, thus making Twitter a viable platform for this study that seeks to explore how the platform can be used to enhance democracy.

2.6.3.7 Hashtags

A hashtag—written with a # symbol—is used to index keywords or topics on Twitter. This function was created on Twitter and allows people to easily follow topics they are interested in. People use the hashtag symbol (#) before a relevant keyword or phrase in their tweet to categorize those tweets and help them show more easily in a Twitter search (Twetty, 2017).

On the other hand, clicking or tapping on a hashtag in any message shows other tweets that include that hashtag and can be included anywhere in a tweet. Hashtags that become very popular are often trending topics. This study used a hashtag as its unit.
2.7.3 Presidential Strategic Communications Unit (PSCU) use of Twitter

The Presidential Strategic Communications Unit was established in 2013 when President Kenyatta’s administration took power from the grand coalition government that was led by former President Mwai Kibaki and former Prime Minister Raila Odinga (Chepkemoi, 2016). The aim of the unit was to help craft messages on behalf of President Kenyatta and the executive and disseminate the same through digital platforms and mainstream media. The content was and still is mainly about the government’s agenda and development activities, as well as various projects carried out throughout the country.

The Big Four Agenda encompassing food security, universal health coverage, manufacturing, and affordable housing as envisaged by the Jubilee government (The Presidency, 2019) was seen as one of the priority areas requiring strategic communication. The government has continued to drum up support for these projects using social media platforms, and more specifically on Twitter. The president has himself come out boldly on this platform to proclaim his mission and vision with regard to those four main pillars of development. The PSCU has also used Twitter to give information to the public on the progress of the Big Four Agenda using Twitter handles such as @PDUDelivery and @StateHouseKenya. Below is a table detailing other Twitter accounts that the PSCU uses to share content on the #Big4Agenda.

<table>
<thead>
<tr>
<th>Twitter handle</th>
<th>Description</th>
<th>Joining Date</th>
<th>Popular hashtags</th>
<th>Followers</th>
<th>Following</th>
</tr>
</thead>
<tbody>
<tr>
<td>@UKenyatta</td>
<td>President of The Republic of Kenya</td>
<td>26/8/2010</td>
<td>#UHC #Big4Agenda #Kenya</td>
<td>3,443,547</td>
<td>23</td>
</tr>
</tbody>
</table>
**2.7.4 Users’ Identity towards digital civic participation**

Smith (2007) defines identity as an approach to give people a unique character. Identity is also the extent to which social media users use their real identities or the level to which a social media platform expects users to share their identity (Kietzmann *et al*., 2012). This identity is presented in form of name, age, gender, location, and profession. Identity is a crucial construct for this study as it aimed to only use content from Kenyans, and their location will be crucial as well as real names where they can be identified. The government, through PSCU, can create good identity with the public given that crucial personalities such as the president, his deputy, and State House spokespersons also engage citizens using their Twitter handles.

**2.7.5 Users’ Influence of Twitter: Influencers and level of influence**

According to the influencer marketing hub (2019), an influencer is an individual who has the power to affect the decisions of others because of his/her authority, knowledge, position, or relationship with his/her audience. Social media influencers—who majorly will be celebrities, leaders, industry experts, and content creators—
increasingly build credibility from regular posting of content around different topics. According to Pixilee (2019), influencers generally have a large following and can use their wide reach to persuade others. Level of influence is measured by looking at a combination of factors: Number of followers, power of followers, regular updates, update recency, followers to following ratio, and engagement (Bullas, 2019).

This study aims to understand who the influencers of the hashtag #Big4Agenda are and their level of influence, with the aim of establishing their contribution to digital civic participation in Kenya.

In this study, the researcher has modified the presence construct to influence based on existing studies that show that high presence leads to high influence; thus, this study focuses on influence (Elaluf, Kietzmann, & Saccol, 2005). It is worth noting that Smith (2007) defines presence as the aspect of knowing who is online, available, and nearby. Kietzmann, Silvestre, McCarthy and Pitt (2012) further explain presence as the extent to which users know if other users are accessible at any given time. By understanding the availability and accessibility of users based on location, organizations can tap into this provision to have real-time and influential interactions (Elaluf, Kietzmann, & Saccol, 2005). This is an essential construct when studying Twitter and civic participation because of its characteristic of being real-time. The real-time nature increases immediate responsiveness, thus achieving interactivity (Li, Daugherty, & Biocca, 2002).

Sundar, Kalyanaraman and Brown (2003) present an argument that high interactivity gives users more control and allows for two-way engagement. People have always connected with each other; technology then came in as an enabler, helping people.
connect more effectively, efficiently, and at scale—making the people so powerful that institutions can no longer ignore their power (Li & Bernoff, 2008). This is brought about by their high level real-time interactivity as is evidenced on Twitter. The more the PSCU uses Twitter, the more it stays present in the public domain. This study therefore seeks to examine the interplay between PSCU and Kenyan citizens on Twitter.

2.7.6 Users’ conversations and sentimentality

This refers to the concept of people talking to each other (Smith, 2007). Kietzmann, Silvestre, McCarthy and Pitt (2012) define conversations as the extent to which people communicate with each other through social media. Conversations on social media happen for a variety of reasons. According to the groundswell model, people connect online to get the things they need from each other, rather than from traditional institutions like corporations (Li & Bernoff, 2008). On Twitter, users initiate a relationship or conversations based on common views, tastes, interests, or any other form of affinity that brings them together. The more the government uses Twitter, the more they are able to involve the public in conversations on issues of national interest. This study examined to what extent conversations between the PSCU and Kenyans on Twitter contribute to digital civic participation by analyzing #Big4Agenda content. According to the International Association for Measurement and Evaluation of Communication (AMEC), conversations lead to participation, which relates to the aspect of capturing one’s interest (AMEC, 2012).

Social media sentiment is the perceived positive or negative mood being portrayed in a social media post or engagement (Tran, 2019). Sentiment allows organizations, governments, and people to maintain good relationships with varied audiences. The emotions of one’s target audience are too important to ignore (Barnhart, 2019). Measuring
sentiment of social media content can be useful in predicting real life outcomes (Asur and Huberman 2010). How people feel about content is as useful as the network actions taken by the receivers of the messages, making sentimentality a key focus for this study. Asur and Huberman (2010) posit that Twitter sentiments are directly related to the power of social media, where in this case PSCU can use the sentimentality of the content shared using the hashtag #Big4Agenda to make an analysis of what citizens feel about the development agenda and generally their performance. Stieglitz and Dang-Xuan (2013) in their study on social sentiment noted that there is little research on emotions and content, and this study seeks to explore social sentiments while giving recommendations on ways to use sentiment analysis to enhance public digital communication. Lake (2018) states that sentimentality adds context to social media content by helping the sender of the message understand if people are happy, satisfied, angry, or annoyed with the content and the work, in this case delivery of the Big Four Agenda.

2.7.7 Users’ relationships construct (network actions)

Relationships block refers to how users of a system relate (Smith, 2007). This is the extent to which users have a relationship that leads to a conversation, share content, meet, or have been listed as a fan, friend, or follower (Miranda & Saunders, 2003). This interaction leads to people building powerful online communities that shape and drive agendas. Relationships are simply the interaction between members of a given social network (Claywell, 2017). The relationships construct is used to explain the network actions taking place on Twitter using the hashtag #Big4Agenda.
2.8 Conceptual Framework

This study’s conceptual framework was informed by the honeycomb’s functional blocks theory constructs: Identity, presence (influence), conversations, and relationships—and how these intersect with digital civic participation.

2.8.1. Independent variables

Users’ identity: “Users” refers to the people using the hashtag to post content, while presence is about users knowing that others are accessible on the platform. Presence is essential because it is influenced by immediacy and intimacy brought about by the relationship model. This construct will help us understand the users of the hashtag #Big4Agenda, thus giving a good analysis of digital civic participants in Kenya.

Users influence: Kaplan and Haenlein (2010) state that in most instances, higher levels of presence are likely to make conversations influential. In this study, influence has been used to refer to the honeycombs framework. According to Klear, influence refers to the ability to drive action. This study seeks to explore the most influential participants and their level of influence. Influence is not about number of followers or network action taken on a post, but about using machine learning to identify relevant users that will see and react to the post, thus affecting a participant’s influence (Klear, 2019). This variable will help the study understand the people driving action related to conversations related to the Twitter hashtag #Big4Agenda. It is adapted from the theory constructs of presence and identity and the groundswell phenomenon of people using technology to get things from each other. The indicators for this independent variable will be users’ presence and social influence. These will be analysed using Microsoft Excel. These will be presented both in form of tables and figures.
**Users’ Conversations on the hashtag #Big4AAgenda:** The indicators for the independent variable conversations are: Content themes, type of content shared categories through the hashtag #Big4Agenda, and the sentimentality of the conversations linked to the hashtag. These are adapted from the conversation’s honeycombs model constructs. The variable was analyzed using SPSS and MS Excel to review conversations variable. Crimson Hexagon was used to give the sentimentality data and Excel was used to give the analysis.

**Users’ relationships**

This study’s dependent variable was relationships measured by analyzing the network actions/interactions by users. This variable indicator is network actions taken by the users of the hashtag #Big4Agenda. Network actions refer to the Twitter elements that help users build relationships and have conversations. These are: Original tweets, replies, retweets, mentions, other hashtags, and tweets with links (Comm & Taylor, 2015). The indicators for relationship-dependent variable were original tweets, number of retweets, replies, mentions, tweets with links, and other hashtags used together with #Big4Agenda. The variable was analysed using *SPSS and Microsoft Excel*.

**2.8.2 Dependent variable—digital civic participation**

This study aimed to explain the role of Twitter and functional blocks towards digital civic participation in Kenya on the current development agenda, the Big Four Agenda. The study places digital civic participation at the intersection of people, technology, and content; users’ identity, users influence, users’ conversations, and users’ relationships all enhance digital civic participation guided by the honeycombs functional blocks and groundswell phenomenon.
2.8.3. Intervening variable—use of the Internet and Twitter in Kenya

According to the Communications Authority of Kenya, there are about 42.2 million Internet users in Kenya (CAK, 2019). In his Kenyan digital landscape report, Kaigwa (2019) gives the state of mobile data from various sources such as Internet Live Statistics, which claims there are 21.2 million Internet users; the CIA World Factbook, which cites 12.1 million Internet users in Kenya; and Google statistics, which indicates over 13 million Internet users in the country. The varied data indicates the high Internet access in Kenya.

Additionally, Twitter users in Kenya account for 9.36% of social media users in the country as of February 2019 (Stat Counter, 2019). According to Kaigwa (2019), Twitter is the 10th most popular website in the Kenya. According to the State of the Internet in Kenya 2017 Report published in February 2018 by the Bloggers Association of Kenya (BAKE), there are over 1 million active monthly Twitter users in Kenya. Nendo (2018) further indicates in an infographic that Twitter has 1.5 million active monthly users in Kenya; this data is accurate as of May 2018.

The access to the Internet in Kenya and the demonstrated use of Twitter are the intervening variables for this study, which will not be analyzed but form a good basis for an understanding of the context.
Figure 2.4 Conceptual Framework
2.9 Research Questions

1. What is the **identity** of the users of Twitter hashtag #Big4Agenda in relation to digital civic participation in Kenya?

2. What **is the level of users’ influence** towards digital civic participation in Kenya on Twitter’s hashtag #Big4Agenda?

3. What are the kind of **conversations are users** of the Twitter hashtag #Big4Agenda having towards digital civic participation in Kenya?

4. How are users of the Twitter hashtag #Big4Agenda **relating** towards digital civic participation in Kenya?

2.10 Chapter Summary

The chapter reviewed existing literature on ways in which Twitter can influence public communication and civic participation. While there is recognition and appreciation that social media tools such as Twitter can improve government communication with the public and enhance public participation, the impact of technology and how it can be leveraged for good governance remains under-researched (Waema & Ofwona, 2011). While there is a lot of literature on how digital communication functional blocks—which include identity, conversations, sharing, presence, relationships, reputation and groups—influence civic participation, this study seeks to contribute to research on how technology, and particularly Twitter, is used for civic participation in Kenya.
CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

This chapter defines and explains the research design, approach, target population, methodology, and sampling design—including procedure and technique used to arrive at the sample size. The chapter also explains the data collection and analysis techniques that were used for the study and the research ethics taken into consideration. Research methodology is the structure which provides guidance in conducting research (Creswell, 2013). It describes how information relevant to the objectives of the study would be collected.

3.2 Research Design

This study adopted the quantitative content analysis research design. Content analysis is a design that is used to identify, make inference, and analyze words, texts and concepts (Sloan & Quan-Haase, 2016). In quantitative content analysis the researcher transfers content through coding into a measurable and verifiable form (Sloan & Quan-Haase, 2016). Quantitative content analysis, Sloan and Quan-Haase (2016) posit, involves the researcher counting the manifest and denoting content under analysis, making it quantitative in nature. The researcher used the codebook (appendix IV) to code the tweets for interpretation and analysis to achieve the study’s objectives. The aim is to analyze and interpret recorded data, involving the analysis of recorded data with the purpose of making inferences from texts to contexts through processes of coding and identification of themes and patterns. This means that the data must be unambiguous, precise, and free of the
researcher’s biases. This method has been used in previous studies on government use of Twitter in civic participation (Small, 2012). Therefore, to ensure the study is free of biases, the researcher ensures the data was coded by two people to get rid of any biases.

3.3 Research Approach

The study used a quantitative research approach. This approach focused on gathering numerical data, classifying it, and describing it in a particular manner to explain a concept (Babbie, 2010). This approach was ideal for this study, which used content analysis to group tweets into quantitative elements, thus making it a quantitative study.

3.4 Population of the Study and Sampling

The population selected for this study was the users of the hashtag #Big4Agenda on Twitter. This study narrowed down the study period to the first half of Kenya’s 2018-2019 financial year. According to the Treasury, Kenya’s financial year ends on June 30. Therefore, the study period for this study was July 1 to December 31, 2018, a study period of six months. This was arrived at with the intention to get deeper insights given that it is the second financial year in the implementation of the Big Four Agenda.

A pre-test study of 15 tweets with the #Big4Agenda was sampled (Wang, Chen, Thirunarayan, & Sheth, 2012). Two coders, the author and a research assistant, independently annotated each of the 15 tweets that were randomly selected for the pre-test. A tweet was coded as 1.00 if the coder agreed and 0.00 if the coder disagreed based on the variable’s definitions. The codebook was modified in line with the pre-test findings and further used to code all other 986 tweets geotagged Kenya for the formal study.
3.5 Operationalization of variables

This section gives a detailed explanation of how the variables were operationalized:

**Users’ identity** independent variable was measured and analyzed using SPPS, Excel and Word Cloud. This variable sought to understand the “who,” the people using the hashtag, their location and gender. To ensure anonymity and confidentiality, users’ names were not considered.

**Users’ influence** independent variable was measured using Crimson Hexagon API. Level of influence was measured using Crimson Hexagon and later analyzed using Microsoft Excel.

**Users’ conversations** independent variable was measured by looking at the content themes and content categories discussed. It also involved looking at the sentimentality measured using Crimson Hexagon. Excel was used to identify other hashtags used in the same tweet with #Big4Agenda. In representing the users’ top influencers, Word Cloud was used to show the relationships to the content. Tables and charts were also used to show their magnitude of influence around the hashtag.

**Users’ relationships:** Relationship dependent variable was analyzed using Microsoft Excel. The indicators to be analyzed here are original tweets, retweets, replies, mentions, tweets with links, and tweets with pictures. Network actions were presented in tables and charts. This covers the number of replies, retweets, original tweets, mentions, links shared, and images using the online tools. The data was visualized in charts.
3.6 Research Instrument

The study, which took a quantitative content analysis approach, developed a codebook (Appendix IV), which was used to code the tweets for analysis. The instrument has four sections: Users’ identity, users’ influence, users’ conversations, and users’ relationships. The instruments detail each of the study construct’s indicators. This was further tested by two coders: The researcher (coder 1) and a research assistant (coder 2). The coders then tested the instruments’ reliability and validity using SPSS version 24 and found the Cohen Kappa results.

3.7 Study’s Reliability and Validity of the Research Instrument

Cohen Kappa’s reliability coefficient for five variables was tested using SPSS24 and the results were as follows: Users’ identity scored 1.00, users’ influence .722, users’ conversations .0815, and users’ relationships measured by the network actions .70. The four variables scored above the .70 permissible score, implying that the research instrument was reliable for the study.

The admissible Cohen Kappa score for this study was .70 or greater. Wimmer and Dominick (2006) posit that a score of .70 is acceptable in similar studies. Therefore, the pretest by two coders successfully achieved the recommended Cohen Kappa reliability score of .70 and above.
To ensure validity and reliability of data used, a pilot of 15 tweets was done to measure the inter-coder reliability coefficients. SPSS crosstabs were used to measure the reliability of the research instrument. Two coders, the researcher and an assistant, tested the research instrument. The two went through the conceptual framework to ensure a common understanding of the research objectives before coding. Coding was then done over a period of three hours and reliability scores established.

Reliability is the ability of a research instrument to consistently measure characteristics of interest over time. It is the degree to which a research instrument yields consistent results or data after repeated trials (Mugenda & Mugenda, 2003). Reliability, as such, refers to the consistency, stability, or dependability of the data. Whenever a researcher measures a variable, he or she wants to be sure that the measurement provides dependable and consistent results (Cooper & Schindler, 2003).

### 3.8 Ethical considerations

Twitter’s commercial terms of service allow for third users to access posts freely and legally; however, in the context of this research, privacy was ensured by coding of personal information in line with users’ views on ethics of social media use (Sloan & Quan-Haase, 2016). Informed consent was not sought on each of the users of the hashtag.

---

Table 3.1: *Cohen Kappa Reliability Scores*

<table>
<thead>
<tr>
<th>Kappa</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 0</td>
<td>Poor agreement</td>
</tr>
<tr>
<td>0.0 – 0.20</td>
<td>Slight agreement</td>
</tr>
<tr>
<td>0.21 – 0.40</td>
<td>Fair agreement</td>
</tr>
<tr>
<td>0.41 – 0.60</td>
<td>Moderate agreement</td>
</tr>
<tr>
<td>0.61 – 0.80</td>
<td>Substantial agreement</td>
</tr>
<tr>
<td>0.81 – 1.00</td>
<td>Almost perfect agreement</td>
</tr>
</tbody>
</table>

Source: Landis and Koch (1977)
#Big4Agenda, but anonymity was ensured as a result of not seeking consent. Particularly, anonymity was achieved by not saying who said what in the analysis of the data (Sloan & Quan-Haase, 2016), which was coded based on the users’ profiles. This involved giving particular attention to how the mined data was handled to ensure privacy of users from equipment used was password-protected, and analysis was only done on information that was already in the public domain. The data was also only used for the purpose of this research and will be deleted on publication of the study.

Confidentiality was also attained by ensuring the data was safely stored and shared only with relevant users, such as the supervisor and university faculty. Direct quotations were also not used in the presentation of the data because this can compromise anonymity if the direct quote is copied into a Google web search (Sloan & Quan-Haase, 2016). In addition, Buchanam (2011) argues that “ethical pluralism” should not be used, but the researcher needs to reflect on contexts before disclosing any user’s information. Therefore, while using the users’ names would have added value to the analysis on top influencers, the researcher chose anonymity.

In line with social media research ethics (Sloan & Quan-Haase, 2016), the researcher ensured there is no harm caused to the users of the hashtag by not disclosing the names and also not laying emphasis on negative posts.

Additionally, in line with USIU-A research ethical guidelines, IRB authorization was requested and granted for this study and a letter is attached (Appendix IV), in addition to that of the National Commission for Science, Technology and Innovation (NACOSTI).
Data mined from Twitter was treated with utmost levels of confidentiality in line with the IRB and NACOSTI data handling and protection guidelines.

3.9 Data collection method

The sampled data was mined for a period six months, July 1, 2018 to December 31, 2018, in which the hashtag #Big4Agenda ran. Chandran (2004) defines data collection as the assembly of empirical evidence for the purpose of acquiring new insights about a situation and answering all queries that have prompted the undertaking of the research. Data mining involves the automated processes associated with the extraction of knowledge from large-scale databases or online repositories (Fielding, Lee, & Blank, 2017).

Crimson Hexagon, an artificial intelligence-powered consumer insight tool, was used to mine tweets under the hashtag #Big4Agenda courtesy of IPSOS Kenya. A total of 5,136 tweets were harvested for the period running from December 12, 2017 to December 31, 2018. These were later narrowed down to only include the study period of six months starting July 1 to December 31, 2018, which was a total of 1,602 tweets. The author further cleaned the data to only include tweets with the Kenya country geotag using the Crimson Hexagon API to ensure relevance to the scope of the study. These were 986 tweets, which then formed the formal dataset for the study.

3.10 The unit of analysis

This study used a hashtag as the unit of analysis. Specifically, #Big4Agenda was selected as the actual unit of analysis for this study. The hashtag was launched on December 12, 2017 after the president of Kenya launched the national government’s Big Four Agenda: Manufacturing, affordable housing, universal health coverage, and food
security, during that year’s Jamhuri Day celebrations (Presidency, 2017). The hashtag has been used by both the government and citizens to monitor progress, challenge processes used, and broadcast information related to the Big Four Agenda and national government priorities.

3.11 Data Analysis Procedures

The study used content analysis to analyze the harvested tweets. The codebook (Appendix I), which was adapted from the conceptual framework, was used to analyze the 986 tweets geotagged Kenya.

Data analysis refers to the activity of analyzing what has been collected and making deductions and inferences. It involves extracting significant variables, detecting anomalies, and testing any assumptions (Kombo & Tromp, 2009). Data processing entails editing, classification, and tabulation of data collected so that they are amenable to analysts (Kothari, 2009).

Thematic contextual analysis was used to draw conclusions according to the variables under investigation on the use of Twitter in digital civic participation. The codebook (Appendix I), was used to make replicable and valid inferences by interpreting and coding textual material and thereby systematically evaluating the contents of the #Big4Agenda. This method allowed qualitative data to be converted into quantitative data. The method of content analysis enabled the researcher to include large amounts of textual information and systematically identify its properties, such as the frequencies of most used keywords, by locating the more important structures of its communication content. Such
amounts of textual information were then categorized to provide a meaningful reading of
the content under scrutiny (Cooper & Schindler, 2001).

Specifically, SPSS and Microsoft Excel were used to analyze the data and also
calculate the chi-square correlations of the variables, and the analysis is further presented
in tables.

3.12 Chapter Summary

This chapter provides the research design detailing how the data was sought. It
includes the research design and research methodology approaches used. The chapter
further presents the population, sample and sampling technique, instruments’ validity and
reliability test, data collection procedures, data analysis methods, and ethical
considerations.
CHAPTER FOUR

FINDINGS

4.1 Introduction

This chapter presents and interprets findings from the various variables of the four research questions using different statistical and social media analysis tools. The author harvested the data using Crimson Hexagon, then coded the data using Statistical Package for Social Sciences (SPSS) version 24. Microsoft Excel was also used to analyze the data. Using content analysis technique, the analyzed data was then presented in different tables and charts for interpretation.

4.2 Users’ Identity of the Twitter Hashtag #Big4Agenda towards Digital Civic Participation in Kenya

The users’ identity indicators were number of users, location, and gender of the users. A series of analyses were carried out to answer the first research question on users’ identity on the hashtag #Big4Agenda. The study looked at the 1,602 tweets harvested in the period July 1 to December 31, 2018 using Crimson Hexagon. The data was further analyzed using SPSS version 24 and Microsoft Excel. This research question aimed to examine who the users of the hashtag were, their location, and gender.

The study established that there were a total of 645 unique hashtag users during the six-month study period. These were identified using the handle names listed using the @ sign under the author data extracted from the 946 tweets geotagged Kenya.
An examination of the users’ geotagging using Crimson Hexagon’s API found that out of the 1,602 tweets of the July 1, 2018 to December 31, 2018 dataset, 986 (61.55%) of the total tweets of the hashtag #Big4Agenda were geotagged Kenya, 442 (27.59%) did not disclose location, and 174 (10.86%) were from other countries. The author further analyzed the 986 tweets based in Kenya because of the scope of the study, which is Kenya’s current development agenda, which is statistically significant with a frequency percentile score of 61.5%.

Figure 4. 1: Geographic Location of Hashtag #Big4Agenda Users

According to this finding, it is valid to say that a majority of the users are Kenyans on Twitter posting content on the Big Four Agenda conversation, giving the indication that Kenyans are participating in the country’s current development agenda on digital spaces.
An examination of the gender of the users revealed that a majority of users did not disclose their gender, accounting for 56.49%. Of the users who disclosed their gender, 32.76% were male and 10.75% were female.

![Gender Frequency Analysis of the Hashtag Users’ identity](image)

Figure 4.2: Gender Frequency Analysis of the Hashtag Users’ identity

A closer examination of the gender of the 986 tweets geotagged Kenya using the Crimson Hexagon based users shows that 32.76% (323) were male and 10.75% (106) were female, while 56.49% (557) did not disclose their gender.
Figure 4.3 indicates a prominent male dominance on Twitter in general as analysed from the 986 tweets considered for this study. This data indicates male dominance and a significantly low representation and participation of women in the country’s development agenda, the Big Four Agenda, as indicated in Tables 4 and Table 5. This indicates that a majority of Twitter users do not disclose their identity and that there is male dominance in the use of the hashtag. This is in line with the literature, which indicates that women are still underrepresented in digital civic conversations, which in turn leads to gender inequality due to the low participation of women.

4.3 Users’ Influence of the Twitter Hashtag #Big4Agenda towards Digital Civic Participation in Kenya

The users’ influence indicators were top influencers and the level of influence. The second research question investigated the top influencers of the hashtag #Big4Agenda. According to analysis conducted using Crimson Hexagon tool, the study singled out 45
top influencers (Appendix III) from the 986 tweets posted by users, with the Kenya geotag between July 1 and December 31. Table 6 lists the top 10 influencers of the hashtag. The question also looked at the top influencers, most active participants on the hashtag, and their level of influence. Actual names were coded and categorized to ensure anonymity and confidentiality of the users in line with ethical considerations.

Table 4. 1: *Top 10 Influencers of the Hashtag #Big4Agenda and their Levels of Influence*

<table>
<thead>
<tr>
<th>Author</th>
<th>Tweets</th>
<th>Following</th>
<th>Followers</th>
<th>Influence Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>#KOT1</td>
<td>1626</td>
<td>479</td>
<td>11769</td>
<td>11.9</td>
</tr>
<tr>
<td>#GoK</td>
<td>12287</td>
<td>23</td>
<td>3612059</td>
<td>10.9</td>
</tr>
<tr>
<td>#PrivateSector</td>
<td>5171</td>
<td>1665</td>
<td>23573</td>
<td>6.7</td>
</tr>
<tr>
<td>#KOT2</td>
<td>2622</td>
<td>1262</td>
<td>970</td>
<td>5.7</td>
</tr>
<tr>
<td>#KOT3</td>
<td>86800</td>
<td>5519</td>
<td>37837</td>
<td>3.6</td>
</tr>
<tr>
<td>#KOT4</td>
<td>21362</td>
<td>22106</td>
<td>25823</td>
<td>3.6</td>
</tr>
<tr>
<td>#NGO1</td>
<td>11763</td>
<td>1022</td>
<td>11914</td>
<td>3.6</td>
</tr>
<tr>
<td>#KOT5</td>
<td>1427</td>
<td>5585</td>
<td>5565</td>
<td>3.6</td>
</tr>
<tr>
<td>#KOT6</td>
<td>31769</td>
<td>401</td>
<td>357669</td>
<td>3.6</td>
</tr>
<tr>
<td>#Media1</td>
<td>14525</td>
<td>441</td>
<td>170498</td>
<td>3.6</td>
</tr>
</tbody>
</table>

Level of influence is measured by looking at a combination of factors: Number of followers, power of followers, regular updates, update recency, followers to following ratio, and engagement (Bullas, 2019).

A further grouping of the 45 top influencers revealed that 37.78 per cent of the top influencers were Kenyans on Twitter. This was followed by media houses and media personalities, each scoring 13.33%, followed by government officials at 11.11%. Official government office accounts, private institutions, and nonprofit organizations scored 6.67 per cent.
A 4-Likert scale was developed to conduct cross-tabulations on the levels of influence. The Likert scale level ranged from lowest to high, as indicated in Table 4.3. Lowest level of influence was characterized by an influence score of 0-5, average as 5.1-10, high 10.1-11, and highest above 11.

Table 4. 3: Level of Influence Likert Scale Cross-Tabulation

<table>
<thead>
<tr>
<th>Level of influence score</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5</td>
<td>41</td>
</tr>
<tr>
<td>5.1-10</td>
<td>2</td>
</tr>
<tr>
<td>10.1-11</td>
<td>1</td>
</tr>
<tr>
<td>Above 11</td>
<td>1</td>
</tr>
</tbody>
</table>
Standard Deviation

Standard Error of Mean

Standard Error of mean is an indication of the reliability of the mean. A small SE (Standard Error) is an indication that the sample mean is a more accurate reflection of the actual population mean. A larger sample size will normally result in a smaller SE (while Standard Deviation is not directly affected by sample size).

The actual calculations for Standard Deviation and Standard Error look similar, but represent two different yet complementary measures. SD tells us about the shape of our distribution, how close the individual data values are from the mean value. SE tells us how close our sample mean is to the true mean of the overall population. Together, they help to provide a more complete picture than the mean alone can tell us.

Basically, a small standard deviation means that the values in a statistical dataset are close to the mean of the dataset, on average, and a large standard deviation means that the values in the dataset are farther away from the mean, on average.
Table 4. 4: Standard Deviation on the Level of Influence

<table>
<thead>
<tr>
<th>Level of influence</th>
<th>TOTAL</th>
<th>Total Base</th>
</tr>
</thead>
<tbody>
<tr>
<td>BASE</td>
<td>986</td>
<td>986</td>
</tr>
<tr>
<td>0-5</td>
<td>898</td>
<td>898</td>
</tr>
<tr>
<td>5.1-10</td>
<td>44</td>
<td>44</td>
</tr>
<tr>
<td>10.1-11</td>
<td>22</td>
<td>22</td>
</tr>
<tr>
<td>Above 11</td>
<td>22</td>
<td>22</td>
</tr>
</tbody>
</table>

Level of influence
| Mean     | .16 |
| Std Deviation | .56 |
| Standard Error of Mean | .02 |

Standard deviation is the average distance to the mean. Standard deviation tells us how spread out the responses are—whether they are concentrated around the mean, or they are spread around the mean, or scattered far and wide. Did all the ratings fall in the middle of our scale or did some love it and some hate it?

Looking at our SD (Standard Deviation) which is .56, we can conclude that it is well spread out to the mean, making this statistically significant.

4.4 Users’ Conversations: Content Themes and Type of Content on the Hashtag #Big4Agenda

The users’ conversations indicators were content themes, content categories, and sentimentality accorded to the posts. Research question three sought to understand the
content of the tweets by analyzing the content themes, content categories discussed, and sentimentality of the tweets content, which served as the indicators for the conversation’s variable. This was done by analyzing 246 total tweets, of which 210 were original tweets and 36 replies; out of the 986 under study, 743 were retweets and the rest replies, and therefore not analyzed for the deep content to avoid duplication of information.

The study analyzed 246 total tweets—210 original tweets and 36 replies—out of the 986 geotagged Kenya under study. There were a total of 743 retweets and the rest replies, and therefore not analyzed for the deep content.

The author categorized the posts into seven major themes as general Big Four Agenda content; universal health care; affordable housing; food security; manufacturing; public debt, corruption, and fuel cost; and irrelevant content to the Big Four Agenda conversations. General Big Four Agenda content was categorized based on the overall nature. These was made up of conversations on financing of the big four, partners working on the implementation of the big four, and information on the Kenya politics linked to the current development agenda. Food security, affordable housing, universal health coverage, and manufacturing were all categorized separately as the main big four priorities as stipulated by the national government. Other major post types were conversations on the public debt, corruption, and the cost of fuel, which were mentioned in the tweets under study.
Figure 4.4: Content Themes

The figure shows that a majority of the users of the hashtag are having conversations on general Big Four Agenda (47.15%) as the main development agenda of the country. This category is followed by affordable housing at 10.98%, and universal health care at 8.54%. The least discussed category of the Big Four Agenda is manufacturing at 5.69%. Other topics that were mentioned include cost of fuel, public debt, and corruption, which were mentioned as factors limiting attainment of the Big Four Agenda. An example of a post under the category of public debt, corruption and cost of fuel was a tweet that was sending a request to the president to resolve the high corruption in the country and reduce public debt—a tweet posted from Kenya and that had a negative sentimentality. The actual tweet not given to ensure confidentiality.

The researcher did a further review of chi-square tests—results; the Pearson chi-square figure (Asymp. Sig. (2-sided)) is less than the P-value (0.05), and therefore we say that there is no significant association between interaction (network action) and post type.
In other words, Interaction (action) is independent on post type, which is line with general literature, which indicates low engagement on Twitter.

Table 4. 5: Chi-Square Statistical Significance Test of Content Themes

<table>
<thead>
<tr>
<th>Chi-Square Tests</th>
<th>Value</th>
<th>df</th>
<th>Asymp. Sig. (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>8.837a</td>
<td>8</td>
<td>.356</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>9.646</td>
<td>8</td>
<td>.291</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>1.496</td>
<td>1</td>
<td>.221</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>986</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In coding and analyzing the nature of content, the author categorized the information into seven groups: Issue discussion, information sharing, partnership, event conversation, leadership appreciation, citizen comment, and irrelevant—which denoted anything not related to the development agenda.

A majority of the tweets posted were general information sharing on the Big Four Agenda, scoring 30.08 per cent of the total 246 posts analyzed. These were majorly tweets announcing progress of the implementation of the agenda, without requiring a response from the public. This category was followed by in-depth issue discussion at 19.92% around the Big Four Agenda. This included people giving ideas on what needs to be done to achieve the set milestones, case studies of where similar initiatives have worked, and a general critic of the Big Four Agenda—including the implementation budget.
Citizen comments and response to the content themes by the users followed at 15.45%. These posts mainly included content from Kenyans on Twitter criticizing the approach taken by the government in the implementation of the Big Four Agenda, asking about progress so far, and registering complaints where progress has been slow. This is an indication of citizen interest and uptake in conversations on the country’s Big Four Agenda.

Other categories were appreciation and recognition of the Big Four Agenda implementation—leadership at 10.16%, partnership conversations at 8.94%, and content that was not relevant to the Big Four at a score of 8.13%.

Table 4. 6: Types of Content Categories

<table>
<thead>
<tr>
<th>Content type</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issue discussion</td>
<td>49</td>
<td>19.92</td>
</tr>
<tr>
<td>Information sharing</td>
<td>74</td>
<td>30.08</td>
</tr>
<tr>
<td>Partnership</td>
<td>22</td>
<td>8.94</td>
</tr>
<tr>
<td>Event conversation</td>
<td>18</td>
<td>7.32</td>
</tr>
<tr>
<td>Leadership appreciation</td>
<td>25</td>
<td>10.16</td>
</tr>
<tr>
<td>Citizen comment</td>
<td>38</td>
<td>15.45</td>
</tr>
<tr>
<td>Irrelevant</td>
<td>20</td>
<td>8.13</td>
</tr>
<tr>
<td></td>
<td>246</td>
<td>100.00</td>
</tr>
</tbody>
</table>

This indicates that the users of the hashtag are mainly using the platform to share out information without creating the space for two-way communication.

Sentimentality indicator was measured using Crimson Hexagon tool. This was then analyzed using SPSS by categorizing the posts as either positive, negative, or neutral, which was provided by Crimson Hexagon API.
The results showed that a majority of the posts attained a neutral sentiment at 75.46%, followed by positive sentimentality at 16.13%. Negative sentimentality scored 6.48%, while 1.93% was of uncategorized tweets.

Table 4.7: Sentimentality Analysis

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive</td>
<td>159</td>
<td>16.13%</td>
</tr>
<tr>
<td>Neutral</td>
<td>744</td>
<td>75.46%</td>
</tr>
<tr>
<td>Negative</td>
<td>64</td>
<td>6.48%</td>
</tr>
<tr>
<td>Unclassified</td>
<td>19</td>
<td>1.93%</td>
</tr>
<tr>
<td></td>
<td>986</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

A further analysis on the emotions tied to the tweets indicated that most tweets produced neutral emotions at 68.86%, followed by joy emotion at 19.27%, then sadness at 3.85%. Other emotions were fear at 0.71%, disgust 0.51%, and anger 0.51%. Up to 6.29% of the posts were unclassified.

Figure 4.5: Emotions Tied to the Tweets
These neutral emotions present an opportunity for the PSCU to use Twitter more strategically to ensure citizens are brought on board with the development agenda, and are engaging in its delivery.

4.5 Users’ Relationships towards Digital Civic Participation on Twitter as Indicated by Network-Actions on Twitter’s Hashtag #Big4Agenda

The user’s relationships indicators were network actions original tweets, replies, retweets, and tweets with links. Research question four sought to explain the network actions taken by users of the hashtag #Big4Agenda. The network actions were: Original posts, retweets, replies, mentions, and tweets including a link. Of the total 986 total posts analyzed, 75.25% (740 tweets) were retweets, 21.30% (210 tweets) were original tweets, and 3.45% (36 tweets) were replies.

Table 4.8: Frequency Analysis of Network Actions

<table>
<thead>
<tr>
<th>Post Types</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original Tweets</td>
<td>210</td>
<td>21.30</td>
</tr>
<tr>
<td>Retweets</td>
<td>740</td>
<td>75.25</td>
</tr>
<tr>
<td>Replies</td>
<td>36</td>
<td>3.45</td>
</tr>
<tr>
<td><strong>986</strong></td>
<td><strong>100.00</strong></td>
<td></td>
</tr>
</tbody>
</table>
A further analysis of the network actions indicated that 14.91% had links, while 85.09% did not have links. Links are used to share more information—such as main reports, brochures, blogs, news pieces or multimedia material such as video or infographics. Notably, there is a significantly low usage of links to share more information with users.

![Tweets with links](image)

**Figure 4. 6: Tweets with Links Network Action Analysis**

To further analyze civic participation as a dependent variable, the study looked at the most mentioned users of the hashtag #Big4Agenda. President Kenyatta was identified as the most mentioned user with 20 mentions during the study period, followed by Amnesty Kenya with seven mentions. Out of the 10 users with high mentions, one is a government leader, the president; one is an organization; two are media personalities; while the majority is Kenyans on Twitter at six counts.

**Table 4. 9: Top Mentions for the Study Period**
Using Microsoft Excel, the author established other hashtags used together with #Big4Agenda as #bigfour, used 68 times, #SDGS 19 times, #universalhealthcare 18 times, and #Kenya 31 times. Table 4.15 below shows all other hashtags used along with hashtag #Big4Agenda.

<table>
<thead>
<tr>
<th>Author</th>
<th>Mentions</th>
</tr>
</thead>
<tbody>
<tr>
<td>#GovernmentOfficial</td>
<td>20</td>
</tr>
<tr>
<td>#NGO</td>
<td>7</td>
</tr>
<tr>
<td>#KOT</td>
<td>7</td>
</tr>
<tr>
<td>#KOT</td>
<td>7</td>
</tr>
<tr>
<td>#MediaPersonality</td>
<td>7</td>
</tr>
<tr>
<td>#KOT</td>
<td>7</td>
</tr>
<tr>
<td>#PublicFigure</td>
<td>7</td>
</tr>
<tr>
<td>#KOT</td>
<td>7</td>
</tr>
<tr>
<td>#MediaPersonality</td>
<td>6</td>
</tr>
<tr>
<td>#KOT</td>
<td>6</td>
</tr>
</tbody>
</table>

Using Microsoft Excel, the author established other hashtags used together with #Big4Agenda as #bigfour, used 68 times, #SDGS 19 times, #universalhealthcare 18 times, and #Kenya 31 times. Table 4.15 below shows all other hashtags used along with hashtag #Big4Agenda.
Table 4. 10: Frequency Analysis of Used Hashtags

<table>
<thead>
<tr>
<th>Hashtag</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>#BigFourAgenda</td>
<td>178</td>
<td>46.60</td>
</tr>
<tr>
<td>#BigFour</td>
<td>68</td>
<td>17.80</td>
</tr>
<tr>
<td>#SDGS</td>
<td>19</td>
<td>4.97</td>
</tr>
<tr>
<td>#Kenya</td>
<td>31</td>
<td>8.12</td>
</tr>
<tr>
<td>#UniversalHealthCare</td>
<td>18</td>
<td>4.71</td>
</tr>
<tr>
<td>#FoodSecurity</td>
<td>11</td>
<td>2.88</td>
</tr>
<tr>
<td>#YouthEmpowerment</td>
<td>12</td>
<td>3.14</td>
</tr>
<tr>
<td>#AffordableHousing</td>
<td>4</td>
<td>1.05</td>
</tr>
<tr>
<td>#BlueEconomy</td>
<td>5</td>
<td>1.31</td>
</tr>
<tr>
<td>#Innovation</td>
<td>8</td>
<td>2.09</td>
</tr>
<tr>
<td>#CorruptionKE</td>
<td>5</td>
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</tr>
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<td>1.57</td>
</tr>
<tr>
<td>#Vision2030</td>
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<td>1.05</td>
</tr>
<tr>
<td>#LeaveNoOneBehind</td>
<td>8</td>
<td>2.09</td>
</tr>
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</tr>
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<td><strong>382</strong></td>
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</table>
A word cloud application was used to visually illustrate other hashtags used together with #Big4Agenda.

Figure 4.7: Word Cloud of Related Hashtags

Figure 4.7 shows that the users of the hashtag #Big4Agenda are mostly inclined towards the country’s development agenda, making the study focus relevant.

4.6 Chapter Summary

This chapter has presented the study results and findings in tables, graphs and charts. The chapter also gives an interpretation of the results and findings, and the data which speaks to the four objectives of the study; the top influencers, their level of influence, and the content shared using the hashtag #Big4Agenda, and the sentimentality
of the content and how these relate to digital civic participation in Kenya. The next chapter discusses the results and findings and gives recommendations for policy and practice and further research, and provides conclusions of the study.
CHAPTER FIVE

DISCUSSIONS, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of findings of the study, discussion and interpretation of the study. The key recommendations given in this chapter are derived from the interpretation of the study results and findings analyzed systematically from the objectives of the study triangulated with the existing literature.

5.2 Summary of Findings

The study reveals an appreciation and uptake of Twitter as a tool for civic participation in Kenya by the government, citizens, the media, development partners, and the private sector. Like noted in the literature, Twitter is described as a free and open platform that connects people, and gives them power (Li & Bernoff, 2008). This study concluded that Twitter has allowed users in Kenya to build a community (have relationships) and have conversations around a topic of interest that brings them together, as noted in #Big4Agenda conversations and network actions. This is aligned to the honeycombs social media model, where relationships and conversations are part of the key building blocks.

The study established that the hashtag #Big4Agenda has been used by government officials and their offices, the media, citizens, private institutions, and other stakeholders to keep tabs on the five-year development agenda dubbed the Big Four Agenda launched by the fourth president of Kenya, Uhuru Kenyatta, on December 12, 2017. The study analyzed 45 top influencers’ users and found that that 37.78% of the top influencers were
Kenyans on Twitter. This was followed by media houses and media personalities, each scoring 13.33%, followed by government officials at 11.11%. Official government office accounts, private institutions, and nonprofit organizations scored 6.67%. The president of Kenya had the highest level of influence, scoring 10.9%. This shows that Kenyans have a keen interest in participating in the development agenda of the country, while the government offices and officials are lagging behind in the conversations—which could negatively affect the growth of civic participation in Kenya.

The Big Four—food security, affordable housing, manufacturing, and universal health coverage (Presidency, 2019)—were all referenced and mentioned significantly on Twitter using the hashtag #Big4Agenda over the six-month study period. Universal health coverage was the most discussed topic using the hashtag, scoring 12.88%. This was followed by food security, which scored 10.24%, followed by affordable housing at 9.74%, while manufacturing was the least discussed topic scoring 6.9%.

5.3 Users’ Identity Discussion

This study mined a total of 986 tweets tagged Kenya, out of the total 1,602 tweets mined using Crimson Hexagon API for the study period of six months. These were coded using the codebook and analyzed with the aim of establishing the user’s identity. This section discusses and interprets the results.

In answering the first research question, the study established 645 users of the hashtag from Kenya #Big4Agenda during the study period. This was identified from the 986 tweets geotagged Kenya. A significant number of users did not disclose their location or their gender, which is identified as a limitation of the study. Based on the available data,
there is a male dominance in the conversations on the Big Four, which could have negative implications such as gender inequality in the realization of the benefits of the Big Four.

According to existing literature, Kenyans are already using Twitter for civic participation (Tully & Ekdale, 2014). This is also noted in the study, where 645 users of the hashtag #Big4Agenda are actively participating in the country’s development agenda. The study therefore contributes to the honeycombs theory as per the identified gap by Kietzmann et al. (2011), who recommended that the honeycomb model was a critical model on which to ground further research on social media in public services, including government activities, by providing a suitable theoretical view, which this study has done by showing that the presence/influence and identity building blocks are essential for people to connect and fuel participation. Kaplan and Haenlein (2010) state that in most instances, higher levels of presence are likely to make conversations influential. The identity building block is about users using their names, and giving their location and gender, which was also identified in the study. Kietzmann, Hermkens, McCarthy, and Silvestre (2011) posit that users want to connect and build communities with people they know and can identify. A good example in this study is the observation that Uhuru Kenyatta, the president of Kenya, is one of the top influencers of the hashtag, indicating that people want to connect with him and hold conversations.

5.4 Users Influence Discussion

The top influencers of the hashtag were mainly Kenyans on Twitter, media houses, and media personalities. Government offices and government leaders followed, then private and nonprofit organizations, who were not very influential in the conversations. This data indicates that citizens are increasingly using social media to build communities
and share opinions and ask questions on the development agenda. This finding is further backed by literature, which notes that digital media presents possibilities of strengthening citizens’ voice in politics, which in turn enhances accountability by the government to its citizens (National Democratic Institute for International Affairs [NDI], 2013). The media is also coming strongly in playing their role of amplifying and strengthening conversations between citizens and governments. The government, on the other hand, is not strongly using this platform to share information or have conversations with the citizens, even though studies show that citizens are now increasingly expecting governments to engage using social media channels (Omar, Stockdale, & Scheepers, 2014). This is noted in the literature, which shows that governments mainly use social media to send out information without requiring feedback or engagement. A study by Toni et al. (2014) found that governments mainly use web-based technologies to send out information, thus lacking the two-way communication factor. The authors noted that despite technology offering opportunities for interactivity, there is still little responsiveness from the government.

Fyfe (2009), in his review, states that most of the groundswell phenomenon of people using the Internet to connect, be bold, and draw power from each other is useful for governments and organizations to use the existing online citizen communities on social media. Both nonprofit and for-profit organizations are also not effectively utilizing the spaces provided by social media to involve citizens.

From this study, there is evidence that citizens want to be involved in the development agenda based on the content shared by KOT; however the government and institutions are not involving the citizens critically, as is seen from the results. According to the groundswell theory, institutions need to come up with strategies to engage with
increasingly connected and powerful citizens (Li & Bernoff, 2008). There is a need for both the government and organizations to use the digital tools to do more than sending out information, but to listen to the views of citizens by collecting their views through pools or issue discussions, and also by responding to the issues raised. As noted in the study, retweets were higher than replies, which is an indication of low conversations and more information dissemination. By the government responding to the issues raised by KOT real time, PSCU would significantly increase immediate responsiveness, thus achieving interactivity (Li, Daugherty, & Biocca, 2002), which in turn creates a conducive environment for civic participation. Sundar, Kalyanaraman, and Brown (2003) presented an argument that high interactivity gives users more control and allows for two-way engagement, which validates the conversations and relationships constructs of the honeycombs theory. The conversations construct is about people connecting over a common issue. Relationships construct speaks to people having conversations with people they know, for instance citizens relating with the government, which each party can identify from the profile details.

An analysis of combined levels of influence indicates that Kenyans on Twitter have the highest level of influence when grouped. This is backed by the groundswell phenomenon literature that posits that the Internet has created space for people to connect, be bold, and draw power from each other (Li & Bernoff, 2008). The study shows have the levels of influence are spread out, which is an indication that there are a variety of voices discussing the Big Four Agenda, and not just the president.

This is in line with existing literature, which shows that levels of influence are determined by looking at a combination of factors: Number of followers, power of
followers, regular updates, update recency, followers to following ratio, and engagement (Bullas, 2019). This also ascertains the importance of the presence and identity constructs by Kietzmann *et al.* (2011). Additionally, Elaluf, Kietzmann, and Saccol (2005) ascertain that there are higher levels of influential interactions when users understand the availability and accessibility of government officials. Government leaders therefore need to put this high level of influence to good use and effectively engage citizens in the country’s development agenda. This can take the format of interpreting government data to citizens for their understanding and to take specific actions.

The author also analyzed the content shared using the hashtag #Big4Agenda, the sentimentality accorded, and how this is linked to digital civic participation in Kenya.

5. 5 Users’ Conversations Discussion as Demonstrated by Tweet Content

This study aimed to understand the users’ conversations on the hashtag #Big4Agenda. The study established that a majority of the tweeps use the hashtag to share general information (30.08 per cent of total 244 tweets analyzed), and others to discuss topics in detail (19.92 per cent). Yet others used it to share event information (7.32 per cent), appreciate leadership (10.16 per cent), and discuss partnerships (8.94 per cent) in the implementation of the Big Four. This is further discussed in detail in the next three subsections under this variable on content.

The study identified that most of the users of the hashtag were using it to send out information to the public. Dubow, Axelle, Christian, and Catriona (2017) posit that digital technologies by their very nature of reaching people across boundaries can help lower citizen participation barriers by making information access easier, faster, and at lower
costs. Kenyans are already extensively using social media to look for information, share information, ask questions, and demand better services from their government. The study observes that Twitter has helped citizens, government and stakeholders to share information without barriers. Through the hashtag, users sent out useful information to their followers. This was also noted in the use of links to share more information than what could be accommodated in the 480 characters per tweet restriction.

Existing literature on the honeycombs theory indicates that Twitter users initiate a relationship or conversations based on common views, tastes, interests, or any other form of affinity that brings them together (Li & Bernoff, 2008). The study notes that through the use of the hashtag #Big4Agenda, users are having conversations on the development agenda; therefore, the conversation construct is highly evident in this study and is one of the key Twitter building blocks.

The study also investigated the content shared, which was established by analyzing the content in depth. The researcher categorized the content into the seven major groups of the content nature: Content discussion, information announcement, partnership, event conversation, leadership appreciation, citizen comment, and irrelevant for anything that was not related to the development agenda.

The study found that most of the tweets were sharing one-way information (30.08%) about the Big Four Agenda implementation. These were majorly tweets announcing the progress of the implementation of the agenda without requiring a response from the public. This category was followed by in-depth issue discussion around the Big Four Agenda at 19.92%. This included people giving ideas on what needs to be done to achieve
the set milestones, case studies of where similar initiatives have worked, and general critique of the Big Four Agenda—including the implementation budget. Citizen comments and response to the content themes by the users followed at 15.45%. These posts majorly included content from Kenyans on Twitter criticizing the approach taken by the government in the implementation of the Big Four Agenda, asking about progress so far, and making complaints where progress has been slow. This is an indication of citizen interest and uptake in conversations on the country’s Big Four Agenda.

In line with the literature, social media applications, built on Web 2.0 technologies offer governments wide-ranging approaches to engage citizens, with an aim of efficient provision of essential services (Jayakanthan, 2011). In addition, Howard (2011) argues that governments should deliver value using social media. Bertot, Jaeger, and Hansen (2012) note that social media has great potential to enhance participation and transform democratic processes. The nature of content shared is a major way to ensure citizens stay informed and engaged. A case in point is the citizens’ responses and comments category, which scored 15.45%, and should have feedback from PSCU on the concerns raised, thus closing the feedback loop. The study findings indicate more of one-way communication than conversations, which is one of the major building blocks of the honeycombs framework. Conversations construct is majorly about how users communicate with other users. People engage to make new friends, to find love, to contribute to a trending topic, or even to engage in political debates (Beirut, 2009). According to the groundswell model, people engage for a variety of reasons depending on their mood, motivation, and objectives. The underlying factor remains the need to connect (Li & Bernoff, 2008) and be part of a community. By the PSCU observation, when conversations on the Big Four
Agenda start, they can be prepared to have conversations with users in real-time; thus, users can engage from a point of knowledge.

This study aimed to understand the feelings and emotions of users towards the content of the hashtag #Big4Agenda. Social media sentimentality can help the PSCU understand the mood portrayed in social media messages (Tran, 2019). This can in turn inform areas of improvement in their public communication on the development agenda. This study established that a majority of the posts attained a neutral sentiment of 75.46%, followed by a positive sentiment at 16.13%, while negative sentiment was 6.48%. Sentimentality is aligned to the levels of trust and levels of standing of others. According to Kietzmann et al. (2011), reputation is essential to how institutions engage with social media. Therefore, it is critical for the PSCU to work on engaging content that increases the positive sentiment and reduces the neutral and negative. A further analysis on the emotions tied to the tweets indicates that most tweets produced neutral emotions at 68.86%, followed by joy emotion at 19.27%, then sadness 3.85%. Other emotions were fear at 0.71%, disgust 0.51%, and anger 0.51%. A total of 6.29% of the posts were unclassified. In depth, this is an indication that most of the people using the hashtag #Big4Agenda are inclined towards the joy emotion, which can be aligned to the content of leadership appreciation and partnership conversations, which were more positive.

While literature does not include reputation as one of the major building blocks for Twitter, this study suggests that it is crucial because organizations—and including the government in the context of civic participation—can use the sentiment analysis to determine and evaluate their delivery on the promises made to citizens, such as the Big Four Agenda. An article published in the Soko Directory in February 2018 echoes the view
that Twitter is indeed a powerful platform for pushing agendas and articulating issues. Given that Kenyans are already using Twitter to hold government accountable, condemn injustice, or comment on various issues as stated by the Soko Directory article, an understanding of the sentiment accorded to the content is crucial and the PSCU should invest in this analysis.

5.6 Users’ Relationships as Demonstrated by Network Actions towards Digital Civic Participation

This study established that digital technologies and specifically social media have created new spaces for citizens to give their views to their leaders without barriers. As noted in this study, Kenyans on Twitter were the top influencer of the hashtag #Big4Agenda, indicating that the Twitter platform has given the citizen an opportunity to have their voices heard in the public space. This is backed by the literature, which noted that social media has to a great extent presented opportunities for governments to interact with their electorate (Dubow, Axelle, Christian, & Catriona, 2017).

The study also noted that the government of Kenya is keen on using Twitter to share information on the country’s current development agenda, the Big Four. This is evidenced by the nature of content shared out using the hashtag #Big4Agenda. The study noted that a majority of the users on the platform shared general information on the Big Four. As established by the study, a majority of the users, 30.08%, use the platform to share information, which was followed by issue discussion at 19.92%. Existing literature also indicates that digital technologies such as Twitter complement civic participation by offering the government alternative spaces to engage citizens, with an aim of efficient provision of essential services (Jayakanthan, 2011; NDI, 2013; Bertot, Jaeger, & Grimes, 2013).
2012; Sika et al., 2014). Literature also shows that citizens are now increasingly expecting governments to engage using social media channels (Omar, Stockdale, & Scheepers, 2014). This was also established in the study in the nature of content coming from citizens, which mainly was questions from citizens on the progress of the implementation of the Big Four Agenda.

The growth of social media has created new avenues for research, especially at the intersection of public affairs and social media use (Terblanche, 2011) and government activities (Waters & Williams, 2011). Notably, there is a rise in studies looking at government civic participation through social media (Perlman, 2012). However, a majority of the existing studies do not focus at local-level citizen participation (Larsson, 2013).

5.7 Conclusions of the Study

Hermida (2010) notes that the Internet has great potential to address democracy deficits, such as low civic participation, by offering networked interactivity. Even though social media channels such as Twitter can improve government communication with the public and enhance public participation, the impact of this technology and how these sites can be leveraged for good governance remains under-researched (Waema & Ofwona, 2011). This study sought to contribute to research on how technology—and particularly Twitter—can be used to enhance governance and democracy, thus reducing the research gap. The study therefore contributed to this area by discovering the existence of digital civic participation in Kenya on the country’s current development agenda dubbed the Big Four Agenda.
Kenya has a great opportunity to adopt the use of digital tools such as social media to enable civic participation in the country’s development agenda. As noted in the literature review and study, Kenyans are already using social media and particularly Twitter to engage with the duty bearers. They are using these platforms to demand transparency and accountability in the use of public resources and better essential services. Kenyans on Twitter and the Kenyan government are already using social media platforms to strengthen citizen participation in democratic processes through sharing information on the development agenda, amplifying the voices of the citizens, and building online communities around issues. This is also backed by existing literature that indicates that digital tools have a positive impact on direct citizen participation in democratic processes. Dubow, Axelle, Christian, and Catriona, (2017) note that digital tools can transform democratic processes by enabling higher civic participation in decision making and by also reaching and mobilizing more people who are left out by traditional methods that lead to lower participation.

The study identified gaps in quantifying the number of citizens mobilized using Twitter, and a direct link between essential public services and digital civic participation. There is therefore a need for more scientific evidence on levels of civic participation on digital technologies such as Twitter.

**5.8 Recommendations for practice**

The national government, and particularly the PSCU which is mandated with public communication, should invest in training and sensitizing all government officials to take up the use of digital tools—and particularly Twitter—to have two-way conversations on the country’s development agenda. The PSCU can take advantage of the
presence of Kenyans on Twitter to inform and educate the citizenry on the projects and the agenda that the government is pursuing. PSCU can also use this platform to collect citizens’ opinions and suggestions of action that the government can take to ensure successful implementation of the Big Four Agenda to the benefit of all Kenyans. Howard (2011) presents an argument that governments should by now be delivering value using social media. Bertot, Jaeger, and Hansen (2012) note that social media has great potential to enhance participation and transform democratic processes. The more the government uses Twitter, the more it is able to involve the public in conversations on issues of national interest, thus enabling civic participation.

The PSCU should come up with a way to curate and analyze comments. Twitter users expect institutions to listen and engage them, and not just broadcast. It is described as the “simplest, most powerful social tool that can be used” (Li & Bernoff, 2008).

The PSCU and other public communication stakeholders need to adopt the use of links to share more information. According to the study, there was notably low use of links to share details of the Twitter conversation. This is a missed opportunity that could go a long way to increase civic participation by ensuring users have access to more information on the issues being discussed.

5.9 Limitations of the study

The tool used to harvest the data, Crimson Hexagon API, does not give data on likes, which had been include in the conceptual framework as one of the indicators of network actions. This limited the study’s finding of network actions taken by users to only original tweets, replies, mentions and retweets.
Historic tweets are expensive to obtain using available social media tools. Tools such as Hashtagify charge $400-600 to obtain the tweets. The university tool NODE Excel can only obtain data going back one week, which limits researchers’ ability to access data at affordable rates.

A significant number of users of the hashtag #Big4Agenda do not disclose their geographic location or gender, which limits study findings. This is supported by Twitter’s privacy settings and demographics profile unavailability, where some users do not disclose details such as location or use pseudonyms; it is therefore difficult to study the characteristics of the users. Additionally, for users who give their real identities, name and location, they expect privacy in how their data is handled (Kietzmann & Angell, 2010). Therefore, this study handled the disclosed identities confidentially and only for the purpose of this study. However, using the analysis tools, and narrowing to a hashtag, the study managed to get insights on the content, sentimentality, actions taken, and the key influencers and their level of influence.

Kenyans on Twitter on numerous occasions influence Twitter trends, where we have seen other hashtags related to governance trend, such as the #Stateofthenation, which is not specific to Kenya and therefore not an ideal unit to study because of the geographic focus. However, the study identified other trending hashtags—a delimitation in the sense that civic participation could be happening more through other hashtags that trend for a week then go quiet. But the advantage of the Big Four Agenda is that it is a long-term development plan, so the hashtag is used consistently.
This study also identified language as a delimitation, especially in instances where users post content in *Sheng* (Kenyan slang) or local dialects. This limited analysis of content themes and issues discussed through the hashtag if the language used was not English, which led to coding such posts as irrelevant.

### 5.10 Areas for Further Research

Waema and Ofwona (2011) noted that there is still little research on the impact of digital civic participation, even with the appreciation that social media channels such as Twitter can improve government communication with the public and enhance public participation. Therefore, more research needs to be conducted on the impact of digital civic participation and measure the actual link between digital civic participation and improvement in service delivery by the government. This study did not particularly look at a specific issue through to feedback and action by the government, but focused on the existing online community on the country’s development agenda, the Big Four.

This study did not factor in inclusivity, creating a gap for further research that looks at how digital tools such as Twitter can enable inclusivity of different demographics to ensure digital civic participation is inclusive of all publics.
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Nairobi, Kenya


APPENDIX I: IRB LETTER

TO WHOM IT MAY CONCERN.

23rd April, 2019

Dear Sir/Madam,

REF: PERMISSION TO CONDUCT RESEARCH – KABUE JOYCE GATHIGIA
STUDENT ID. NO. 653442

The bearer of this letter is a student of United States International University (USIU) -Africa pursuing a Master of Arts in Communication Studies.

As part of the program, the student is required to undertake a dissertation on “Twittercracy: An Analysis of the Twitter Hashtag #BigAgenda Participants’ Influence and Network-Actions’ Contribution to Digital Civic Participation in Kenya” which requires her to collect data.

Please note that information provided will be treated with utmost confidentiality and will only be used for academic purposes.

Kindly assist the student get the appropriate data and should you have any queries contact the undersigned.

Yours Sincerely,

Prof. Amos Njuguna,
Dean – School of Graduate Studies, Research and Extension
Tel: 730 116 442
Email: annjuguna@usi.ac.ke
APPENDIX II: NACOSTI LETTER

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Ref No: NACOSTI/P/19/26344/29975

Joyce Gatfibina Kabue
United States International University – Africa (USIU-A)
P.O. Box 14634 – 00800
NAIROBI

RF: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on “Twittercracy: An analysis of the twitter hashtag broken agenda participants’ influence and network-actions’ contribution to digital civic participation in Kenya” I am pleased to inform you that you have been authorized to undertake research in Nairobi County for the period ending 15th May, 2020.

You are advised to report to the County Commissioner and the County Director of Education, Nairobi County before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit a copy of the final research report to the Commission within one year of completion. The soft copy of the same should be submitted through the Online Research Information System.

DR. MOSES RUGEJE, PhD, OGW
DIRECTOR GENERAL/CEO

Copy to:

The County Commissioner
Nairobi County.

The County Director of Education
Nairobi County.
# APPENDIX III: TOP INFLUENCERS

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APPENDIX IV: RESEARCH INSTRUMENT - CODE BOOK

AN ANALYSIS OF TWITTER DIGITAL CIVIC PARTICIPATION IN KENYA AS DEMONSTRATED BY THE HASHTAG #BIG4AGENDA USERS’ IDENTITY, INFLUENCE, CONVERSATIONS AND RELATIONSHIPS.

Section 1: (RQ1) Users identity, (IV) adapted from presence, identity constructs.

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Coder 1</th>
<th>Coder 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Users of the hashtag number</td>
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<tr>
<td>Location</td>
<td></td>
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<tr>
<td>Gender</td>
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Section 2: (RQ2) Users influence, (IV) Adapted from presence, identity constructs.

<table>
<thead>
<tr>
<th>Indicators</th>
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<tbody>
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<td>Top influencers</td>
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<td>Levels of influence</td>
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Section 3: (RQ3) Users conversations: Tweets content, content themes, and sentimentality (IV).

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Coder 1 (Peter)</th>
<th>Coder 2 (Joyce)</th>
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</thead>
<tbody>
<tr>
<td>Information e.g. food security, housing, manufacturing and healthcare</td>
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<td></td>
</tr>
<tr>
<td>Type of content</td>
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<tr>
<td>Sentimentality: Positive, negative or neutral</td>
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</table>
Section 4. (RQ4) Users relationships as demonstrated by network actions.

<table>
<thead>
<tr>
<th>Indicators</th>
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<th>Coder 2 (Joyce)</th>
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<tbody>
<tr>
<td>Original tweets</td>
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<td>Replies</td>
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<td>Mentions</td>
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<tr>
<td>Tweets with links</td>
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<tr>
<td>Other hashtags used together with #Big4Agenda</td>
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