

# Democracy in Engineering Organizations. A Case Study of Kenya

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**Citation:** Ndolo A. (2020)  
Democracy in Engineering  
Organizations. A Case Study of  
Kenya Open Science Journal 5(4)

**Received:** 4<sup>th</sup> July 2020

**Accepted:** 17<sup>th</sup> September 2020

**Published:** 9<sup>th</sup> October 2020

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**Funding:** The author received no specific funding for this work

**Competing Interests:** The author has declared that no competing interests exist.

## Abstract:

In December 2019, the world was engulfed in coronavirus/COVID19 pandemic that spread like wildfire after emerging from Wuhan City, China. Naturally, this disrupted world's order and how organizations, including workplaces, are managed. In this short communication, we present what and how the Institution of Engineers of Kenya conducted their election campaigns and the election itself. The elections were held electronically. Number of voters' turnout shows some discrepancies as the total votes for the presidential post do not match that of the ordinary council member positions. It is therefore important to improve on transparency at the institution. We recommend that future election should be handled by independent scrutineers. Any sitting council should not directly handle any election material. This will enhance accountability, transparency, trust and enhance service delivery to members.

**Keywords:** Democracy, Management, Engineering society, Kenya

## Introduction

For more than eight months now or so the world has been ravaged by novel coronavirus otherwise called SARS-COV-2. Researchers strongly believe that the virus originated from a bat and hopped on to another animal like pangolin before jumping onto human beings [1]. The outbreak's origin is believed to be a market in Wuhan City, China. World Health Organisation has since named the disease COVID19 and not Wuhan virus as the earlier reports stated [2]. This is in order to avoid discrimination against the people of Chinese origin. COVID19 pandemic made many countries Kenya included, to come up with measures to curb its spread [4]. The first case of coronavirus in Kenya was reported on 12th

March 2020 [12] and the first fatality was an engineer registered by Engineers Board of Kenya (EBK) under Engineers Act 2011 [3]. Engineering is one of the most hit sectors in Kenya. Engineering practice in Kenya is regulated by EBK while members welfare is cared for by the Institution of Engineers of Kenya (IEK). IEK draws all its members from EBK who is the regulator of engineering practice and an accreditor of engineering education in consultation with Commission for University Education under [15]. The leaders of IEK are elected every two years as per its constitution [5]. The leaders form a management council. The council is made up of the president, two vice presidents, honorary treasurer, honorary secretary and six ordinary council members. The president sits in the engineers' regulatory board as per [3]. Elections for the period 2020–2022 were slotted for 23rd March, but the campaigns were disrupted by the pandemic. To avoid crisis at the board and continuity at IEK, in a special general meeting member opted for an e-voting system. Section 5 of the institution's constitution describes elections and transfer of membership. It is clear how one can transfer from one membership class to another. For example, for a university graduate to join the institution he/she must be endorsed by a corporate member of good standing in IEK. Good standing here means that the member has no annual subscription arrears and disciplinary action on them. The procedure to transfer to corporate status is also very clear. However, the term election is not elaborated. In Section 9, how to constitute the management and council is explained. The eligibility of the officeholders is described and office term is also mentioned. But the office term is not described in detail. At the same time, the election procedure is mentioned briefly without giving clear description. This contravenes [11] which requires all professional societies in Kenya to have a clear and fair electoral guidelines and procedure. The method of election is given but the specifics are not. The nomination of members for election is done latest by 21st January of every election year the incumbent honorary secretary. Nomination process is also not independent as the scrutineers are not independent person or body but members of IEK and the incumbent office holders are involved in the process. For instance, the incumbent honorary secretary was vying for the post of the president. The nomination process is vague or silent on gender parity and other sex minority. It is also worth noting that there is no policy on how nominated candidates are supposed to do carry out their campaigns. From here we can categorically say that section 5 and 9 of IEK constitution have numerous ambiguities on election of any given council. With pandemic in place online campaign tools described in the next section were employed by the candidates. These tools enabled them explain their manifestos and visions to more than seven thousand IEK members and the Kenya population.

## Campaigns and elections

Due to public health rules and regulations set by the Government of Kenya (GoK) which included social distancing, campaigns took place using digital technology applications such as Zoom cloud, YouTube and e-flyers/posters shared on Facebook, telegram, WhatsApp and Twitter. This enabled candidates "sell" their manifestos and visions to members who are spread all over the country and the world. Wikipedia defines manifesto as "a published declaration of the intentions, motives, or views of the issuer" [13] while the issuer can be an

individual, group, political party or government [14]. The term "sell" here means to communicate or share the content of their manifesto. Figure 1 shows statistical data how the campaign tools applied by the candidates while manifestoing. Thus, engineers of Kenya held their election 10 days after the GoK declared the first case of Coronavirus in the country [12], and eight days after the His Excellency President Uhuru Kenyatta ordered the closure of all learning institutions.

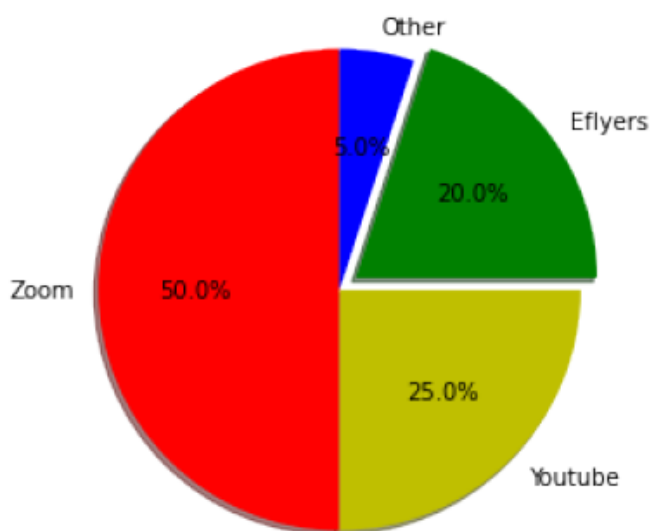


Figure 1. Election campaign tools

The IEK presidential aspirants included: Ms. Jane Mutulili, a civil engineer and founder of Le Femme Engineering Services Ltd, Mr. Peter Oloo Okaka, a mechanical Engineer–cum Kenyatta University Lecturer in the department of mechanical engineering, Mr. Howard Ashiundu M'Mayi, a civil engineer and a director at Kenha and Mr. Nathaniel Matalanga, a structural engineer and owner of Ngasi Consulting Engineering. While the vice president posts attracted experienced engineers as well like Ms. Lucy Mutinda, Mr. Abel Rotich, Mr. Anthony Sang and Mr. Daniel Ng'ang'a. For the second vice president, we had only two contenders; Mr. Erick Ohaga and Ms. Emelda Odhiambo. The position of Honorary Secretary was lucrative enough to attract candidacy of Ms. Margaret Waruguru Ogai, Mr. Stephen Auma Wasinda and Mr. Paul Kioko Kimali. The other most important post in the council is treasurer one. This was a fight between Ms. Careen Oyolla and Mr. Fanuel Mwashigadi. The six slots for Ordinary Council Membership attracted 21 contenders as shown in the table 1.

## Election result

The results of the presidential elections are in figure 2 where Matalanga garnered 595 votes, Mr. M'Mayi got 294 votes, Mr. Okaka managed only 42 votes. The only female candidate here got away with 241 votes. The gender representation at this level of male-to-female was 3:1 shown in figure 3. During 2019 census in Kenya reported female being more than 50% of the total population. At the same time, the census reported over one thousand five hundred intersex [6], [7], [8] living within the country. However, the institution's

constitution did not call these minority group amongst engineers to forward their papers for nominations. As such, there is no representation of non-binary gender and intersex persons in all the positions not only at IEK but also in other professional societies like Law Society of Kenya [9]. There is no communication that would have encouraged LGBTQ+ and intersex group to present themselves for elective posts in societies like IEK and LSK. The results for the post of the first vice president (VP) included; Ms. Lucy Wanjiku got 562 votes, Mr. Abel Rotich got 313, Mr. Anthony Sang got 138 and Mr. Daniel Ng'ang'a managed 132 votes as represented in figure 4. Gender representation is same as in the case text in figure 3. For the second VP as represented in figure 5, Mr. Erick Ohaga got 765 votes and Ms. Emelda Odhiambo garnered 397.

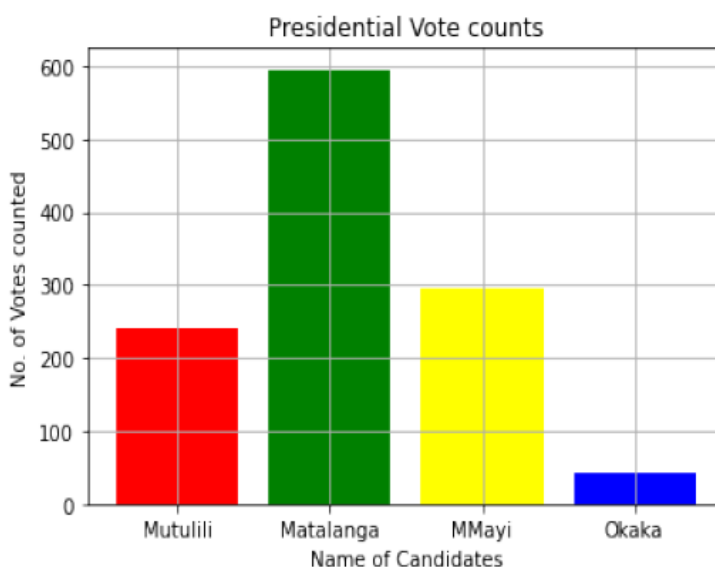


Figure 2. Presidential votes

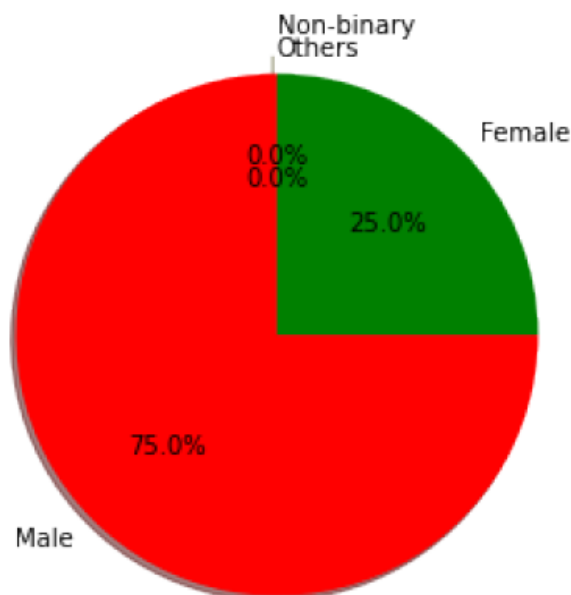


Figure 3: Presidential candidate gender

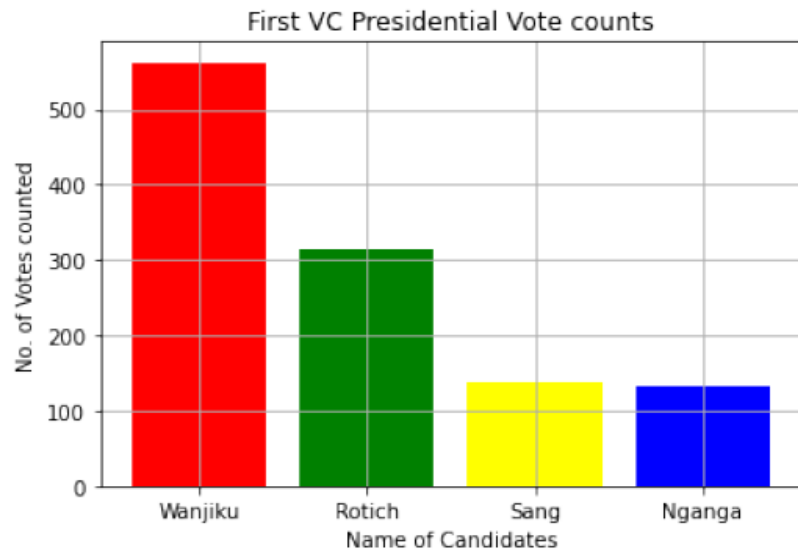


Figure 4: First vice presidential votes

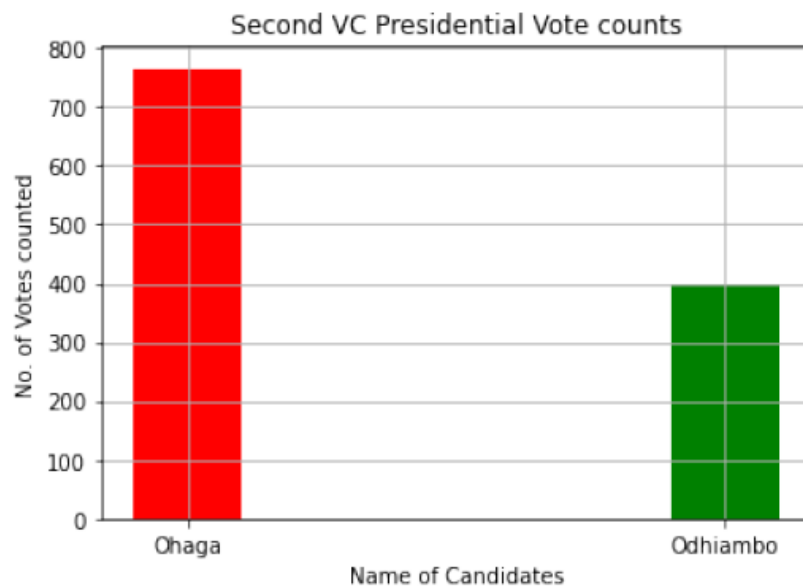


Figure 5: Second vice presidential votes

For the position of the honorary secretary voting was 759 votes for Ms. Ogai, 231 vote for Mr. Auma and 174 votes for Mr. Kioko. While the that of the honorary treasurer was 655 votes for Ms. Oyolla and 510 votes for Mr. Mwashigadi. For comparison check figures 6 and 7.

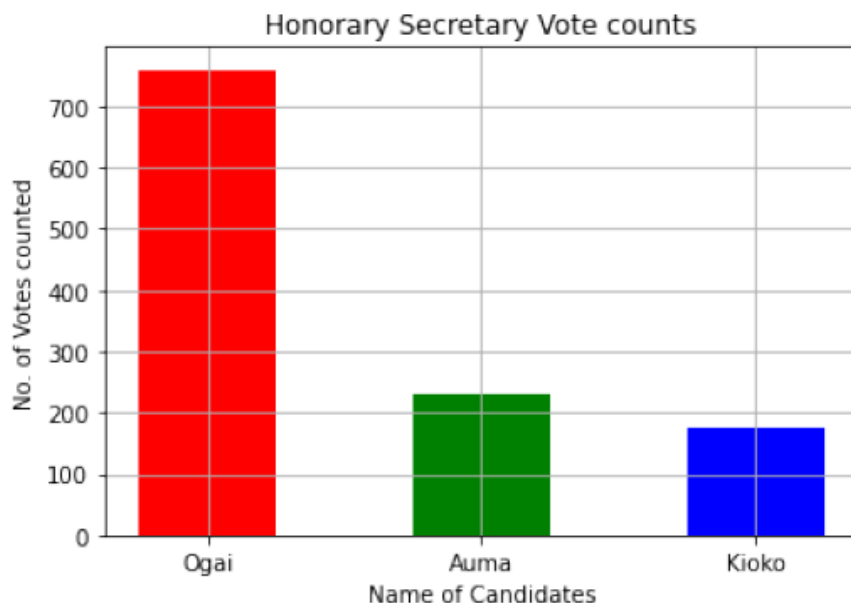


Figure 6: Honorary secretary votes

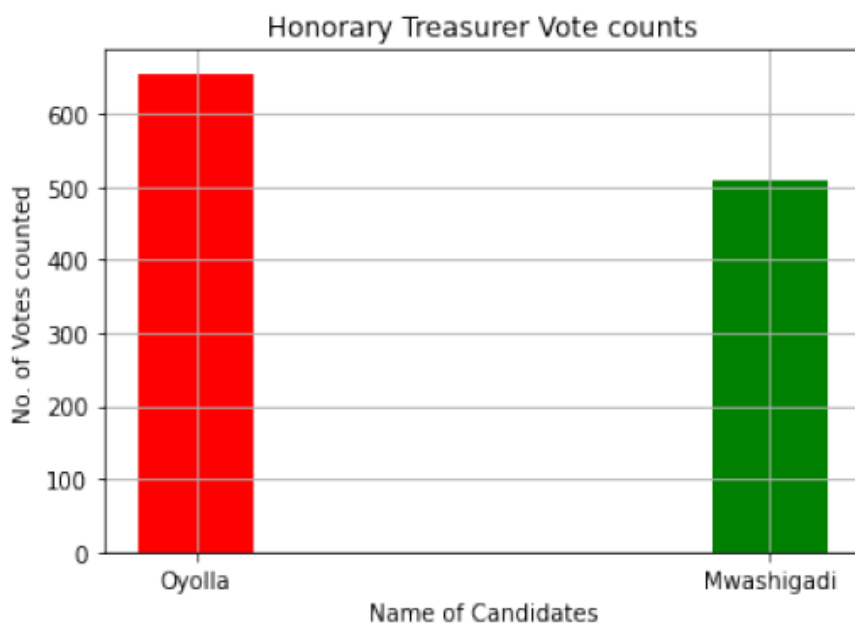


Figure 7: Honorary treasurer votes

The position of ordinary council membership attracted the following candidates whose votes are as shown in table I. Table II shows the total votes cast for each position. The gender diversity for the position of the ordinary council member included only three female against 18 men and summarized in figure 8. Figure 9 show the average of the votes that were cast with their margin errors for each competitive position

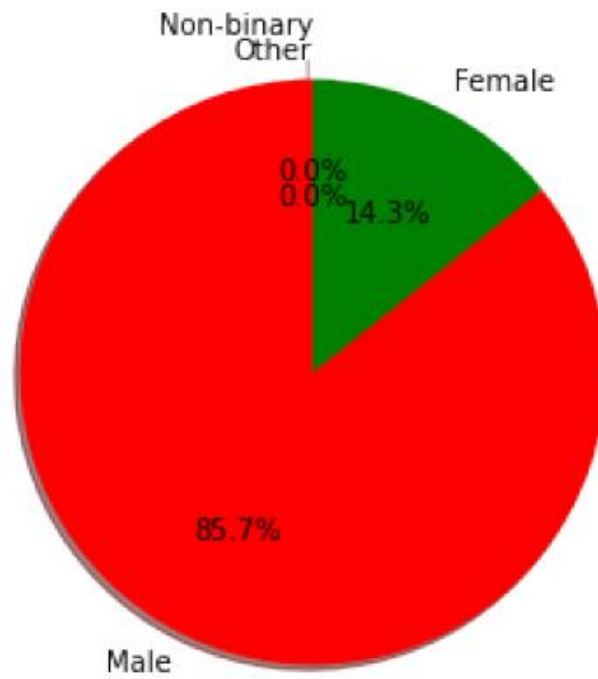


Figure 8: Ordinary member candidates' gender

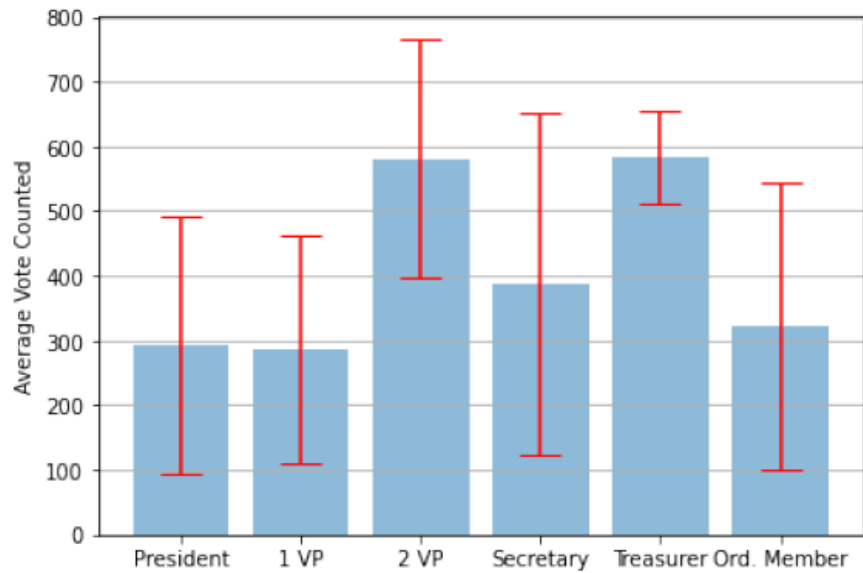


Figure 9: Averages and error bars for each position

**TABLE I**  
**VOTES FOR ORDINARY COUNCIL MEMBER CANDIDATES**

No.	Name of Candidates	Votes garnered
1	Shammah Kiteme	812
2	Doreen Kiende Kirimi	791
3	Christine Adongo Ogut	685
4	Grace Muthoni Kagundu	583
5	Justus Aufridus Otwani	385
6	Godfrey Marambe Momanyi	380
7	Clarence Karot Ouma	370
8	Kahoro Wachira	360
9	Collins Kiptoo Changole	321
10	Stanley Simiyu Sitati	313
11	Stanley Kalile Musau	309
12	Samuel Njagi Charagu	239
13	Joshua Muema Nyamai	216
14	Sufyan Yusuf Somoebwana	204
15	Robert Kipkirui Korir	204
16	David Mwangi Ngokonyo	140
17	Gideon Nzioki Mutala	130
18	Derek Wangaki Okava	118
19	Nelson Kipkemoi Bosuben	104
20	Titus Elijah Munene Nyaga	94
21	Dereck Musyimi Mutungi	17

**TABLE II**  
**TOTAL VOTES PER POSITION**

No.	Position	Total Votes counted
1	President	1,172
2	First Vice President	1,145
3	Second Vice President	1,162
4	Honorary Secretary	1,164
5	Honorary Treasurer	1,165
6	Ordinary Council Member	6,875



## Conclusions

Engineering sector in Kenya is a regulated. The regulator is the Engineers Board of Kenya the Institution of Engineers of Kenya, a professional society which is mandated to improve the general well-being of its members. Board's commissioners are appointed by the Cabinet Secretary in the GoK Ministry of Public Works. As Professional society, IEK is registered in the country under Society Act CAP 108 [11]. The CAP requires all members a society to participate in the election as voters. During this election, other categories of IEK members like graduate engineers were excluded from the voters' list. The only members who voted are Fellow Members, Corporate Members and Associates. This seems to have been the trend in the previous elections contrary to CAP 108. The voter turn-out shown in table II shows discrepancy if not errors. For example, the 1172 voted for the presidential candidates and 1145 on average for each of the six ordinary council members' seat. These discrepancies beg the question of whether the election was one-man one-vote principle. With a secure electronic voting platform, the voter turn out should have been constant if they voted for all position. There is need to improve on the gender representation in engineering leadership. Elected women constitute 14.3% only. This is very small in a society with more than 7,000 members. EBK membership is higher as graduate engineers membership only is more than 17,000 as per EBK website. It is also important to give opportunities the minority group of LGBTQ+ and the Intersex persons who are engineers. We also recommend that election should be handled by independent scrutineers and/or organizations. During future elections a council should not directly handle any election materials or be involved in the nomination process. This will enhance accountability trust, transparency and improve on service delivery to members. These measures might attract EBK members who have not joined the Institution.

## Acknowledgment

We thank all the doctors, nurses and health workers in the forefront for their efforts against COVID-19. We dedicate this paper to the late Eng. Maurice Namiimba, who was Kenya's first COVID19 fatality and the late Prof.(Eng.) Maurice Kizito Wafula Mang'oli who also succumbed to the virus in July.

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