

# The potential of increased internet penetration to combat corruption in Africa

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## Abstract

This paper /study examines the relationship between internet penetration and perceptions of corruption in African countries. In particular, it assesses the potential of the former to address the latter, which has crippled economic growth and development for decades. The way in which corruption has seeped into the continent's responses to the Covid-19 pandemic underscores that combating corruption is more urgent than ever before. Utilising correlation analysis, this study finds that there is a positive correlation between IP and perceptions of corruption. It concludes with recommendations for combating corruption in Africa and its regressive effects on the continent's socio-economic development.

**Key words:** Covid-19, internet penetration, corruption, e-governance, ICTs.

## Introduction

The 2019 novel coronavirus pandemic has exposed the problems and inadequacies in Africa's health sector, among others by highlighting disparities in government responses as well as poor capacity (notably for testing and hospitalisation) in the sector itself. It has also highlighted the continued economic vulnerability of the poor, reminding us that an estimated 85% of the continent's populace live on less than \$5,50 a day (Aguilar et al, 2010). This unsettling figure is the result of decades of economic stagnation, caused, among others, by endemic corruption. Corruption undermines development in multiple ways – among others, by bleeding off government resources, reducing the efficacy of government expenditure, and discouraging local and foreign direct investment. It also saps the political will of politicians, demoralises or corrupts civil servants, and undermines citizens' trust in government as well as their hopes for holding their governments accountable. Ultimately, it challenges citizens' rights to accountability, and works to undermine their rights to freedom of expression and political mobilisation (Mustaka, 2020).

Corruption also encourages authoritarian government, and encourages governments to suppress political opposition and the free flow of information. As evidenced by numerous internet shutdowns around the globe, corrupt governments fight to curb the free flow of information, for fear of provoking popular protests as well as international condemnation, possibly resulting in the withdrawal of foreign aid and damaging economic sanctions.

As elsewhere, African governments have responded to the Covid-19 pandemic by imposing social shutdowns, with severe consequences for economic activity. Due to corruption, among other factors, African economies are far more fragile than those in countries with more accountable governments and healthier economies, and therefore far less able to withstand the disruptions caused by the shutdowns.

This article assesses the responses of African governments to the pandemic, ostensibly aimed at protecting the wellbeing of their citizens. It argues that the widespread inability of African governments to test and treat citizens and roll out effective economic stimulus packages has been corroded by decades of corruption. It does this by examining the role of internet penetration (IP) in citizen's perceptions of public sector corruption. It also assesses the role of social media in exposing corruption to citizens and the rest of the world. It concludes by discussing how – in the form of e-governance – the fourth industrial revolution can be leveraged to achieve more transparent and accountable government, and therefore to combat corruption.

## Background

The first case of Covid-19 in Africa was identified in Egypt on 14 February 2020 (Africa CDC, 2020). Like most countries elsewhere, African governments responded by imposing national lockdowns of varying severity. On 3 March 2020, Morocco became the first African country to restrict citizens' movements, followed by the Democratic Republic of Congo on 18 March, Liberia and Burkina Faso on 21 March, and South Africa and Ethiopia on 26 March (Our World in Data, 2020).

Africans soon began to suffer the adverse effects of the pandemic and lockdowns, notably hunger due to a loss of economic activity. Given that 85% of Africans are 'self-employed' as street vendors and day labourers, among others, they have no job security, and many were severely affected by the lockdowns (Deutsche, 2020). In 2020, the UN calculated that the pandemic could result in 30 million more people joining the ranks of the poor. Moreover, disruptions of food aid supply chains were expected to affect about 50 million more people in the Sahel region alone. Locust plagues in East and some parts of southern Africa pose ongoing threats to food security (International Rescue Committee, 2020).

Additionally, millions of Africans live in informal settlements, with as many as 10 people sharing single shacks or shelters. As a result, social distancing was difficult or impossible to implement, thus leading to higher levels of infection. Poor testing capacities made it more difficult to detect and combat the spread of the virus in these high-density areas (Deutsche, 2020). As a result, African governments appealed for international assistance in the form of financial aid and protective equipment.

However, government officials soon began to divert government and donor resources for personal gain (Schipani, Cotteril, and Mushi, 2020). In Zimbabwe, the journalist Hopewell Chinono was arrested for exposing Covid-related corruption, sparking public protests against the ZANU-PF regime. However, planned protests were called off due to fears of brutal police and military repression, ordered by the president. The Zimbabwean government also shut down the internet to limit the spread of information.

This became a trend among corrupt and authoritarian African governments, with Burundi employing the same tactics during its elections in July 2020. In Kenya, the misuse and

misappropriation of Covid-19 aid by public sector officials also provoked public protests (Schipani, Cotteril, and Mushi, 2020; BBC, 2020).

Uganda's ambassador to Denmark, Nimisha Madhvani, was recalled for plotting to divert financial resources allocated to combating the pandemic while four health officials in Somalia were arrested for misappropriating COVID-19 relief funds (Schipani, Cotteril, and Mushi, 2020; Yusuf, 2020). In South Africa, government officials and even cabinet ministers – all members of the ruling ANC – were also accused of large-scale corruption in respect of contracts for the procurement of medical equipment and protective clothing (Schipani, Cotteril, and Mushi, 2020). Allegations about the misappropriation or misuse of relief funds emerged all over the continent, with governments conducting internal investigations to ascertain whether public officials were siphoning off public funds. In just one example, it was found that corrupt health officials in Nigeria had hiked the price of face masks to \$53 apiece (Schipani, Cotteril, and Mushi, 2020). The widespread misappropriation of relief funds served to undermine the confidence of the international community and indeed African citizens in the ability of African governments to utilise resources for combating the pandemic in a transparent and effective way. It has discouraged domestic and international investment, and further undermined the quality of governance and public service provision, ultimately continuing to inhibit economic growth and development (The African Capacity Building Foundation, 2018: 1; Nduku, 2015). Ultimately, corruption also perpetuates the hold on political power by small governing elites, who enrich themselves at the expense of the masses.

## Sources and methods

As noted previously, this study seeks to correlate IP with perceptions of corruption, as a means of assessing whether improved IP could be utilised to combat corruption. To this end, it utilised IP and Facebook subscription data as of March 2020 from Internet World Stats, and corruption perception data from Transparency International. A 1-tailed Pearson correlation test was used to calculate the nature and strength of the relationship between IP, which constitutes the independent variable (IV) for the first segment of the analysis, and the Corruption Perception Index (CPI) and Facebook subscriptions, which constitute the dependent variables (DV). The formula used to conduct the Pearson correlation test is as follows:

$$r_{xy} = \frac{n \sum x_i y_i - \sum x_i \sum y_i}{\sqrt{n \sum x_i^2 - (\sum x_i)^2} \sqrt{n \sum y_i^2 - (\sum y_i)^2}} \quad (1)$$

Where  $r_{xy}$  = Pearson  $r$  correlation between  $x$  and  $y$

Where  $n$  = numbers of observations

Where  $x_i$  = value of  $x$  (for  $i$ th observation)

Where  $y_i$  = value of  $y$  (for  $i$ th observation)

The scale of the correlation co-efficient ranges from  $-1$  (perfect negative downhill linear relationship) to  $1$  (perfect positive uphill linear relationship), where  $0$  indicates that there is no linear relationship. In addition, the study conducted a regression analysis to determine the effect that the IV has on the DV and to assess the variation, computed with the formula below:

$$Y = a + bX \quad (2)$$

Where  $Y = DV$

Where  $X = IV$

Where  $b = slope$

Where  $a = y-intercept$

## Hypotheses

The study hypothesises that citizens of countries with low levels of IP are less likely to perceive their governments as corrupt due to a lack of information and possibilities of social interaction provided by social media.

## Limitations

To remain relevant, the data may need to be updated.

## Results

Table 1 shows the regression slope, Pearson correlation and determination coefficients between IP (% of the population), CPI, and Facebook subscription in Africa, based on Internet World Stats as of March 2020 and the CPI from Transparency International as of 2019 (Internet World Stats, 2020). It shows that the regression slope and the correlation coefficients for IP (which constitutes as our IV) and CPI and Facebook subscriptions (which constitute as our DVs) are both positive. The regression slope for these variables are 0,23 and 0,53 respectively, while the correlation coefficients for CPI and Facebook subscriptions are a moderate 0,42 and a relatively strong 0,63 respectively. These results were generated using observations from 55 African countries. The determination coefficients ( $R^2$ ) for these variables as produced by the regression analysis were 18% and 40%.

**Table 1:** Regression slope, pearson correlation and determination coefficients

Regression slope Internet penetration to	Correl test Internet penetration to	Number of observations	$R^2$
Corruption Perception Index			
0.23	0.42	55	0.18
Facebook subscriptions			
0.53	0.63	55	0.40

Source: compiled by the author.

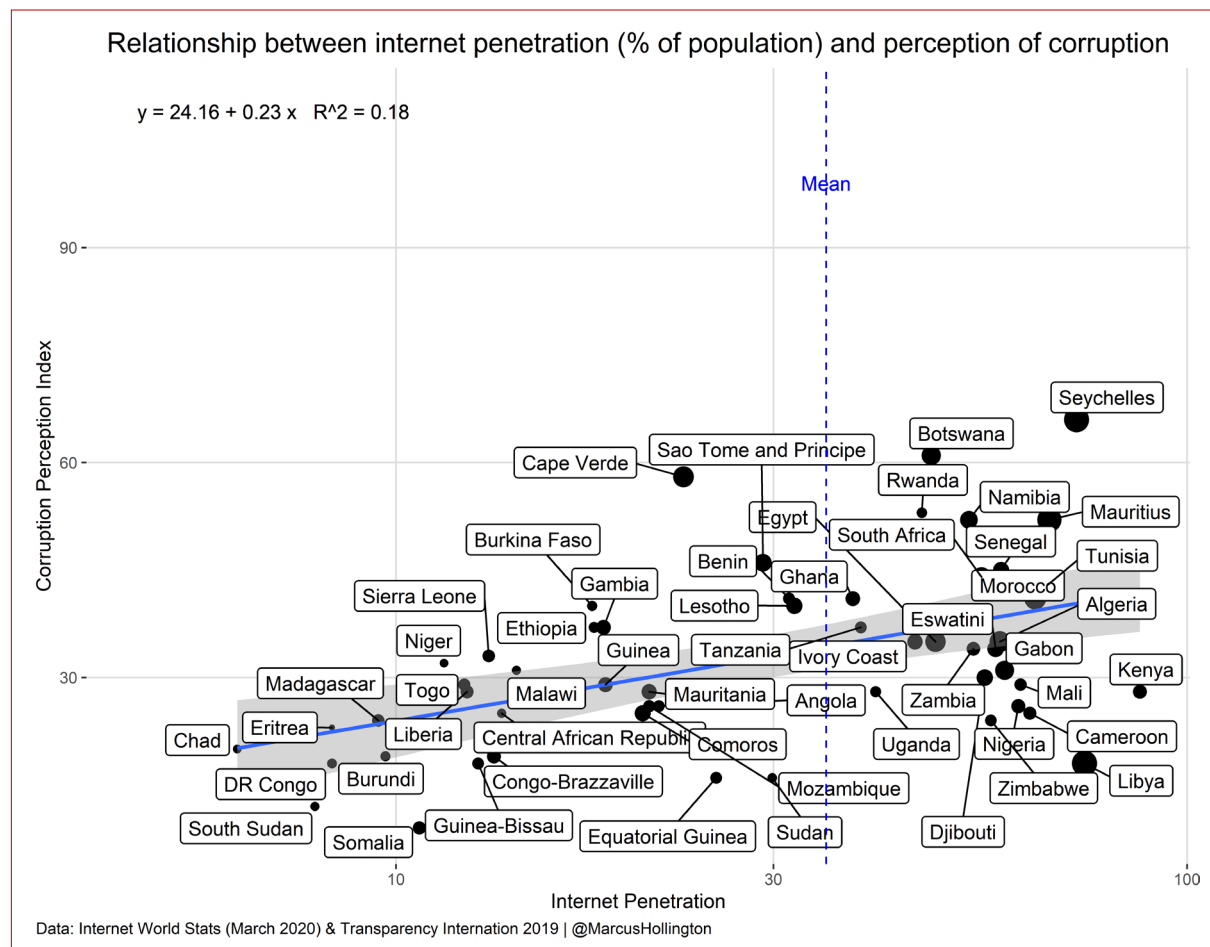
Figure 1 is an extension and visual illustration of Table 1, and delves deeper into the study's regression analysis. It shows that the mean for IP in Africa is 34,97%. The size of the bubble represents the percentage of a country's population with Facebook subscriptions. These were considered as an intervening variable due to its pivotal role in exposing corruption. However, its efficiency as a 'watchdog' mechanism depends on a country's IP. Therefore, Figure 1 goes on to show the relationship between IP and perceptions of corruption, quantified in CPI.

It also shows that the estimated regression line equation for the analysis is:

$$CPI = 24,16 + 0,23 (IP)$$

This indicates that 24,16 is the average CPI for a country with an IP of zero. The slope estimate for IP is 0,23, which means that for an average increase for 1 CPI unit, we would expect IP to increase by 0,23 percentage points/units. Lastly, Figure 1 shows that the R<sup>2</sup> for this segment of analysis is 0,18, which means that even though IP accounts for a significant amount of variation in the CPI of African countries, the analysis only explains 18% of the relationship based on the variation in IP.

**Figure 1:** Relationship between Internet penetration (% of population) and perceptions of corruption



Source: Compiled by the author from Internet World Stats, March 2020; Transparency International, 2019.

## Analysis and recommendations

Corruption has been identified as a major hindrance to economic growth and development which is endemic in Africa and elsewhere in the Global South. While not confined to this region, chronic poverty and conflict in most African countries can be partly attributed to corruption.<sup>17</sup> This is because corruption undermines governance, corrodes governments' ability to render services to their citizens, and discourages investment. This has a range of knock-on effects, including weakening tax collection, decreasing international competitiveness, inviting sanctions, losing support from multilateral financial institutions such as the World Bank and the International Monetary Fund (IMF) and undermining currency stability.

Clearly, combating corruption is vital for breaking this vicious cycle of poor governance and underdevelopment, finally opening the way to improving the wellbeing of Africa's citizens. This could be achieved by expanding access to the internet. This is because increased IP will improve the flow of information and the ability of citizens to mobilise, thereby their ability to demand better and more accountable government.

The ability of the internet to expose and curb corruption and human rights violations has been demonstrated the advent of social movements such as 'Black Lives Matter', which inspired the international 'Zimbabwean Lives Matter' hashtag campaign. This, in turn, has been utilised to focus international attention on the misconduct of the Zimbabwean government under president Emmerson Mnangagwa.

Given the ability of social media to publicise issues and mobilise people on a global basis, the campaign has gained considerable global traction. This underlines that social movements in a particular period are shaped by the technology available to them. In 1965, television news crews penetrated police blockades and exposed the brutal treatment of civil rights marchers by police to 48 million Americans.<sup>15</sup> In 2020, the internet and social media became a driving mechanism for combating corruption on a global basis.

## The potential role of the fourth industrial revolution

It has become clear that the fourth industrial revolution can be leveraged to combat corruption. More specifically, e-governance can be used to enhance transparent and accountable governance as well as citizen participation, and improve service provision.

E-governance can combat corruption by enabling public insight into government tenders and other transactions,<sup>16</sup> providing universal access to tender procedures and other relevant information, and limiting or eliminating personal contacts between government officials and potential contractors.

However, this can only happen if IP is improved. Table 1 shows clearly that IP and perceptions of corruption are highly correlated at 42%. Moreover, the efficiency of e-governance in combating corruption has been demonstrated in both developed and developing countries, although to varying degrees.

Japan, Bangladesh, Israel and Singapore have succeeded in utilising e-governance to improve governance and curb corruption.<sup>18</sup> Kenya, South Africa and Nigeria have taken steps in this direction, but still have far to go.<sup>19</sup> In Africa, e-governance should be enabled by ICT rollouts at a national and continental level, thereby creating environments that will be less susceptible to corruption.



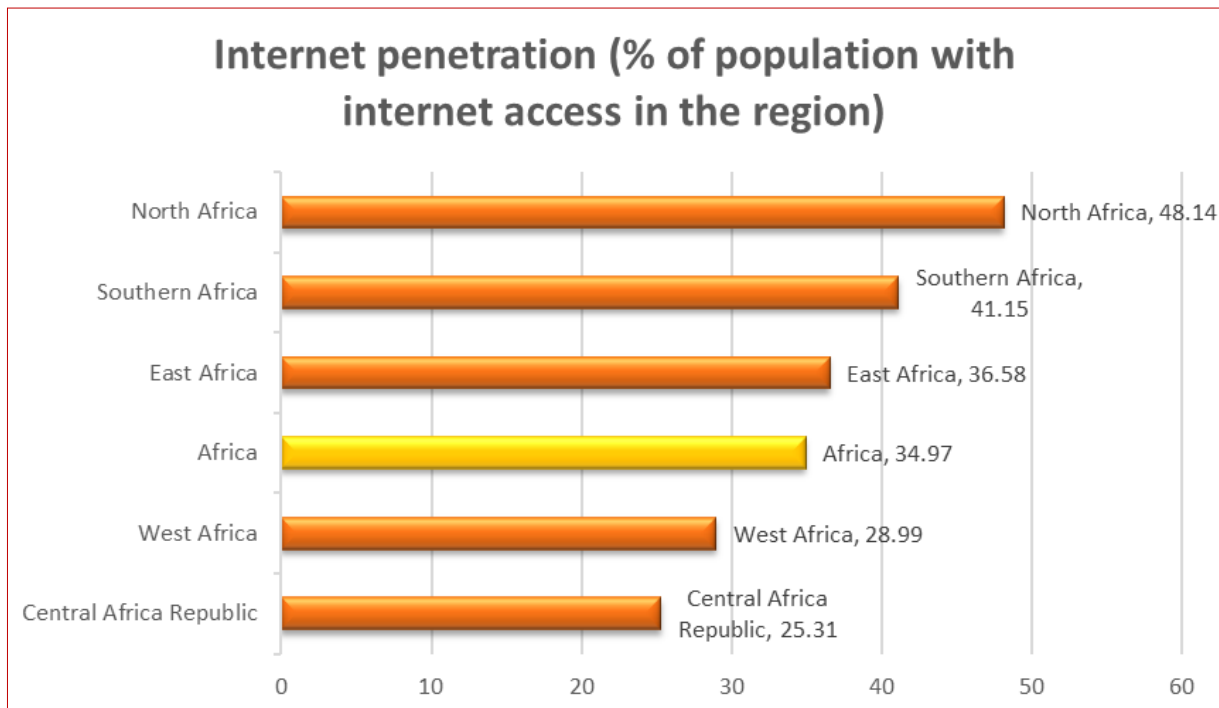
**Figure 3:** IP in various African subregions as of March 2020

Figure 3 shows IP in various African regions, including a significant drop from North Africa down to West Africa and the CAR. This shows that a bottom-up approach could be utilised by allocating most new resources to high-risk regions such as Central and West Africa. Planners should realise that the continent is interconnected, and so is corruption.

## Conclusion

Corruption is a major obstacle to African growth and development. It corrodes governance, and undermines service delivery. In turn, this undermines civil relations with government, as well as citizens' faith in democracy. This is illustrated by the numerous Covid-19 corruption scandals across the continent, at the expense of ordinary citizens.<sup>20</sup>

The paper has demonstrated that IP is linked to perceptions of corruption. This means that corruption can be combated by higher levels of investment in ICT, resulting in better information flows, and a more active citizenry. Following from this, it recommends that the 4<sup>th</sup> industrial revolution be leveraged by investing in e-governance, which could improve governance, citizen participation, service provision, and ultimately the wellbeing of Africa's people.

## References

- Africa CDC. 2020. 'Africa CDC - COVID-19 Daily Updates.' Africa CDC. 2020 [cited 4 September 2020]. Available from: <https://africacdc.org/covid-19/>
- Aguilar et al. 2020. '85% of Africans live on less than \$5.50 per day.' World Bank Blog. 3 September 2020. At <https://blogs.worldbank.org/opendata/85-africans-live-less-550-day>

- BBC. 'Hopewell Chin'ono: Whistle-blowing Zimbabwean journalist arrested.' 2020 BBC News [cited 4 September 2020]. Available from: <https://www.bbc.com/news/world-africa-53477423>
- Deutsche. 2020. 'Do coronavirus lockdowns in Africa make sense?' | DW | 24.04.2020. DW.com. [cited 4 September 2020]. Available from: <https://www.dw.com/en/do-coronavirus-lockdowns-in-africa-make-sense/a-53228689>
- International Rescue Committee. 2020. 'The double burden of COVID-19 and locusts in East Africa: Saving Millions of People From Hunger and Malnutrition.' New York: International Rescue Committee; 2020 p. 1-4. Available from: <https://www.rescue.org/sites/default/files/document/4884/eastafricalocustsoutbreak.pdf>
- Internet World Stats. 'Africa Internet Users, 2020 Population and Facebook Statistics.' Internetworldstats.com. 2020 [cited 7 September 2020]. Available from: <https://www.internetworldstats.com/stats1.htm>
- Mutsaka F. 2020. 'Zimbabwe reporter denied bail as government arrests critics'. *Washington Post*. 4 September 2020. At <https://www.washingtonpost.com/>
- Nduku E, Tenamwenye J. 2015. *Corruption in Africa: A Threat to Justice and Sustainable Peace*. Geneva: Globethics Net.
- Our World in Data (OWID). 'Restrictions on internal movement during the COVID-19 pandemic. Our World in Data.' 2020 [cited 4 September 2020]. Available from: <https://ourworldindata.org/grapher/internal-movement-covid?year=2020-03-26>
- Schipani A, Cotterill J, Neil Munshi. Africa's Covid-19 corruption: 'Theft doesn't even stop during a pandemic'. Ft.com. 2020 [cited 4 September 2020]. Available from: <https://www.ft.com/content/617187c2-ab0b-4cf9-bdca-0aa246548745>
- The African Capacity Building Foundation. 2020. 'Brain Drain in Africa: The Case of Tackling Capacity Issues in Malawi's Medical Migration.' Harare: The African Capacity Building Foundation; 2018 p. 1. Available from: [https://media.africaportal.org/documents/Brain\\_Drain\\_English.pdf](https://media.africaportal.org/documents/Brain_Drain_English.pdf)
- Transparency International. Corruption Perceptions Index. Transparency.org. 2020 [cited 7 September 2020]. Available from: <https://www.transparency.org/en/cpi>
- Yusuf A. 2020. Maxkamadda Gobolka Banaadir oo xukunno kala duwan ku ridday saraakiil ka tirsanaa Wasaaradda Caafimaadka. | Somali National Television - sntv.so. Sntv.so. 2020 [cited 4 September 2020]. Available from: <https://sntv.so/2020/08/24/maxkamadda-gobolka-banaadir-oo-xukunno-kala-duwan-ku-ridday-saraakiil-ka-tirsanaa-wasaaradda-caafimaadka/>