The European Journal of Development Research
https://doi.org/10.1057/s41287-020-00353-1

SPECIAL ISSUE ARTICLE

Malawi at the Crossroads: Does the Fear of Contracting COVID-19 Affect the Propensity to Vote?

Gowokani Chijere Chirwa[1] · **Boniface Dulani**[2] · **Lonjezo Sithole**[1] · **Joseph J. Chunga**[3,4] · **Witness Alfonso**[4] · **John Tengatenga**[4]

Accepted: 4 December 2020

Abstract

The new coronavirus disease (COVID-19) has paralysed many sectors of human life, including economic, social-cultural and political processes. In the political arena, several countries have postponed elections due to the COVID-19 pandemic. Other countries, including Malawi, went ahead with their planned elections. Malawi held a presidential election at a time when the number of COVID-19 cases was increasing rapidly. In this paper, we assess the effect of the perceived risk of catching COVID-19 on willingness to vote in the Malawi presidential election that was held on 23 June 2020. Turn out in this election was ten percentage points lower than in the general elections that were held a year earlier. The paper draws on a nationally representative survey of adult Malawians ($n = 1155$). In our main analysis, we use instrumental variables to account for potential endogeneity. We find that nearly two thirds of Malawians thought that they were likely to catch COVID-19 at some point. Notwithstanding the COVID-19 risk, 86% of the country's citizens were willing to vote. Our analysis shows that an individual's perceived risk of catching COVID-19 is associated with a lower likelihood of voting ($\beta = -0.096$; $p < 0.05$). This suggests that voter turnout in Malawi's fresh presidential election may have been highly affected by the perceived risk of catching COVID-19. The policy implication is that instituting and enforcing primary preventive measures may help reduce the perceived risk of catching COVID-19 and mitigate voter apathy.

Keywords Corona virus · COVID-19 · Voting · Instrument variable · Risk · Malawi

✉ Gowokani Chijere Chirwa
gowokani@gmail.com; gchirwa@cc.ac.mw

[1] Chancellor College, Economics Department, University of Malawi, Zomba, Malawi

[2] Chancellor College, Political and Administrative Studies Department, University of Malawi, Zomba, Malawi

[3] Center for Social Research, University of Malawi, Zomba, Malawi

[4] Institute of Public Opinion and Research, Zomba, Malawi

Published online: 04 January 2021

Resumé
La nouvelle maladie à coronavirus (COVID-19) a paralysé de nombreux secteurs de la vie humaine, y compris au niveau économique, socioculturel et politique. Au niveau politique, plusieurs pays ont reporté des élections en raison de la pandémie de COVID-19. D'autres pays, comme le Malawi, ont maintenu les élections qui étaient prévues. Le Malawi a organisé l'élection présidentielle au moment où le nombre de cas de COVID-19 augmentait rapidement. Dans cet article, nous évaluons l'effet que la perception du risque de contracter la COVID-19 a eu sur la volonté de se rendre aux urnes à l'occasion de l'élection présidentielle qui s'est tenue le 23 juin 2020 au Malawi. Le taux de participation à cette élection était inférieur de dix points de pourcentage à celui des élections générales qui ont eu lieu un an plus tôt. L'étude s'appuie sur une enquête nationale représentative des personnes adultes du Malawi ($n = 1155$). Dans notre analyse principale, nous utilisons des variables instrumentales pour tenir compte d'un potentiel biais d'endogénéité. Nous constatons que près de deux tiers des Malawites pensaient qu'ils étaient susceptibles de contracter la COVID-19 à un moment ou à un autre. En dépit du risque de contracter la COVID-19, 86% des citoyens et citoyennes du pays étaient prêt.es à voter. Notre analyse montre que la perception du risque qu'a une personne de contracter la COVID-19 est associée à une probabilité plus faible de se render aux urnes ($\beta = -0.096$; $p < 0.05$). Cela suggère que la participation électorale à la nouvelle élection présidentielle au Malawi a pu être fortement impactée par la perception du risque de contracter la COVID-19. En terme de politique, cela signifie que la mise en place et l'application de mesures de prévention primaire peuvent aider à réduire la perception du risque de contracter la COVID-19 et ainsi permettre d'atténuer l'apathie des électeurs.

JEL Classification I120 · I180

Introduction and Background

Credible elections—that is to say, elections which reflect the free will of the people, inclusiveness, transparency, accountability and competitiveness (Van Weelden 2013; Van Zuydam and Hendriks 2018)—are an important part of putting leaders in power (Lappin 2009; Abdullah 2019). Malawi held tripartite elections to choose members of parliament, local government councillors and a president in May 2019, where turnout was 74.44%. In the presidential race, the candidate for the then ruling Democratic Progressive Party (DPP), Peter Mutharika, was declared the winner with a plurality of 38.57% of the vote (Malawi Electoral Commission 2019) beating Lazarus Chakwera of the Malawi Congress Party (MCP) and Saulos Chilima of the UTM party. However, Chakwera (who came second in the election) and Chilima (third) challenged Mutharika's victory in court, citing massive irregularities in the management of the elections (Tostensen 2019; Dionne and Dulani 2020) and that this rendered the elections not credible. On 3 February 2020, following a seven-month trial, a panel of High Court judges sitting as a Constitutional Court ruled in favour of Chakwera and Chilima and nullified the 2019 presidential election. The

court subsequently ordered a fresh poll to be held within 150 days from the date of the ruling (Dionne and Dulani 2020). The High Court decision was upheld by the Malawi Supreme Court in a ruling delivered on 8 May 2020 (Masina 2020). The Malawi Electoral Commission then set 23 June 2020 as the date for the fresh presidential election.

While Malawi was preparing to hold the fresh presidential election, the coronavirus disease 2019 (COVID-19) (World Health Organization 2020) hit the country. The first COVID-19 positive cases in Malawi were confirmed on 2 April 2020. Even before these cases were registered, the Malawi government had already declared a state of national disaster on 20 March 2020. Following the declaration, the government introduced several measures aimed at curbing the spread of the virus. The measures included compulsory screening of all travellers coming into the country at the port of entry, a ban on all travellers from highly affected countries, restrictions on public gatherings to a maximum of 100 people and closure of all schools. Additionally, the government implored Malawians to practice social distancing and other preventative measures such as regular handwashing with soap, avoiding handshakes, touching of eyes, nose and mouths and covering one's mouth and nose with tissue or sleeve or flexed elbow when coughing or sneezing. Individuals who showed symptoms of COVID-19 were encouraged to seek medical care without delay.

Despite the introduction of the preventative measures, Malawi still recorded her first COVID-19 cases on 2 April 2020 when three people in the country's capital, Lilongwe, tested positive. In the weeks that followed, additional cases were recorded, compelling the government to attempt the introduction of a national lockdown in mid-May 2020. However, this attempt was halted by a court injunction obtained by civil society organisations. By the end of July 2020, the number of confirmed COVID-19 cases in Malawi had increased to 3302, with a total of 76 deaths (Public Health Institute of Malawi 2020b).

Against the background of rising COVID-19 cases, Malawi still went to the polls to choose a new president in the court sanctioned fresh presidential polls on 23 June, 2020. As the number of COVID-19 cases increased, there were calls from various quarters of the country asking for a postponement of the elections (Brown and Chinele 2020; Cooper 2020; Mohamed 2020). Among those leading calls to postpone the elections were public health experts and the DPP administration officials led by President Peter Mutharika. Both the health experts and Mutharika reasoned that holding elections would undercut the battle against coronavirus.

The arguments for postponing the elections were consistent with expert advice which suggested that the highly infectious nature of COVID-19 (Jain and Yuan 2020; Yang et al. 2020) implied that people were at a higher risk of contracting the virus if they participated in election campaigns and went out to vote on election day. The emergence of the disease and the requirement to vote thus put Malawians at the crossroads: whether to risk increasing the possibility of contracting the coronavirus by attending campaign meetings and to turning up to cast their votes or stay safe by avoiding the election processes altogether. This paper sought to investigate the association between COVID-19 and the likelihood of voting in the 23 June 2020 Malawi election. Even though the case fatality in Malawi was low at the time of the elections (848 confirmed cases and 11 deaths by 23 June 2020) [Public Health Institute of

Malawi 2020a]), there were public health concerns that the local transmissions of the virus in the country would exponentially rise due to the large public gatherings during the campaign period and on the election day itself. This study is essential because it links political economy and public health in Malawi as the country navigates towards the realisation of the African Agenda 2063 (African Union 2020) on achieving functional democracies and the Sustainable Development Goals (SDGs) on developed political institutions, governance and health (UNDP 2015).

Health Pandemics and Politics

The outbreak of the COVID-19 pandemic has affected politics in unprecedented ways. Previous studies in the United States have found that by negatively impacting welfare at the individual and household levels, health pandemics and natural disasters can increase grievances against incumbents and reduce support for them in elections (Achen and Bartel 2004). However, not all disasters appear to sway votes against incumbents. For example, there is emerging evidence suggesting that lockdown measures in Western Europe have raised vote intentions for the party of the incumbent as well as trust in government and satisfaction with democracy (Bol et al. 2020). Indeed, natural disasters can provide incumbents with an opportunity and justification to distribute aid, thereby drumming up their electoral support. During the campaign period for the annulled 2019 Malawi general elections, for example, the DPP was accused of using relief aid for victims of the Cyclone Idai disaster to gain voter support.

Furthermore, the pandemic has the potential to affect electoral processes (James 2020; Kavanagh and Singh 2020), good governance and, more crucially, development outcomes. Apart from influencing support levels for incumbents, health pandemics can also have a more direct political impact by reducing voter turnout (Rambaud 2020). Even where the fatality rates due to the pandemics are low, as was the case in Malawi on election day, individuals who are sick and those looking after them, would naturally be unable to go to vote. Further, voters may be afraid to attend campaign rallies and go to vote, viewing polling stations as areas of possible infection.

It is not surprising then, that since the outbreak of the COVID-19 pandemic, countries have had to navigate the balance between the risk of holding an election through voting in-person with the associated health hazard of bringing people together in a confined space, and the impact postponing an election would have on upholding of democratic standards (International IDEA 2020). Up to 14 countries across Africa, including Ethiopia and Uganda, took the unprecedented decision to indefinitely postpone elections due to the COVID-19 pandemic (Mohamed 2020). Other African countries such as Burundi, Guinea, Mali, Tanzania and Malawi, went ahead with their elections as scheduled. Apart from the increased likelihood of the spread of COVID-19 during an election campaign period, the COVID-19 pandemic has a deleterious impact on economies in short to long term (Ataguba 2020; MCCI 2020).

The impact of the COVID-19 pandemic on economies, politics, governance and the norms that weave the social fabric is still a subject of exploration. Empirical work on these themes remains scanty but rapidly growing. One area that remains unexplored in this regard is how the pandemic has affected voter turnout and conduct of elections, for the countries that resolved to go ahead with their planned elections amidst the spreading virus. Landman and Splendore (2020) argue that the pandemic poses a risk on the election by undermining turnout, among other aspects of the electoral process. However, this has not been tested using public perception data as several countries have taken the decision to postpone elections as a result of the pandemic.

Previous studies that focus on other health pandemics have established that public health emergencies have a bearing on political behaviour, electoral outcomes, and governance in general (International IDEA 2020). Civic obligations such as voting, for example, are difficult for people to perform during outbreaks of infectious diseases. Urbatsch (2017), notes that between 1995 and 2015, low voter turnout in elections was associated with regional episodes of influenza outbreaks in Finland and the United States. In two recent elections held in Guinea and Mali during the COVID-19 pandemic, voter turnout went down relative to previous elections. In Guinea's case, turnout in legislative elections held in March 2020 alongside a plebiscite on constitutional reforms, provisional turnout was estimated at 58%, much lower compared to the 68.4% turnout during the 2015 presidential elections (International IDEA 2020). In Mali, voter turnout in the first and second rounds of parliamentary elections held in March and April 2020 hovered in the region of 35% compared to roughly 43% in the previous parliamentary elections held in 2013 (International IDEA 2020). In the Malawi case, turnout in the 23 June 2020 elections was 65%, which is 9 percentage points lower than the 74% turnout recorded in the annulled 2019 election. These anecdotes are by no means conclusive evidence of a cause-and-effect relationship between voter turnout and the coronavirus pandemic. There are other possible confounding factors at play, such as an opposition boycott of elections in the case of Guinea and an ongoing terrorist insurgency since 2013 in Mali's case. Nevertheless, the decrease in voter turnout is still highly suggestive of a potential link, especially in the Mali case since the previous elections were held while the country was still fighting the terrorist insurgency and yet the turnout was higher than in the 2020 elections.

A strand of literature much closer to this paper (originating in higher-income countries) examines perceptions of risk among different demographics within an electorate and preferences of voters on voting methods. This literature has burgeoned with the advent of coronavirus. Using county-level state-wide data in Wisconsin at the onset of the coronavirus pandemic, a study found wide disparities in preferences for voting methods such as in-person voting and absentee voting between Democrats and Republicans (Lockhart et al. 2020). The study further established that the choices depended on the perception of risk of coronavirus infection among the voters. There is no study yet that examines the link between perception of risk and the propensity to vote during this pandemic in a developing country context where voting is typically in-person. The present study aims to advance the literature in this direction.

It is evident that COVID-19 is an unprecedented humanitarian crisis requiring urgent and collective efforts to mitigate its impact. Among other effects, the pandemic impinges on the attainment of development goals, African Agenda 2063 and the SDGs in many developing countries, including Malawi. High infection rates of COVID-19 in such countries as Malawi, can put extra pressure on hospitals that are already strained by years of under-investment. The virus threatens to reverse years of progress that countries such as Malawi have made towards good health for all in line with the SDG 3. Poor health occasioned by the pandemic may further reduce the productivity of labour, thereby affecting one of the essential factors for economic growth (Todaro and Smith 2012). Since people may not have enough resources, economic inequality may be exacerbated, which in turn may negatively affect efforts to tackle SDG 10 (UNDP 2018). This study, therefore, makes an important contribution to the literature on the subject by using a quasi-experimental analysis to delineate the causal link between the COVID-19 pandemic and a crucial aspect of political governance: electoral outcomes. To the authors' knowledge, this is the first study to be conducted in a low-income country setting since the advent of the COVID-19 pandemic.

Materials and Methods

Data

The paper used data from the Institute of Public Opinion and Research (IPOR) Pre-election and Governance Survey, which was conducted over a ten-day period between May and June 2020. The IPOR Pre-election and Governance Survey was implemented with financial support from the Open Society Initiative for Southern Africa (OSISA). This was a national study which was conducted in 26 districts across the three regions of Malawi, covering both rural and urban areas. The sample was stratified at two levels: region and residency (rural and urban). The sample was then allocated at these levels in direct proportion to the share of the population at each of the two levels. Because the sample allocation did not take into consideration districts, the selection process meant that it was not automatic that all districts will be represented in the final sample, with especially those districts with small populations likely to miss out. As a result, two districts, Likoma and Mwanza, were not represented in the final selected sample. It is important to point out that since we do not make any analysis of the results at levels below the regional level, the omission of the two districts does not in any way bias our results or limit their generalisability at the regional and national levels.

The survey was conducted in a face to face format with randomly selected respondents in the language of their choice: Chichewa, Tumbuka or English, with a multi-stage, stratified random sample drawn from the 2018 Malawi Population and Housing Census sampling frame provided by the National Statistical Office (NSO). Among other things, the survey aimed at contributing to the national discourse on COVID-19 and the fresh presidential elections.

Empirical Strategy

Both parametric and non-parametric methods were employed in the data analysis. With respect to non-parametric methods, graphs, bar charts and univariate and bivariate analyses were performed. Assuming that the perceived risk of catching COVID-19 and voting are related linearly, the association between perceived risk of catching COVID-19 and voting can be expressed as follows:

$$Y_i = \propto_i + \theta RISK_i + X_i^{'}\beta + \varepsilon_{i,} \tag{1}$$

where Y_i is whether the respondent is willing to vote or not; $RISK_i$ is the perceived risk of catching COVID-19 by the respondent; $X_i^{'}$ is a vector of controls, and ε_i is the error term of the model. If the error term in Eq. (1) is not independent from the $RISK_i$ such that $E\left(RISK_i|\varepsilon_i \neq 0\right)$, then $RISK_i$ is endogenous, suggestive of the presence of confounding factors that have not been controlled for in the equation. This precludes a causal interpretation. Estimating the above relationship using ordinary least squares (OLS) would result in a biased and inconsistent coefficient (θ) (Angrist and Pischke 2008). In this paper, we apply the IV approach. This IV approach is superior to other causal inference methods in the literature in this setting because other methods either require the use of panel data instead of cross-sectional data or are predicated on stronger assumptions such as selection based on observables. Selection based on observables, variously referred to as unconfoundedness exogeneity or ignorability in the literature, is an assumption that all biases between treatment and control groups in the data are removed when observable characteristics are adjusted to achieve 'balance' between the two groups (Imbens and Wooldridge 2009). In most applications, including this paper, this assumption would not be tenable, as it rests on another often implicit and yet stronger assumption that all confounding variables are known and available (Dague and Lahey 2019). Our IV approach thus allows us to avoid making such stringent assumptions. Furthermore, having more instruments than one endogenous regressor in our model allows for more precision and reduces biases in the estimate of the causal effect compared to other available canonical causal inference approaches (Cameron and Trivedi 2005a, b).

With reference to Eq. (1), an IV (Z) is, by way of definition, a variable that is correlated with the perceived risk of catching COVID-19 ($RISK_i$), and not the error term (ε_i). A valid IV must satisfy two conditions, namely: relevance and exogeneity (Angrist and Pischke 2008). An instrument is relevant if it is highly correlated with the endogenous regressor, that is to say [$\text{Cov}(RISK_i, Z \neq 0$]. An IV is exogenous if it is not correlated with the error term such that $\text{Cov}(Z, \varepsilon_i|X_i \neq 0)$. The intuition behind these two instrument conditions is that the instrument, in effect, splits the variation in the endogenous regressor and captures only the variation in the endogenous regressor that is uncorrelated with the error term, thereby allowing for identification of the causal effect of the explanatory variable on the outcome. Equation (1) can then be estimated as a two-step procedure: first running Eq. (2) and then Eq. (3). Equation three is called the first stage:

$$RISK_i = \delta_0 + \delta_i Z_i + X_i^{'}\beta + u_i, \tag{2}$$

where $RISK_i$ is the perceived risk; Z_i is the vector of instruments; $X_i^{'}$ is a vector of controls; β is a vector of coefficients; δ_0 is a constant; and u_i is an error term. To assess whether the instruments were valid, we used the *J*-test (Cameron and Trivedi 2005a, b; 2010; Wooldridge 2010). We then use predicted values from Eq. (2) and substitute them for the endogenous regressor in Eq. (1) to produce Eq. (3), which is our final estimation as follows:

$$Y_i = \propto_i + \tau\widehat{RISK}_i + X_i^{'}\beta + \varepsilon_i, \tag{3}$$

where τ is our coefficient of interest which measures the effect of perceived risk on voting. *RISK* is the predicted value of the risk; $X_i^{'}$ are controls with a vector of coefficients β; $\propto_i$ is a constant; and ε_i is an error term, which is now independent of the endogenous variable.

We instrument our variable of interest using three variables: wearing a face mask (whether the respondent wears a face mask), washing hands with soap regularly (whether the respondent washes hands with soap and water as recommended by health experts) and perceived risk of a family member catching COVID-19 (whether the respondent thinks that the family member is likely to catch COVD-19). Based on the recent advice from the WHO and Centre for Disease Control, washing hands with soap and wearing face masks have been recommended as being among the most effective ways of preventing catching or spreading COVID-19 (Center for Diseases Control 2020; Chen et al. 2020; UNICEF et al. 2020). These measures are associated with reducing the perceived risk of catching COVID-19. Therefore, we expect that they satisfy the instrument relevance condition. A formal test was performed to check this condition in our data. These attributes are, however, independent of the individual's decision to vote. Their effect on voting operates through the individual's perceived risk of catching COVID-19. To that extent, the instrument exogeneity or exclusion restriction condition is satisfied. Since we have multiple instruments, a formal test for whether this condition is satisfied in our data was also performed. All the variables used in the study are defined in Table 1. The analysis was done in Stata 16.

Results

We first present the univariate analysis to show the distribution of our variables in Table 2. The results show that a majority of Malawian adults (86%) were willing to vote. The perceived risk of catching COVID-19 was equally high (63%). Consistent with the fact that Malawi's population is predominantly youthful, a plurality of the survey respondents were aged between 25 and 34 (28%). This was followed by the group aged 18–24 (19%). The lowest percentage was from the age group of those older than 64 years. In terms of gender, 53% were males. A majority (55%) of the respondents had primary education, and almost 82% agreed with the court's decision to nullify the 2019 presidential election. Regarding self-assessed living conditions,

Table 1 Variable definitions

Variable	Description
Dependent variables	
Willingness to vote	Binary variable = 1 if a respondent indicated that they would definitely vote in the election; = 0 otherwise
Independent variables	
Fear of COVID-19	If the respondent is afraid of catching COVID-19 = 1 and 0 otherwise
Agrees with the court to nullify the election	Categorical variable = 1 if agrees with the court's decision to nullify election; 0, otherwise
Living conditions	1 = very bad living conditions; 2 = fairy bad living conditions and 3 = good living conditions
Age	Age groups are in categories; 18–24; 25–34; 35–44;45–54; 55–64; 64 + , each group = 1 or 0
Male	Binary variable = 1 if respondent is male; = 0 if respondent is female
Employed	Binary variable = 1 if respondent is employed; = 0 if respondent is not employed
Jehovah's witness	Binary variable = 1 if the respondent is Jehovah's witness; = 0 if the respondent is not Jehovah's witness
Education	Categorical variable = 0 if no formal education; 1 = primary; 2 = secondary; 3 = post-secondary
Urban	Binary variable = 1 if respondent is based in urban area; = 0 if respondent is based in rural area
Region of residence	Categorical variable, if respondent is based in: 1 = North; 2 = Centre; 3 = South

almost 42% consider their conditions to be very bad, and 25% thought that their living conditions were good. The distribution of social and demographic characteristics is shown in Table 2.

Besides looking at social and demographic features, we also assessed the differences in the characteristics of the respondents by COVID-19 risk status. Table 3 presents the results for this analysis in four columns, A, B, C and D. Column A shows the proportion of those who did not consider themselves to be at risk of catching COVID-19. Column B shows respondents who felt they were at risk of catching COVID-19. Column C indicates the difference in the proportions by risk, and column D lists the p values of the difference in the proportions. We find that there are differences among age groups. With respect to sex, more men consider themselves to be more at risk ($d = -0.121$; $p = 0.004$) compared to women. There are also significant disparities in risk perception by education status and living conditions (Table 3).

Econometric Results

Before presenting the results of the regression, we undertook a battery of tests. When undertaking the IV method, it is important to assess whether our variable of interest is indeed endogenous and that the instrument is relevant. On endogeneity, a Durbin–Wu–Hausman test statistic of 6.47 ($p < 0.011$) implies that indeed

Table 2 Socio and demographic characteristics

Variables	%	*n*
Will definitely vote	86	990
Perceived risk of catching COVID-19	63%	728
Age 18–24	19%	217
Age 25–34	28%	322
Age 35–44	21%	243
Age 45–54	15%	172
Age 55–64	9%	106
Age > 64	8%	95
Male	53%	608
No education	9%	105
Primary education	55%	639
Secondary education	29%	340
Tertiary	6%	72
Religion is Jehovah's Witnesses	1%	3
Respondent is employed	92%	1067
Agrees with the court to nullify the election	82%	945
Respondent lives in urban	17%	200
Very bad living conditions	42%	483
Fairy bad living conditions	33%	380
Good living conditions	25%	292
Central region	44%	502
Northern region	14%	166
Southern region	42%	487
Observations	1155	

the variable, risk of catching COVID-19 is not exogeneous, hence the need for IV. We also undertook the overidentifying restrictions to verify the validity of our excluded instruments. The null hypothesis for the test is that the instruments are not valid. The test statistic we obtained shows that our instruments were valid (Chi2 = 2.522; $p = 0.283$). Lastly, in order to gauge whether our instrument is relevant or not, we also tested the first stage. We used rule of thumb that the F -statistic from the first stage should be greater than ten. The resultant F statistic (= 122.78; $p < 0.000$) was greater than ten. For more on test for endogeneity, exogeneity, and instrument relevance, see Appendices 1, 2 and 3, respectively.

In terms of the main econometric results -shown in Table 4, we first did naive model of OLS and probit to see if any significant relationship between the perceived risk of COVID-19 and voting can be established. The naive model results are presented in columns (A) and (B), respectively. In column (A), while the sign is negative, the result is insignificant ($\beta = -0.032$). Just as the case was in the OLS, the probit model also does not show any significant relationship between the perceived risk of catching COVID-19 and voting. In addition to the naive

Table 3 Differences in characteristics

Variables	(A) No risky (0)	(B) Risky (1)	(C) (0–1)	(D)
	Proportion	Proportion	*d*	*p*
Age 18–24	0.223	0.182	0.041	(0.239)
Age 25–34	0.325	0.271	0.054	(0.166)
Age 35–44	0.175	0.216	− 0.042	(0.199)
Age 45–54	0.151	0.149	0.002	(0.948)
Age 55–64	0.066	0.096	− 0.030	(0.167)
Age > 64	0.060	0.086	− 0.026	(0.212)
Male	0.422	0.543	− 0.121**	(0.004)
No education	0.084	0.092	− 0.008	(0.744)
Primary education	0.572	0.550	0.022	(0.594)
Secondary education	0.289	0.294	− 0.005	(0.894)
Tertiary	0.054	0.064	− 0.009	(0.623)
Religion is Jehovah's witnesses	0.006	0.003	0.003	(0.634)
Respondent is employed	0.849	0.936	− 0.087**	(0.003)
Agrees with court to nullify election	0.693	0.839	− 0.146***	(0.000)
Respondent stays in urban	0.247	0.161	0.086*	(0.016)
Very bad living conditions	0.367	0.427	− 0.059	(0.147)
Fairy bad living conditions	0.422	0.313	0.108**	(0.009)
Good living conditions	0.211	0.260	− 0.049	(0.159)
Central region	0.343	0.450	− 0.107**	(0.009)
Northern region	0.060	0.158	− 0.097***	(0.000)
Southern region	0.596	0.392	0.204***	(0.000)
N	166	989	1155	

models, we estimated the IV two-stage least squares (IV 2SLS) and the results are shown in column (C).

Looking at the magnitude of the effects, the estimates suggest that the likelihood to vote is lower by -0.096 among those who fear to catch COVID-19 as compared to those who do not fear catching COVID-19. The large magnitude of the coefficient notwithstanding, it is imperative to bear in mind that the estimate represents a local average treatment effect (LATE). This implies that the estimate is specific to those who are afraid of catching COVID-19 in our sample. Hence, the coefficient can be interpreted as the causal effect of the perceived risk of catching COVID-19 on the propensity to vote among those who fear to catch COVID-19. As with all quasi-experimental designs, external validity is likely an issue. The estimate is, however, sufficiently large for our purposes.

We undertook some robustness checks to see whether our results are sensitive to different model specifications. We noted, for example, that although Jehovah Witnesses are not allowed by their faith to participate in voting, some of them in our sample indicated that they would vote. We thus run a full model, without the religion

Table 4 Effect of self-perceived risk of COVID-19 on voting

Variables	OLS *β*/95% CI	Probit *β*/95% CI	IV 2SLS *β*/95% CI
Perceived risk of catching COVID-19	− 0.005	− 0.006	− 0.096**
	[− 0.047, 0.036]	[− 0.047, 0.035]	[− 0.175, − 0.017]
Age 25–34	− 0.007	− 0.005	− 0.008
	[− 0.072, 0.057]	[− 0.061, 0.051]	[− 0.072, 0.057]
Age 35–44	0.042	0.047	0.043
	[− 0.021, 0.106]	[− 0.014, 0.108]	[− 0.021, 0.106]
Age 45–54	0.010	0.010	0.012
	[− 0.064, 0.085]	[− 0.059, 0.079]	[− 0.062, 0.087]
Age 55–64	0.045	0.054	0.042
	[− 0.034, 0.123]	[− 0.030, 0.138]	[− 0.036, 0.121]
Age > 64	0.032	0.040	0.038
	[− 0.050, 0.114]	[− 0.048, 0.128]	[− 0.046, 0.122]
Male	0.042*	0.043*	0.048**
	[− 0.003, 0.087]	[− 0.000, 0.086]	[0.002, 0.093]
Primary education	− 0.035	− 0.031	− 0.040
	[− 0.108, 0.038]	[− 0.104, 0.043]	[− 0.113, 0.033]
Secondary education	− 0.021	− 0.014	− 0.024
	[− 0.103, 0.062]	[− 0.096, 0.068]	[− 0.107, 0.058]
Tertiary	− 0.021	− 0.004	− 0.025
	[− 0.127, 0.085]	[− 0.116, 0.107]	[− 0.133, 0.083]
Religion is Jehovah's Witnesses	− 0.126	− 0.119	− 0.120
	[− 0.561, 0.309]	[− 0.411, 0.173]	[− 0.545, 0.305]
Respondent is employed	0.129***	0.098***	0.138***
	[0.033, 0.225]	[0.034, 0.162]	[0.043, 0.233]
Agrees with court to nullify election	0.085**	0.069***	0.082**
	[0.018, 0.151]	[0.020, 0.118]	[0.016, 0.148]
Respondent lives in urban	− 0.076**	− 0.071***	− 0.084***
	[− 0.136, − 0.016]	[− 0.120, − 0.022]	[− 0.144, − 0.023]
Fairy bad living conditions	− 0.042*	− 0.045**	− 0.050*
	[− 0.091, 0.008]	[− 0.089, − 0.000]	[− 0.099, 0.000]
Good living conditions	0.047*	0.041	0.041
	[− 0.002, 0.097]	[− 0.011, 0.094]	[− 0.010, 0.091]
Northern region	0.047*	0.065*	0.037
	[− 0.000, 0.094]	[− 0.006, 0.137]	[− 0.011, 0.085]
Southern region	− 0.071***	− 0.067***	− 0.065**
	[− 0.121, − 0.021]	[− 0.112, − 0.023]	[− 0.115, − 0.014]
N	1155	1155	1155
R^2	0.066	–	–
Pseudo-R^2	–	–	–
F	4.21***		–
χ^2	–	80.37***	–

*$p < 0.10$; **$p < 0.05$; ***$p < 0.01$, 95% CI in brackets

variable, and our results are qualitatively similar (see Appendix 4 for details). We also assessed whether the results are sensitive to the choice of control covariates. We found that the results are stable as can be verified in Appendix 5.

Further to this analysis, we also observed that among male rural dwellers, there is a statistically significant negative relationship between the perceived risk of catching COVID-19 and the likelihood to vote. In contrast, this relationship was statistically insignificant in the equation for females. Likewise, we also observed a statistically significant negative relationship between the perceived risk of catching COVID-19 and the likelihood to vote among rural dwellers but not among urban dwellers (see Appendices 6 and 7, respectively). This suggests that voter apathy witnessed in some of the rural parts of the country is potentially attributable to fear of catching COVID-19.

Discussion

This paper has investigated the relationship between perceived risk of catching COVID-19 and voting in Malawi. We have analysed data from a household cross-sectional survey conducted between May and June 2020 when Malawi was preparing for an election against a growing number of COVID-19 cases. Our analysis employed OLS, probit model and IV 2SLS methods. The analysis was robust to various model specifications. We find interesting results, as follows.

On the univariate analysis, there were two key findings. First, many Malawians were willing to vote in the fresh presidential election of 23 June 2020 in spite of the growing number of COVID-19 cases. The proportion of citizens who indicated that they were willing to vote was higher than the actual number of voters in the June 23 election (64.8%). This is consistent with findings of previous studies that show exaggerated willingness to vote among survey respondents who want to appear to engage in socially desirable behaviour. This is especially the case among demographic groups under the most pressure to vote, notably partisans, educated and religious respondents (Silver et al. 1986; Bernstein et al. 2001). However, since our interest in this paper is to examine the extent to which COVID-19 contributed to low voter turnout in the fresh presidential election, it is thus likely that our results are under-reporting the effects of COVID-19 since some of the respondents who said they intended to vote may not have done so on the election day. Secondly, the proportion of Malawians who thought that they were at risk of catching COVID-19 was high, although previous results suggested that Malawians were more worried about hunger than COVID-19 (GLD-IPOR 2020).

On the multivariate analysis, results from the regression analysis suggest that there is a negative effect of self-assessed risk of catching COVID-19 on the likelihood to vote. The naive models of the OLS and the probit model did not show any significant effect of the perceived risk of catching COVID-19 and the likelihood to vote. However, the IV 2SLS method suggests that the risk of catching COVID-19 is associated with a low likelihood of voting. These effects varied across self-assessed welfare, regions as well as gender. Apart from our variable of interest, namely perception of risk of catching COVID-19, we also found an interesting relationship

between belonging to the Jehovah's Witness faith and voting. The finding suggests that those who belong to this faith are less likely to vote than respondents from other religions. Probably, this is in line with their belief on political neutrality (Chand et al. 2014). Consistent with other studies of voting behaviour (Bryant and Wahman 2017; Bleck and Van de Walle 2018), we found that those living in urban areas are less likely to vote. This may be an indication of relatively higher voter apathy among urbanites (Bryant and Wahman 2017), which might suggest that the perceived benefits of voting, based on campaign promises, are considered lower among urban folk compared to those residing in rural areas. Although such is the case, among the two mentioned variables, it is quite interesting to observe that those who agree that the court's decision to annul the previous elections was valid were more likely to vote than those who disagreed. This may be an indication that people felt that indeed the election was invalid and voting was some form of natural justice. This might also explain why the opposition alliance candidate in the elections, Lazarus Chakwera, emerged victorious as opposition supporters unanimously agreed with the annulment of the elections while nearly one third of supporters of the then ruling DPP disagreed with the court's decision to annul the 2019 presidential election results.

Furthermore, those who were employed were likely to vote. We may speculate that probably, the need to vote among the employed groups was to effect a change of government, in order to deal with the economic and political challenges due to the perceived high taxes by employed Malawians. Due to high proportion of Malawians living in poverty (NSO 2005, 2012, 2017), government policy is frequently geared at promoting anti-poverty programmes paid for by high taxes imposed on the small employed sector (Dulani 2005). This was noteworthy in the 2019/2020 Budget Statement, which, among others, maintained the agricultural input subsidy programmed targeted at poor households; increased the income tax free band for lowest paid workers and increased the minimum wage with a view to assisting poorer households. On the other hand, government introduced a series of new taxes including a doubling of tax on technical fee earnings as well as new taxes on car owners, rentals and mobile money which are predominantly used by employed Malawians (Government of Malawi 2019). Voting was, therefore, an avenue for channelling anger and expressing dissatisfaction with the ruling party. Among the employed, it was observed that most people were bitter about their low pay and high taxes, issues which may have galvanised this silver of the electorate to seek regime change. Specifically, many government employees in the country felt that the conditions of services and the then current government needed to change. Issues such as delayed promotions, non-paid arrears, differed payments, and nepotism, were rampant within the system. However, the government turned a deaf ear to concerns around these issues.

Our results on the high levels of fear of catching COVID-19 can probably help explain the relatively low voter turnout in the fresh elections of 23 June 2020 in Malawi. The proportion of the people who came to vote was lower in the June 2020 elections compared to the number who voted in 2019. In 2020, a total of 4,445,385 out of 6,859,570 registered voters turned out to vote, which translates to 64.8%. In contrast, 5,105,983 Malawians voted in 2019, representing 74.4% of registered voters. The issue of plummeting voter turnout has also been reported in other countries

where elections took place during the COVID-19 pandemic such as Guinea, Cameroun and Mali (Asplund and Akinduro 2020).

One important thing to note is that despite COVID-19 affecting some of the daily life activities in Malawi, other aspects of life have been going on with minimal disruption. As pointed out earlier, an attempt by the government to impose a national lockdown was met by rejected by the courts. This meant that apart from voting and other electoral processes, most citizens continued to pursue their livelihoods almost normally during the pandemic, save for a few instances where they observed preventive measures such as social distancing. In view of this, the paper offers some important implications for policy. The insight from the paper is that the risk of catching COVID-19 reduces the willingness to vote. Essentially, we do believe that having good leaders is a requirement to achieve SDG on good governance and political institutions. This means putting in place strategies that will reduce people's fear is a good move to avoid derailing SDGs and African agenda 2063.

Since voting mainly involves queuing in Malawi, enforcing social distancing is important in preventing the spread of COVID-19. Election management bodies should explore ways of decongesting polling stations like increasing the number of polling stations so that fewer voters are allocated per station. Other voting options that reduce the likelihood of lengthy queues such as electronic, postal and early voting should also be considered as a way of reducing the potential for transmission. Furthermore, preventive measures such as hand sanitising at polling stations and use of face masks by polling staff and voters should be made mandatory (Asplund and Akinduro 2020). Additionally, polling materials must be properly and regularly sanitised in order to reduce the risk of transmission among voters. At the same time, voter education messages should sensitise the people on proper ways to keep themselves safe during voting.

Before we consider the limitations of our study, it would be worthwhile to comment on the discussion between actual voting and intent to vote. It is important to note several issues on this. First, there is a difference not only between 'intent' and 'actual' but also 'self-reported' turnout. The implication is that even if respondents are revisited at a later time, what will be captured will be 'self-reported' turnout which might usually be higher than 'actual'. The point is that it is almost impossible to capture 'actual' voting at an individual level. This is possible at the aggregate level but that is not useful for analysis of individual-level attitude or views. Second, evidence suggests that "the same variables tend to be influential for all three measures, but not to the same degree" (Achen and Blais 2015). Based on this observation, we are comfortable that analysis with 'intention to vote' as a dependent variable will not be very different from results using 'actual' turnout (which we have noted is almost impossible to accurately capture). This has also been supported by Kavanagh et al. (2020)

We are cognizant of the limitations of our study. First, due to data limitations, we were unable to control for the effect of the occupation of the respondent. We would expect the perception of risk to be stronger, for example, among those involved in public health-related occupations on account of their more intimate knowledge of how the disease spreads. However, it may be worthwhile to follow up with the respondents in a future iteration of the survey to check if the respondents who said they would vote indeed went to cast a vote.

Conclusion

In anticipation of challenges managing elections during the COVID-19 pandemic, several countries postponed elections to later dates. Only a few countries such as Malawi, Guinea, Mali and Burundi went ahead with their scheduled elections. Tanzania and Ghana too are pushing ahead with plans to hold elections later in the year. While the public health motive for postponing elections is noble, there are concerns that unpopular, and perhaps authoritarian, governments may exploit the pandemic to avoid elections and thereby extend their grip on power. At the same time, if elections are postponed, illegitimate governments will likely face challenges in mounting an effective campaign against the pandemic. Notwithstanding the political benefits of pushing ahead with elections, the large gatherings associated with election campaigns and congestion at polling stations increase the risk of exposure to citizens for catching the COVID-19. Indeed, evidence from Malawi adduced in this paper has shown that the fear of catching COVID-19 can have the effect of reducing voter turnout in elections, thereby undermining the legitimacy of the government that is elected during times of a health pandemic. The need for a legitimately elected government and public safety can be a delicate balance to strike. It is imperative that if elections have to take place during a health crisis such as COVID-19, then all measures be taken to reduce the possibility of transmission to avoid worsening the pandemic in ways that can not only result in increased pressure on public health services but also forestall any future loss of life. For the credibility of the elections, necessary interventions should be explored to motivate voters to turnout or participate through innovative ways that assure them of their safety.

Acknowledgements We would like to acknowledge the Open Society Initiative for Southern Africa (OSISA), who gave us access to the data used in the paper.

Appendix 1: Test of Endogeneity

H_0: variables are exogenous	χ^2	p
Robust score $\chi^2(1)$	6.46627	0.0110
Robust regression F (1,1135)	6.42868	0.0114

Appendix 2: First-Stage Test

First stage regression	Summary statistics				
Variable	R^2	Adjusted R^2	Partial R^2	F (3,1134)	Prob > F
Risk of catching COVID-19	0.2849	0.2722	0.2575	122.78	0.000

Appendix 3: Test of Overidentifying Restrictions

Test of overidentifying restrictions		
	χ^2	p
Score $\chi^2(2)$	2.522	0.2834

Appendix 4: Effect of Self-Perceived Risk of COVID-19 on Likelihood of Voting (With No Religion Control)

Variables	β	95% CI
Perceived risk of catching COVID-19	− 0.098**	[− 0.177, − 0.019]
Age 25–34	− 0.008	[− 0.073, 0.056]
Age 35–44	0.042	[− 0.022, 0.105]
Age 45–54	0.011	[− 0.063, 0.086]
Age 55–64	0.042	[− 0.036, 0.121]
Age > 64	0.038	[− 0.046, 0.122]
Male	0.047**	[0.002, 0.093]
No education	− 0.040	[− 0.113, 0.033]
Primary education	− 0.025	[− 0.108, 0.057]
Secondary education	− 0.025	[− 0.133, 0.082]
Respondent is employed	0.137***	[0.043, 0.232]
Agrees with court to nullify election	0.083**	[0.016, 0.149]
Respondent lives in urban	− 0.083***	[− 0.144, − 0.023]
Very bad living conditions	− 0.050*	[− 0.099, 0.000]
Fairy bad living conditions	0.041	[− 0.010, 0.091]
Good living conditions	0.037	[− 0.011, 0.086]
Central region	− 0.064**	[− 0.115, − 0.013]
N	1155	

95% confidence intervals in brackets

*$p < 0.10$; **$p < 0.05$; ***$p < 0.01$

Appendix 5: Sensitivity of the Regression to the Inclusion and Exclusion of Various Controls

Variables	(A) β/95% CI	(B) β/95% CI	(C) β/95% CI	(D) β/95% CI
Perceived risk of catching COVID-19	− 0.098**	− 0.094**	− 0.094**	− 0.103**
	[− 0.177, − 0.019]	[− 0.176, − 0.013]	[− 0.176, − 0.013]	[− 0.185, − 0.021]
Age 25–34		− 0.007	− 0.010	− 0.001
		[− 0.066, 0.052]	[− 0.069, 0.050]	[− 0.061, 0.059]
Age 35–44		0.045	0.044	0.048
		[− 0.018, 0.108]	[− 0.019, 0.108]	[− 0.016, 0.112]
Age 45–54		0.015	0.021	0.016
		[− 0.055, 0.084]	[− 0.050, 0.092]	[− 0.055, 0.088]
Age 55–64		0.041	0.059	0.053
		[− 0.040, 0.122]	[− 0.023, 0.140]	[− 0.029, 0.136]
Age > 64		0.044	0.055	0.046
		[− 0.040, 0.128]	[− 0.031, 0.141]	[− 0.041, 0.133]
Male	0.055**	0.046**		0.047**
	[0.012, 0.098]	[0.005, 0.087]		[0.004, 0.091]
Primary education	− 0.051		− 0.025	− 0.032
	[− 0.123, 0.020]		[− 0.099, 0.049]	[− 0.107, 0.043]
Secondary education	− 0.041		− 0.001	− 0.010
	[− 0.119, 0.036]		[− 0.081, 0.080]	[− 0.093, 0.073]
Tertiary	− 0.047		0.005	− 0.010
	[− 0.150, 0.057]		[− 0.104, 0.115]	[− 0.122, 0.102]
Respondent is employed	0.139***	0.133***	0.148***	0.139***
	[0.044, 0.234]	[0.057, 0.209]	[0.072, 0.224]	[0.062, 0.215]
Religion is Jehovah Witnesses	− 0.112	− 0.121	− 0.111	− 0.106
	[− 0.524, 0.300]	[− 0.458, 0.217]	[− 0.449, 0.226]	[− 0.445, 0.233]
Agrees with court to nullify election	0.081**	0.083***	0.082***	0.113***
	[0.015, 0.147]	[0.028, 0.138]	[0.027, 0.137]	[0.060, 0.165]
Respondent lives in urban	− 0.082***	− 0.081***	− 0.085***	− 0.087***
	[− 0.143, − 0.022]	[− 0.134, − 0.028]	[− 0.139, − 0.031]	[− 0.142, − 0.033]
Fairy bad living conditions	− 0.050**	− 0.050**	− 0.052**	− 0.056**
	[− 0.099, − 0.000]	[− 0.097, − 0.003]	[− 0.099, − 0.005]	[− 0.103, − 0.009]
Good living conditions	0.040	0.039	0.037	0.026
	[− 0.011, 0.090]	[− 0.013, 0.090]	[− 0.015, 0.089]	[− 0.026, 0.077]

Variables	(A) *β*/95% CI	(B) *β*/95% CI	(C) *β*/95% CI	(D) *β*/95% CI
Northern region	0.042*	0.036	0.035	
	[− 0.006, 0.089]	[− 0.025, 0.097]	[− 0.027, 0.098]	
Southern region	− 0.064**	− 0.065***	− 0.065***	
	[− 0.115, − 0.013]	[− 0.111, − 0.019]	[− 0.111, − 0.019]	
N	1155	1155	1155	1155

95% confidence intervals in brackets

*$p < 0.10$; **$p < 0.05$; ***$p < 0.01$

Appendix 6: Effect of Self-Perceived Risk of COVID-19 on Voting (by Location)

Variables	Rural *β*/95% CI	Urban *β*/95% CI
Perceived risk of catching COVID-19	− 0.072*	− 0.121
	[− 0.153, 0.008]	[− 0.375, 0.132]
Age 25–34	− 0.025	0.041
	[− 0.093, 0.043]	[− 0.133, 0.214]
Age 35–44	0.007	0.165**
	[− 0.062, 0.075]	[0.011, 0.319]
Age 45–54	0.011	− 0.065
	[− 0.066, 0.089]	[− 0.282, 0.152]
Age 55–64	0.024	0.080
	[− 0.059, 0.108]	[− 0.140, 0.300]
Age > 64	0.053	− 0.169
	[− 0.029, 0.135]	[− 0.490, 0.152]
Male	0.042*	0.070
	[− 0.006, 0.091]	[− 0.063, 0.202]
Primary education	− 0.057	− 0.015
	[− 0.131, 0.018]	[− 0.304, 0.273]
Secondary education	− 0.038	− 0.069
	[− 0.123, 0.047]	[− 0.360, 0.223]
Tertiary	− 0.022	− 0.076
	[− 0.133, 0.090]	[− 0.390, 0.238]
Respondent is employed	0.171***	− 0.001
	[0.063, 0.280]	[− 0.169, 0.167]
Agrees with court to nullify election	0.070*	0.183**
	[− 0.000, 0.141]	[0.016, 0.350]
Fairy bad living conditions	− 0.058**	0.005

Variables	Rural *β*/95% CI	Urban *β*/95% CI
	[− 0.111, − 0.006]	[− 0.140, 0.150]
Good living conditions	0.029	0.098
	[− 0.025, 0.082]	[− 0.042, 0.237]
Northern region	0.051**	0.001
	[0.003, 0.099]	[− 0.171, 0.172]
Southern region	− 0.057**	− 0.143**
	[− 0.112, − 0.001]	[− 0.261, − 0.024]
N	955	200

95% confidence intervals in brackets

*$p < 0.10$; **$p < 0.05$; ***$p < 0.01$

Appendix 7: Effect of Perceived COVID-19 Risk on Voting Among Gender Groups

Variables	Female *β*/95% CI	Male *β*/95% CI
Perceived risk of catching COVID-19	− 0.203***	0.021
	[− 0.318, − 0.089]	[− 0.089, 0.132]
Age 25–34	0.020	− 0.028
	[− 0.075, 0.116]	[− 0.116, 0.060]
Age 35–44	0.057	0.019
	[− 0.038, 0.153]	[− 0.067, 0.105]
Age 45–54	0.029	0.007
	[− 0.093, 0.151]	[− 0.090, 0.103]
Age 55–64	0.006	0.058
	[− 0.163, 0.175]	[− 0.033, 0.148]
Age > 64	− 0.054	0.078*
	[− 0.244, 0.135]	[− 0.010, 0.165]
Respondent lives in urban	− 0.088*	− 0.087**
	[− 0.185, 0.009]	[− 0.165, − 0.009]
Primary education	− 0.097*	0.050
	[− 0.195, 0.001]	[− 0.083, 0.184]
Secondary education	− 0.107*	0.082
	[− 0.224, 0.010]	[− 0.057, 0.221]
Tertiary	− 0.076	0.086
	[− 0.278, 0.125]	[− 0.067, 0.239]
Respondent is employed	0.136**	0.122
	[0.028, 0.243]	[− 0.054, 0.298]
Agrees with court to nullify election	0.120**	0.041

Variables	Female *β*/95% CI	Male *β*/95% CI
	[0.021, 0.220]	[− 0.045, 0.127]
Fairy bad living conditions	− 0.063	− 0.054*
	[− 0.144, 0.018]	[− 0.117, 0.008]
Good living conditions	0.049	0.023
	[− 0.034, 0.133]	[− 0.039, , 0.085]
Northern region	0.057	0.028
	[− 0.033, 0.146]	[− 0.024, 0.081]
Southern region	− 0.050	− 0.088***
	[− 0.126, 0.026]	[− 0.155, − 0.022]
N	548	607

95% confidence intervals in brackets

*$p < 0.10$; **$p < 0.05$; ***$p < 0.01$

References

Abdullah, W.J. 2019. The Mahathir effect in Malaysia's 2018 election: the role of credible personalities in regime transitions. In *Democratization*, vol. 26(3), 521–536. London: Taylor & Francis.

Achen, C. H., and Bartels, L. M. 2004. Blind retrospection: Electoral responses to drought, flu, and shark attacks. Working Paper 2004/199.

Achen, C.H., and A. Blais. 2015. Intention to vote, reported vote and validated vote 1. In *The act of voting*, 195–209. London: Routledge.

African Union. 2020. *Covid-19*. https://au.int/en/covid19. Accessed 20 July 2020.

Angrist, J.D., and J.-S. Pischke. 2008. *Mostly harmless econometrics: An empiricist's companion*. Princeton: Princeton University Press.

Asplund, E., and O. Akinduro. 2020. *How African countries are dealing with elections during COVID-19*. https://africanarguments.org/2020/05/how-africa-countries-dealing-elections-covid-19/.

Ataguba, J.E. 2020. COVID-19 pandemic, a war to be won: Understanding its economic implications for Africa. *Applied Health Economics and Health Policy*. https://doi.org/10.1007/s40258-020-00580-x.

Bernstein, R., A. Chadha, and R. Montjoy. 2001. Overreporting voting: Why it happens and why it matters. *Public Opinion Quarterly* 65 (1): 22–44.

Bleck, J., and N. Van de Walle. 2018. The African Voter. In *Electoral politics in Africa since 1990: Continuity in change*, ed. J. Bleck and Nicolas van de Walle, 218–260. Cambridge: Cambridge University Press, pp. 218–260. https://doi.org/10.1017/9781316676936.007.

Bol, D., et al. 2020. The effect of COVID-19 lockdowns on political support: Some good news for democracy?'. *European Journal of Political Research*. https://doi.org/10.1111/1475-6765.12401.

Brown, R., and J. Chinele. 2020. Protect the vote, or protect the voter? In African elections, no easy? *The Christian Science Monitor*. https://www.csmonitor.com/World/Africa/2020/0623/Protect-the-vote-or-the-voter-In-African-elections-no-easy-choice.

Bryant, K., and M. Wahman. 2017. Rural voters. In *The SAGE encyclopedia of political behavior*, ed. F.M. Moghaddam, 725–728. SAGE: California. https://doi.org/10.4135/9781483391144.n332.

Cameron, A.C., and P.K. Trivedi. 2005a. *Microeconometrics: Methods and applications*. Cambridge: Cambridge University Press.

Cameron, C.A., and P.K. Trivedi. 2005b. *Microeconometrics: Methods and application*. Cambridge: Cambiridge University Press.

Cameron, A.C., and P.K. Trivedi. 2010. *Microeconometrics using stata*. College Station, TX: Stata Press. https://www.stata.com/stata-news/statanews.23.4.pdf. Accessed 28 Dec 2017.

Center for Deases Control. 2020. *Coronavirus Disease 2019 (COVID-19): How to protect yourself & others*. Atlanta: CDC.

Chand, N.K., H.B. Subramanya, and G.V. Rao. 2014. Management of patients who refuse blood transfusion. *Indian Journal of Anaesthesia* 58 (5): 658–664. https://doi.org/10.4103/0019-5049.144680.

Chen, X., et al. 2020. Hand hygiene, mask-wearing behaviors and its associated factors during the COVID-19 epidemic: A cross-sectional study among primary school students in Wuhan, China. *International Journal of Environmental Research and Public Health* 17 (8): 2893.

Cooper, J. 2020. To vote or postpone? Elections in Africa in the time of COVID. *Africa Renewal*. https://www.un.org/africarenewal/magazine/july-2020/vote-or-postpone-elections-africa-time-covid-19. Accessed: 20 July 2020.

Dague, L., and J.N. Lahey. 2019. Causal inference methods: Lessons from applied microeconomics. *Journal of Public Administration Research and Theory* 29 (3): 511–529.

Dionne, Kim, and B. Dulani. 2020. A Malawi court just ordered a do-over presidential election. Here's what you need to know. *The Washington Post*.

Dulani, B. 2005. Three cheers for democracy? Democracy, governance and development in Malawi. In *The new partnership for Africa's development: Debates, opportunities and challenges*, 90–108. Pretoria: Africa Institute.

GLD-IPOR. 2020. Malawians don't fear Covid-19 as much as hunger, loss of access to healthcare and stigma. *The First GLD-IPOR COVID-19 Survey in Malawi*. https://prezi.com/i/ffmbdzpiuou0/covid fears/.

Government of Malawi. 2019. *2020. 2019/2020 budget statement*. Lilongwe: Ministry of Finance.

Imbens, G.W., and J.M. Wooldridge. 2009. Recent developments in the econometrics of program evaluation. *Journal of Economic Literature* 47 (1): 5–86.

International IDEA. 2020. *Global overview of COVID-19 impact on elections*. https://www.idea.int/news-media/multimedia-reports/global-overview-covid-19-impact-elections.

Jain, V., and J.-M. Yuan. 2020. Systematic review and meta-analysis of predictive symptoms and comorbidities for severe COVID-19 infection. *medRxiv*. https://doi.org/10.1101/2020.03.15.20035360.

James, T.S. 2020. New development: Running elections during a pandemic. *Public Money & Management*. https://doi.org/10.1080/09540962.2020.1783084.

Kavanagh, J., C. Ben Gibson, and Q.E. Hodgson. 2020. *Attitudes on voting in 2020: Preparing for elections during a pandemic*. Santa Monica, CA: RAND Corporation. https://doi.org/10.7249/RRA112-9.

Kavanagh, M.M., and R. Singh. 2020. Democracy, capacity, and coercion in pandemic response—COVID 19 in Comparative Political Perspective'. *Journal of Health Politics, Policy and Law* 45 (6): 997–1012.

Landman, T., and L.D.G. Splendore. 2020. Pandemic democracy: Elections and COVID-19. *Journal of Risk Research.* 23 (7–8): 1–7.

Lappin, R. 2009. Why observe elections? Reassessing the importance of credible elections to post-conflict peacebuilding. *Peace Research* 41 (2): 85–117.

Lockhart, M., Hill, S., Merolla, J., Romero, M., and Kousser, T. 2020. Are voters polarized along party lines about how to run elections during the COVID-19 crisis? UC San Diego. Retrieved from https://escholarship.org/uc/item/5714p8qk.

Malawi Electoral Commission. 2019. *Announcement of the determination of the results of the presidential elections 2019*. Blantyre: Malawi Electoral Commission.

Masina, L. 2020. Malawi Top Court upholds Presidential election re-run. *Voice of America*, 9 May. https://www.voanews.com/africa/malawi-top-court-upholds-presidential-election-re-run.

MCCI. 2020. *Impact of Corona Virus (COVID_19) on businesses in Malawi*. Lilongwe: MCCI.

Mohamed, A. 2020. How is the coronavirus pandemic affecting elections in Africa? *Aljazeera*. https://www.aljazeera.com/news/2020/04/coronavirus-pandemic-affecting-elections-africa-200409085324155.html.

NSO. 2005. *Integrated Household Survey(IHS2) 2004–2005: Household Socio-economic characteristics*. Zomba: National Statistical Office. http://www.nsomalawi.mw/index.php?option=com_content&view=article&id=79:integrated-household-survey-200405&catid=3&Itemid=63.

NSO. 2012. *Third Integrated Household Survey (IHS3) 2010/2011*. Zomba: National Statistical Office. http://www.nsomalawi.mw/index.php?option=com_content&view=article&id=190:third-integrated-household-survey-ihs3&catid=3&Itemid=79.

NSO. 2017. *Fourth Integrated Household Survey (IHS4) 2016–2017*. Zomba: National Statistical Office.

Public Health Institute of Malawi. 2020a. *Malawi Covid-19 Daily situation report-19 June*. Lilongwe: Public Health Institute of Malawi.
Public Health Institute of Malawi. 2020b. *Malawi Covid-19 Daily situation report-3rd July*. Lilongwe: Public Health Institute of Malawi.
Rambaud, R. 2020. Holding or postponing elections during a COVID-19 outbreak: Constitutional, legal and political challenges in France. *International Institute for Democracy and Electoral Assistance*.
Silver, B.D., B.A. Anderson, and P.R. Abramson. 1986. Who overreports voting? *The American Political Science Review.* 80: 613–624.
Todaro, S.C., and M.P. Smith. 2012. *Economic development*, 11th ed. New York: Addison-Wesley.
Tostensen, A. 2019. *"The Tipp-Ex election": Widespread unrest after the 2019 elections in Malawi*. Report in External Series.
UNDP. 2015. *Sustainable development goals*. New York: United Nations.
UNDP. 2018. *The sustainable development goals report*. New York: United Nation.
UNICEF, WHO, & +IFRC. 2020. *Key Messages and actions for COVID-19 prevention and control in schools*. UNICEF, WHO, IFRC.
Urbatsch, R. 2017. Influenza and Voter Turnout. *Scandinavian Political Studies*. 40 (1): 107–119.
Van Weelden, R. 2013. Candidates, credibility, and re-election incentives. *Review of Economic Studies* 80 (4): 1622–1651.
Wooldridge, J.M. 2010. *Econometric analysis of cross section and panel data*. Cambridge, MA: The MIT Press.
World Health Organization (WHO). 2020. *Coronavirus (COVID-19)*. https://www.afro.who.int/health-topics/coronavirus-covid-19.
Yang, J., et al. 2020. 'Prevalence of comorbidities in the novel Wuhan coronavirus (COVID-19) infection: A systematic review and meta-analysis. *International Journal of Infectious Diseases*. https://doi.org/10.1016/j.ijid.2020.03.017.
Van Zuydam, S., and F. Hendriks. 2018. Credibility enacted: Understanding the meaning of credible political leadership in the Dutch parliamentary election campaign of 2010. *Journal of Political Marketing*. 17 (3): 258–281.