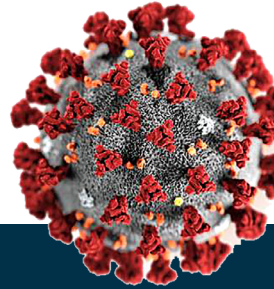


# The effect of **COVID-19** on the operations of agro-processing MSMEs in Uganda

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## Executive Summary

Uganda's Micro, Small and Medium Enterprises (MSMEs) are among the worst affected businesses by the COVID-19 pandemic. This policy note examines how the pandemic has affected specific operations of the agro-processing MSMEs. Based on a unique survey of 172 agro-processing MSMEs conducted in February and March 2021, we find that some firms could re-evaluate their production processes and adapt their production to items demanded by pandemic conditions, such as Personal Protection Equipments (PPEs). Agro-processing MSMEs continued to rely on retained earnings as the primary source of working capital, suggesting that it will take longer for them to scale up the business. More than one-half of micro agro-processing firms reported decreased access to imported inputs, affecting the productivity and the quality of products. There was an overall stagnation in the use of digital payments such as mobile money by agro-processing MSMEs. Finally, very few firms accessed the stimulus package offered by the government of Uganda. This was attributed to a lack of awareness of the availability of such support facilities and bureaucratic red tape. The policy note calls for interventions to security concerns impeding the further use of online payment and marketing while addressing the cost of technology hardware acquisitions among agro-processors; and a rethink of the approach used to reach MSMEs with support and the need to deal with the red tape and bureaucracies associated with receiving public support.

## Introduction

Uganda's agro-processing Micro, Small, and Medium Enterprises (MSMEs) are essential for achieving sustainable development by contributing to income and employment growth. However, they face many challenges, such as low technology adoption, high cost of capital, and intermittent input supply. These pre-existing challenges have been worsened by the outbreak of the coronavirus disease 2019 (COVID-19) pandemic and the subsequent local and global containment measures. According to Lakuma et al. (2020), MSMEs experienced a severe shortage in access to inputs, a shortfall in demand of their output, and lockdown induced constraints to transport and finance, amongst other conditions.<sup>1</sup> Maintaining the competitiveness of the agro-processing sector calls for a concerted intervention by all stakeholders, including the government and the private sector. However, the envisaged effectiveness of responses is dependent on evidence on how the pandemic has impacted MSMEs.

This policy note examines the effect of the COVID-19 pandemic on agro-processing MSMEs' operations. This policy note focuses explicitly on the following issues: (i) the opportunities presented by the pandemic and how agro-processing MSMEs leveraged these opportunities; (ii) the effect of the pandemic on the supply of inputs for agro-processing MSMEs; (iii) the sources of finance for working capital given the disruptions occasioned by the pandemic; (iv) the response of agro-processing MSMEs to technology and innovation challenges presented by the pandemic; and (v) appropriateness of government support offered through the stimulus package. The above focus is partly guided by data collected as part of the industrial

competitiveness survey.

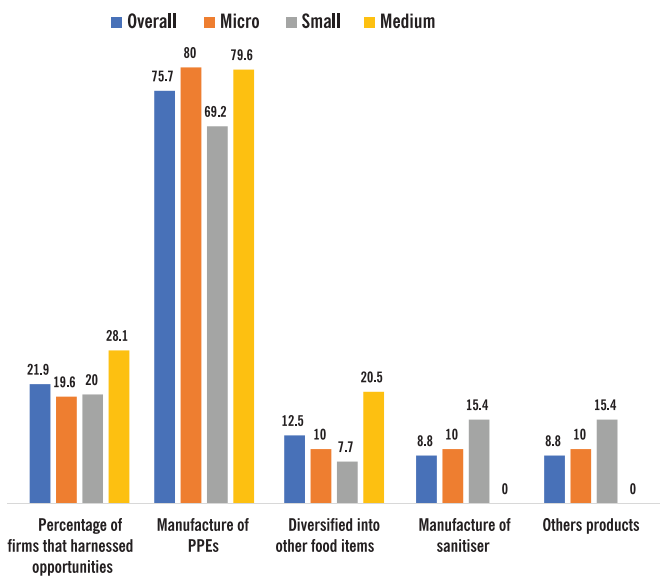
The analysis is based on a survey of agro-processing MSMEs, and the research is undertaken to address parts of EPRC's COVID Response for Equity (CORE) Initiative project. The analysed agro-processing firms were drawn from a survey on enhancing industrial sector competitiveness to boost Uganda's post-COVID-19 economic recovery implemented by EPRC during February and March 2021 (EPRC, 2021).<sup>2</sup> The overall survey covered 480 firms in the three clusters of agro-processing, extractive industries and knowledge-based industries.<sup>3</sup> The sample was based on the Uganda Revenue Authority (URA) sampling frame of about 5,273 industrial firms. For this policy note, we extract only agro-processing firms out of the total firms surveyed. Hence the analysis for the policy note only considers the 172 agro-processing MSMEs, which account for about 36 percent of total firms surveyed.<sup>4</sup> Although covered by the survey, large firms were not considered for the analysis in the policy note, given the CORE initiative focus on MSMEs.

The survey adopted the MSME definition used in the 2015 Uganda Micro, Small, and Medium Enterprise (MSME) policy.<sup>5</sup> Firms with less than five workers were classified as micro, 5 to 49 workers as small, and 50 to 99 employees as medium-sized enterprises. The analysed agro-processing firms comprise 51 micro firms, 80 are small, and 41 are medium. The agro-processing firms are involved in coffee processing, textiles, and apparel; tea processing; cassava processing; grains; vegetable oils, dairy; leather and leather products, among others.

## Opportunities exploited by Agro-processing industries during COVID-19

The outbreak of the COVID-19 pandemic resulted in a sudden increase in demand for medical equipment and items that are essential in controlling the spread of the virus (such as face masks and hand sanitisers). Accordingly, some agro-processing MSMEs modified their production lines to take advantage of these opportunities. Figure 1 shows that about 22 percent of sampled agro-processing MSMEs modified their production lines to manufacture products that fall in the above categories. Furthermore, relatively bigger firms exploited this opportunity—led by medium-size firms at 28 percent. For the firms that re-purposed their production operations, 76 percent of them engaged in manufacturing Personal Protective Equipment (PPE) and 13 percent diversified into other food items and 9 percent into the manufacture of sanitisers.

**Figure 1 Opportunities exploited by Agro-processing industries during COVID-19 (% of firms).**



## Sourcing of inputs used in agro-processing

To contain the spread of the virus, the Government of Uganda implemented lockdowns—starting in March 2020 and these severely limited economic activities, including the acquisition of inputs. In Uganda, agro-processing MSMEs depend on inputs supplied both domestically as well as from foreign sources. Previous research by Lakuma et al. (2020) argues that factory closures in China and other leading suppliers of intermediate inputs for many manufacturers in Uganda are responsible for input supply disruption. Table 1 compares the source of inputs for the sampled firms before the pandemic in 2019 and after the first lockdown was lifted in 2020. The results show that there were marginal changes in sources of inputs used in agro-processing. More than 85 percent of inputs were sourced

domestically. Also worth noting is the fact that there was a marginal reduction in inputs sourced from the East African Community (EAC)—a critical trading block. Overall, most of the surveyed agro-processing MSMEs source most of their inputs domestically and thus were not affected by the COVID 19 containment measures. However, the low level of imported inputs may also point to the low value of products of most agro-processing MSMEs in Uganda.

**Table 1 Percentage of inputs from the different origins**

Sources of inputs (% of inputs)	Overall		Micro		Small		Medium	
	2019	2020	2019	2020	2019	2020	2019	2020
Domestic (within Uganda)	85.3	85.7	89.6	89.7	87.1	87.6	77.7	79.9
East African Community (EAC)	6.2	5.4	2.5	1.8	6.7	5.7	8.9	7.0
Outside EAC but within Africa	1.0	1.5	0.0	0.0	0.3	1.4	3.7	3.7
Outside Africa	7.5	7.4	7.8	8.5	5.9	5.4	9.6	9.4
<b>Number of firms</b>	<b>185</b>	<b>186</b>	<b>51</b>	<b>51</b>	<b>79</b>	<b>80</b>	<b>41</b>	<b>41</b>

Source: Source: ADB industrial sector survey data 2021

Table 2 examines whether the availability of inputs increased, decreased or remained the same due to the COVID pandemic. Whereas the significant sources of inputs used in production remained stable, there were substantial changes in inputs' availability. Most of the surveyed agro-processing MSMEs that depend predominantly on the domestic market registered decreases in access to domestic inputs (64 percent). Nonetheless, even among those that rely on imports for inputs, a decline of 41 percent was recorded. However, firms that depend on imports were more likely to report a "no-change" in availability (about 48 percent), and these were predominantly medium-sized firms. This is mainly because the trans-border transportation of logistics was not halted during the lockdown.

**Table 2 Changes in the availability of inputs due to COVID-19, % of firms**

Change in access to inputs	Overall		Micro		Small		Medium	
	Local	Imported	Local	Imported	Local	Imported	Local	Imported
Increased	12.7	17.9	11.1	0.0	6.8	27.6	23.5	13.8
Decreased	66.4	62.6	68.9	87.5	67.6	55.2	63.4	55.2
No change	21.0	19.5	20.0	12.5	25.7	17.2	13.1	31.0
<b>Number of observations</b>	<b>170</b>	<b>75</b>	<b>45</b>	<b>16</b>	<b>75</b>	<b>29</b>	<b>37</b>	<b>20</b>

Source: Source: ADB industrial sector survey data 2021

## Sources of working capital for agro-processing MSMEs

Disruptions caused by a pandemic like COVID-19 can place significant strains on the sources of finance for MSMEs. The survey collected information on the sources of finance for working capital before and after the pandemic. Table 3 profiles the size of firms and their source of working capital both before (2019) and during

COVID-19 (2020). It is indicated that the COVID-19 crisis did not change the source of working capital substantially. Most of the surveyed agro-processing MSMEs relied on retained earnings to finance working capital. However, the proportion of observed MSMEs that relied on retained earnings for working capital increased from 56 percent to 63 percent. The use of commercial bank loans as a source of working capital marginally reduced by 2 percentage points to 17 percent. However, the micro-sized firms appear to have increased their use of commercial bank loans by 5 percentage points to 12 percent. A major drawback with using internal sources of finances, i.e. supporting firm growth organically—is that it takes longer to scale up the business. On the other hand, the high use of internal capital could also indicate the high cost of external capital. Whereas borrowing would allow firms to expand capacity more quickly, the downside is that firms may be leveraging more than they can carry.

**Table 3** Source of working capital for agro-processing firms between 2019 and 2020, % of firms

Source of working capital	Overall		Micro		Small		Medium	
	2019	2020	2019	2020	2019	2020	2019	2020
Retained earnings	56.3	62.6	63	62.8	52.6	62.5	55.6	62.6
Loan from commercial bank	18.8	17.3	6.5	11.8	17.1	12.5	35.1	32.8
Loan from non-bank financial institutions (microfinance, credit cooperatives, etc)	6.1	5.8	4.4	2.0	9.2	11.3	2.3	0.0
Purchased on credit from suppliers	3.0	5.2	4.4	7.8	2.6	5	2.3	2.3
Money lenders	0.0	1.2	0.0	3.9	0.0	0.0	0.0	0.0
Others specify	4.3	1.7	4.4	0.0	5.3	2.5	2.3	2.3
Owner's contribution/savings	11.5	6.3	17.4	11.8	13.2	6.3	2.3	0.0
Sample	163	172	46	51	76	80	41	41

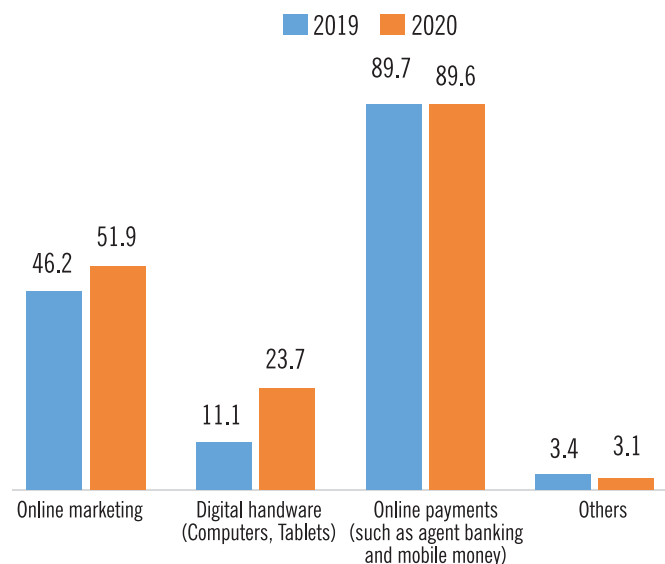
Source: Source: ADB industrial sector survey data 2021

### Technology challenges presented by the pandemic

The reduced economic interactions and the requirement to maintain public health standard operating procedures relating to social distancing made Information and communication technology (ICT) tools critical for facilitating payment, marketing and disseminating agro-related industrial technology. Figure 2 provides a snapshot of the proportion of agro-processing MSME adopting information and communication technology (ICT) during the pandemic. Overall, the use of ICT tools among the MSMEs is seemingly mixed. On the one hand, there was stagnation and marginal improvement in online payment and online marketing, respectively. Specifically, the use of online payments stagnated but remained high at 89 percent, while the use of online marketing improved marginally by 6 percentage points to 52 percent. The stagnation and marginal improvement in payment systems and online marketing could be driven by concerns about data, security of payment systems during the lockdown, and the remote availability of payment systems other than mobile money (Alshhab et al., 2021).<sup>6</sup> Indeed, several banks, telecom companies

and mobile users in Uganda were hacking targets during the first lockdown.<sup>1</sup>

**Figure 2** Percentage of agro-processing MSMEs using various forms of technologies before and after Covid-19 outbreak



Source: Source: ADB industrial sector survey data 2021

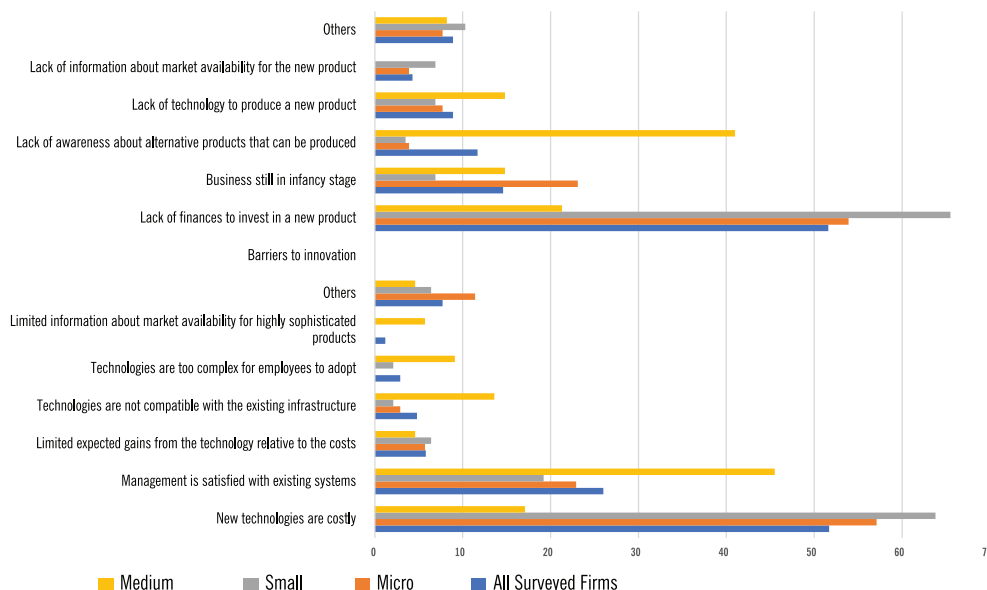
On the other hand, there was a 13 percentage point increment to 24 percent in digital hardware such as computers and tablets after the pandemic (Figure 1). Digital hardware such as laptops and tablets enable staff to work from home. The rise in hardware acquisition could be related to improved business flexibility, efficiency and staff productivity during the pandemic. Disaggregating by the firm's size, the results indicate (not shown in the chart) medium-sized firms registered the most significant increase in hardware acquisition—from 22 to 72 percent. The relatively lower demand for hardware by micro and small agro-processing firms may be related to the extra cost of upgrading hardware for new software versions.

Furthermore, previous research by Kane (2015) shows that micro and small agro-processing firms have lesser human resources and time to manage new hardware.<sup>7</sup> On the other hand, unlike online payment and hardware acquisitions, the use of online marketing marginally reduced by 6.2 percentage points. Notably, medium agro-processing firms significantly reduced the use of online marketing by more than half from 48 to 19 percent (not shown in the chart).

The survey also captured information on the barrier to technology and innovation adoption. Figure 3 shows the significant barriers by size. Generally, the chart indicates that technology deployment puts several questions on the table regarding the affordability and

<sup>1</sup> <https://www.monitor.co.ug/uganda/news/national/conmen-target-mobile-money-users-in-lockdown-1886740>

**Figure 3 Major barriers to adoption of technology and innovation, % of firms reporting**



utilisation of those technologies by agro-processing MSMEs. The majority of agro-processing (52 percent) cited that new technologies are costly. The high cost of technology was also cited by micro (57 percent) and small-sized enterprises (64 percent).

On the contrary, a majority medium (46 percent) cited management satisfaction with existing systems as barriers to new technology adoption. Limited expected gains from the technology relative to the costs was also cited by 6 percent of agro-processing MSMEs. At least 5 percent of surveyed firms cited industries technologies are not compatible with the existing infrastructure as a barrier—with the largest share reported among medium-sized firms (close to 14 percent). Medium-size firms were more likely to frequently report that technologies are too complex for employees to adopt (9 percent) as a barrier to technology adoption.

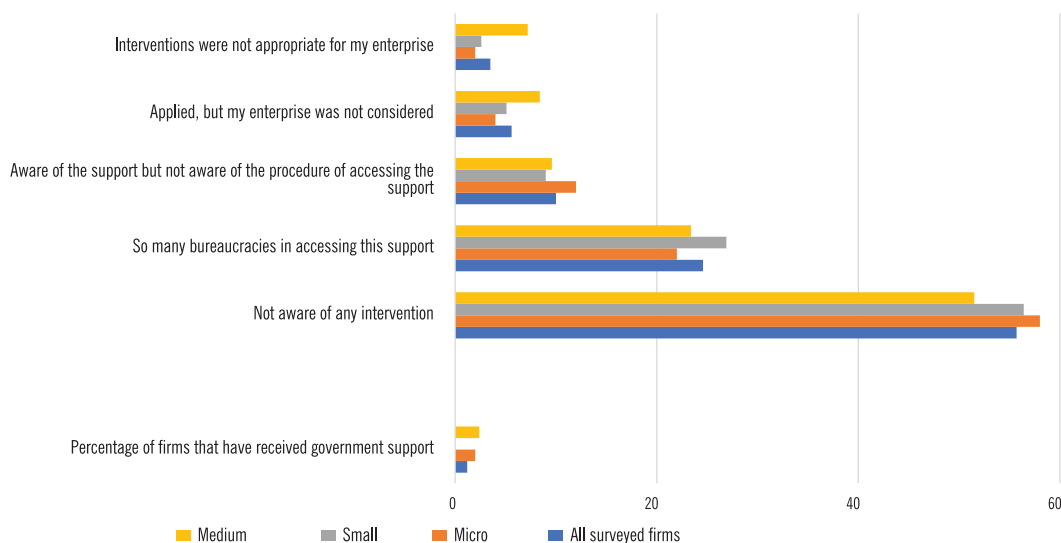
Concerning innovation, lack of finances to invest in new products was the main barrier overall (52 percent). However, this was most frequently cited among micro and small firms than by medium-size firms. The second most significant barrier to innovation was that management is satisfied with existing systems among micro (23 percent) and small (19 percent) enterprises. On the contrary, lack of awareness about alternative products produced was a major barrier to innovation to most medium (41 percent) agro-processing firms. Lack of finances to invest in a new product (17 percent) and technologies that are not compatible with the existing infrastructure (14 percent) was the second and the third most significant barrier, respectably, for medium agro-processing firms.

### Benefit from government Support

To mitigate the adverse effects of the COVID-19 pandemic, the Government of Uganda instituted several measures, including providing a stimulus package to formal enterprises. Specifically, the government announced in June 2020 a recapitalisation to the tune of UGX 1040.5 Billion for the Uganda Development Bank, UGX 100 Billion for Uganda Development Corporation (MoFPED, 2020).<sup>8</sup> These additional resources were for onward lending to qualifying firms distressed by the COVID-19 pandemic, the provision of investment funding for SMEs, and industrial parks’ development. As such, the survey inquired whether firms have received any government support.

Figure 4 shows the extent to which surveyed agro-processing firms received government support. The figure suggests that a marginal share of agro-processing MSMEs (1.2 percent) received government stimulus support. The reasons advanced for not receiving government stimulus support are lack of awareness (56 percent), so many bureaucracies in accessing this support or any government stimulus (25 percent), aware of the support but not aware of the procedure of accessing the support (10 percent), applied. Responses such as “my enterprise was not considered” and “interventions were not appropriate for my enterprise” were also cited by 6 and 4 percent, respectively, of the surveyed firms. Previous research suggests that the three institutions selected to channel the stimulus support (i.e. Uganda Development Bank, Uganda Development Corporation and Microfinance Support Centre) and the eligibility criteria used presented several challenges for agro-processing MSME to access funding (ISER,2020).<sup>9</sup>

**Figure 4 Agro-processing firms that benefitted from government support**



### Conclusions and policy implications

Overall, the outbreak of COVID 19 seems to have affected many dimensions of agro-processing firms in Uganda, in some instances offering opportunities and many other presenting challenges. Drawing from a sample of 172 agro-processing MSMEs, the results suggest that about 22 percent of agro-processing MSMEs modified their production lines to manufacture essential products to control the spread of the virus (such as face masks and hand sanitisers).

Agro-processing MSMEs marginally reduced their inputs sourced from the East African Community (EAC)—a critical trading block. Overall, most of the surveyed agro-processing MSMEs sourced most of their inputs domestically and thus were not affected by the COVID 19 containment measures.

COVID-19 crisis did not change the source of working capital substantially. Most of the surveyed agro-processing MSMEs relied on retained earnings to finance working capital. However, the proportion of observed MSMEs that relied on retained earnings for working capital increased from 56 percent to 63 percent.

Overall, the use of ICT tools among the MSMEs is mixed. On the one hand, there was stagnation and/or marginal improvement in the use of online payment and online marketing, respectively. On the other hand, there was a 13 percentage point increment to 24 percent in the use of digital hardware such as computers and tablets after the pandemic.

Concerning ease of access to stimulus, slightly more than 1 percent of agro-processing MSMEs received government stimulus support. The main reasons for not receiving government stimulus support are

lack of awareness of the stimulus and or the process and so many bureaucracies in accessing this support or any government stimulus. This policy note calls for: 1. deepening the product space and sustaining the demand for the opportunities presented by COVID 19. 2. Sustenance of the domestic input supply system while encouraging the use of imported intermediate to improve the value of domestic output and potential exports. 3. Improve on formal financial inclusion of agro-processing MSMEs 4. Address the security concerns impeding the further use of online payment and marketing while addressing the cost of technology hardware acquisitions among agro-processors. 5. There is an urgent need to rethink the approach used to reach MSMEs with support. The available Development Finance Institutions such as UDB need to be re-purposed to lend to agro-processing MSMEs who require less than UGX 100 million (about USD 28,000). In addition, there is a need to deal with the red tape and bureaucracies associated with receiving public support.



## Endnotes

- 1 Lakuma, P.C., Sunday, N., Sserunjogi, B., Kahunde, R. and Munyambonera, E.F., (2020), *How has the COVID-19 Pandemic Impacted Ugandan Businesses? Results from a Business Climate Survey*, EPRC BCI Special report No. 1.
- 2 EPRC (2021), *Enhancing industrial sector competitiveness to boost Uganda's post COVID economic recovery*, Economic Policy Research Centre (EPRC), Draft Report (Forthcoming)
- 3 The clustering does not follow the standard industrial classification. The clustering followed the National Industrial Policy (NIP) 2020 and the need to define industrialization as value addition segment of the industrial sector.
- 4 The other two sectors on Extractive industries and Knowledge based industries are beyond the scope of this report.
- 5 Ministry of Trade Industry and Cooperatives (2015). Uganda Micro, Small, and Medium Enterprise (MSME) Policy: Sustainable MSMEs for Wealth Creation and Socio-Economic Transformation
- 6 Ziyad R.Alashhaba, Mohammed Anbara, Manmeet Mahinderjit Singhb, Yu-Beng Leauc, Zaher Ali Al-Saib and Sami Abu Alhayja'aa (2021), *Impact of coronavirus pandemic crisis on technologies and cloud computing applications*, Journal of Electronic Science and Technology, Volume 19, Issue 1, March 2021, 100059.
- 7 Kane G.C., Palmer D., Philips A.N., Kiron D., Buckley N. (2015), *Strategy, not technology, drives digital transformation: Becoming a digitally Mature Enterprise*, MIT Sloan Management Review. 2015 (Special Report on digital business).
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- 9 ISER, (2020), *Uganda's covid-19 economic stimulus package: Will it deliver?* [https://iser-uganda.org/images/downloads/Ugandas\\_COVID-19\\_Economic\\_Stimulus\\_Package-Will\\_it\\_deliver.pdf](https://iser-uganda.org/images/downloads/Ugandas_COVID-19_Economic_Stimulus_Package-Will_it_deliver.pdf)