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Document Version

Accepted author manuscript

Published in:

Africa Journal of Management

DOI:

[10.1080/23322373.2021.1878809](https://doi.org/10.1080/23322373.2021.1878809)

Publication date:

2021

License

Unspecified

Citation for published version (APA):

Namatovu, R., & Møller Larsen, M. (2021). Responding to COVID-19: Insights from African Firms. *Africa Journal of Management*, 7(1), 104-120. <https://doi.org/10.1080/23322373.2021.1878809>

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Download date: 20. Sep. 2024



**RESPONDING TO COVID-19:
INSIGHTS FROM AFRICAN FIRMS**

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This is an Accepted Manuscript of an article published by Taylor & Francis in *Africa Journal of Management* on 17 Feb 2021, available at:

<http://www.tandfonline.com/10.1080/23322373.2021.1878809>

Abstract: The severity of the COVID-19 pandemic is underscored by its systemic distortion of socioeconomic and political agendas around the world. It has disproportionately affected fragile states, and has exposed economies with inefficient safety nets. In this article, we contend that while the uncertainty occasioned by the COVID-19 pandemic has been devastating for many African firms, the situation has also given rise to new entrepreneurial opportunities. We draw on three cases from Africa (one multinational corporation, one start-up, and one informal firm) to outline how the COVID-19 pandemic can also be regarded as a source of entrepreneurship in uncertain times. We conclude by discussing implications for African management practice and research.

Keywords: COVID-19, uncertainty, entrepreneurship, innovation, Africa.

INTRODUCTION

Over the past decades, African economies have accelerated their efforts to develop, invested more in infrastructure, and reduced inflation. With burgeoning entrepreneurial and innovative forces, Africa is home to some of the world's fastest growing economies and have emerged as “a continent of hope”.¹ However, disruptive forces threaten to reverse this optimistic trajectory. In particular, while the African continent has previously faced many disruptions including war, hunger, climate change and natural disasters, the high uncertainty and systemic nature of the distortion caused by the unanticipated COVID-19 pandemic has infiltrated health, social, and economic ecosystems, and is consequently curtailing the performance and competitiveness of economies, firms, and other economic actors.

For example, projections showed that Africa's economic growth will decline by at least 1.7 to 3.4% in 2020 compared to pre-COVID-19 projections of 3.9% growth. While pre-COVID-19 estimated GDP stood at \$2.59 trillion for 2020, cumulative gross domestic product losses are estimated to range between \$145.5 billion to \$189.7 billion.² It is further estimated that 30 to 35 million formal jobs are at risk of reduction in wage, and between 9 million and 18 million jobs could be lost or made redundant due to the COVID-19 pandemic (Jayaram, Leke, Ooko-ombaka, & Sun, 2020). Before the outbreak, Africa's population in extreme poverty (using the \$1.90 international poverty line) was 453.4 million. The pandemic is estimated to push an additional 28 to 49 million people into extreme poverty,³ and thereby exposing the stark absence of effective social safety nets in many African countries (Narula, 2020).

¹ <https://www.un.org/africarenewal/web-features/continent-hope> (accessed July 2, 2020)

² <https://www.afdb.org/en/news-and-events/post-covid-19-rebuilding-africa-and-strengthening-its-resilience-against-future-economic-shocks37467> (accessed September 15, 2020)

³ <https://www.afdb.org/en/news-and-events/post-covid-19-rebuilding-africa-and-strengthening-its-resilience-against-future-economic-shocks37467> (accessed September 15, 2020)

The COVID-19 pandemic has posed dire human and economic consequences that have necessitated far-reaching governmental interventions. For example, African governments have responded by extensively borrowing from the International Monetary Fund (IMF), reaching more than \$15 billion per September 2020 as rescue packages.⁴ However, the structural complexity of the pandemic coupled with limited resources has also curtailed the extent to which the relief funds have effectively been utilized. Many governments have prioritized the health sector, while leaving dismal support for other economic actors. Even though governments have committed themselves to fiscal stimulus packages such as tax holidays, reduced business licenses, facilitated delays in payment, and in rare cases provided subsidies to cushion the economic effects of the pandemic, economic actors remain disproportionately affected.

In particular, the COVID-19 pandemic has caused several challenges for African firms at varying levels. The lock-down led to a temporary closure or slowdown in operations of many factories and businesses. Consequently, there has been a stark drop in demand for goods such as energy, food and cargo shipping (Doytchinova et al., 2020). Medium-sized firms have succumbed to massive layoffs and reduction in salaries, and thus shrinking the formal sector (Jayaram, Leke, Ooko-ombaka, & Sun, 2020). A number of firms have struggled to implement digital initiatives while others are uncertain of how to manage remote work⁵. Moreover, due to disruption in the transport system, firms are facing logistical and labor shortages, as production was halted and global value chains were interrupted. The hospitality, tourism and entertainment sector in economies like Algeria, Angola, Botswana, Nigeria and Zambia were particularly hard hit by the lockdown because the drop in consumer confidence and several shutdowns of important global value chains. The lockdowns have also

⁴ <https://www.imf.org/en/Topics/imf-and-covid19/COVID-Lending-Tracker#AFR> (accessed September 2, 2020)

⁵ <https://www.uneca.org/stories/african-businesses-shifting-towards-new-technologies-response-covid-19-pandemic> (accessed November 1, 2020)

disproportionately affected the informal sector and SMEs in service sector, both because they are usually not eligible to receive governmental support, but also because an increasing number of people seek informal business given vast lay-offs from the formal sector. Women and self-employed workers have been most severely impacted by the closure of market places and strict social distancing restrictions associated with the crisis (Doytchinova et al., 2020). However, as Narula (2020: 306) note, the consequences for the informal enterprises may not be that straightforward: *“On the one hand, few informal enterprises have the resources to remain in operations during a slowdown. On the other hand, since they tend to ‘own’ few physical assets, and employ people only on an intermittent basis, some are likely to reconstitute themselves once demand returns.”*

At the same time, distortions, though difficult, are also breeding ground for new ideas and forms of organization. Amidst grave uncertainty, risk-seeking entrepreneurs enact new opportunities, create novel forms of solutions, save and even grow existing organizations. As we argue in this article, the COVID-19 pandemic may function as a catalyst for change to support innovations within a wide range of sectors, such as the digital and health sectors. Many African firms have tweaked business models to accommodate the socio-cultural extremities attached to the crisis.

Specifically, we highlight how the distortions caused by the COVID-19 pandemic can serve as an impetus for change and active engagement of a wide range of economic actors. While the severity of the economic, social and cultural consequences of the COVID-19 pandemic on African economies shall clearly not be underestimated, we suggest that the shock and disruptions caused by the COVID-19 pandemic may also lead to innovation and entrepreneurial action in African management. Through three case illustrations, we expose the value of continuously innovating business models by illustrating 1) how an informal firm changed its business model to beef up community resilience; 2) how innovations addressing

societal challenges emerge from collaborative ecosystems; and 3) how an African multinational revamped its digital online performance by embedding its activities with community needs. In sum, we contribute by raising awareness of the importance of studying how African firms respond to the COVID-19 pandemic in particular, but also to disruptions and uncertainties in more general.

THEORETICAL BACKGROUND

COVID-19, discontinuous change, and uncertainty

While it is too early to understand the full impact of the COVID-19 pandemic on African firms, there is little doubt that the pandemic will carry far-reaching consequences stemming from factors such as the interruption of global value chains, the partial lock-down of national economies, and the severe restrictions on international travel. As Foss (2020: 1) note, *“It is hard to dispute that the COVID-19 disruption was a systemic disturbance, potentially exacerbated by both behavioral responses to the virus itself ... and by government interventions aimed at locking down much of the economy”*.

For African firms, the COVID-19 pandemic may be seen as a sudden and discontinuous change in the environment that cause existing strategies to become increasingly ineffective (Meyer, Brooks, and Goes, 1990). For example, Ethiopian Airlines, Africa's largest airline, has lost more than \$1 billion in revenue and experienced a 90 percent drop in international passenger traffic.⁶ Ongoing surveys of informal traders in Nigeria and Sierra Leone show they are particularly impacted by social distancing rules where they have less customers, challenges restocking, and drops in income after national lockdowns were implemented.⁷ Equally, the Kenyan coffee shop Java House has been forced to cut staff

⁶ <https://www.africanews.com/2020/09/29/how-ethiopian-airlines-rode-out-the-coronavirus-pandemic/> (accessed November 6, 2020)

⁷ <https://www.theigc.org/event/policies-to-address-covid-19s-impact-on-africas-informal-sector/> (accessed November 6, 2020)

salary by 40 percent due to low customer numbers.⁸ Similar to the global financial crisis of 2008 (Lee and Makhija, 2009; Wan and Yiu, 2009), a crisis like the COVID-19 pandemic has thus caused unpredictable, significant downward shifts in the level of demand and dramatically altered the level of environmental munificence.

In particular, the COVID-19 pandemic has caused substantial uncertainty, whereby firms are less able to understand how components of the environment may be changing, and thereby cannot assign probabilities to the likelihood of future events to occur (cf. Miliken, 1987). For example, firms are not able to assign probabilities to central questions such as how long the crisis will last; when and at what pace the economies will reopen; and perhaps also more devastatingly *whether* trade will resume to pre-crisis levels. To illustrate, the Kenyan tourism industry is currently suffering tremendously from sharp drop in foreign visitors, but in particular from the uncertainty of not knowing when tourists will reemerge.⁹ Relatedly, the COVID-19 pandemic will expose many firms with the uncertainty of not understanding how changes in the environment will affect the focal organization. For example, firms may not be able to understand how the ongoing COVID-19 will affect their own organization and employees, their markets, or value chains. In this respect, Narula (2020) discusses how economies with large informal sectors face a particularly uncertain future as large firms are increasingly reluctant due to the COVID-19 pandemic to subcontract activities to informal enterprises. Finally, the COVID-19 disturbances may cause substantial uncertainty through which firms do not understand what response options are available and what their value is. For example, firms may struggle answering important questions related to whether the crisis undermines or potentially strengthens their strategic options; if diversification or specialization could be the more appropriate response; or whether they may maintain or

⁸ <https://www.businessdailyafrica.com/bd/corporate/companies/java-house-slashes-wages-by-40pc-as-covid-19-bites-2287836> (accessed November 6, 2020)

⁹ <https://www.aljazeera.com/features/2020/8/4/kenya-as-wildebeest-migrate-covid-19-keeps-tourists-at-bay> (accessed November 6, 2020)

change prior aspirations.¹⁰ To illustrate, Shoprite, the South African supermarket chain, is currently uncertain whether it should pull its activities out of Nigeria, due to the uncertainty derived from the pandemic.¹¹

Entrepreneurial responses

Given the uncertainty caused by the COVID-19 pandemic, a natural question pertains to understanding how firms respond to dramatic shifts in the environment. In this respect, it is important to remember that the COVID-19 pandemic is primarily associated with dire health, social and economic consequences. Consequently, managers may respond by becoming more risk averse, hesitant, indecisive, and procrastinated (cf. Casson, 1982), and would thus rather want to ‘wait-and-see’ what the consequences of the crisis will be. Decision makers are likely to perceive high levels of uncertainty as threatening, and respond by being conservative (Chen and Miller, 2007) and hesitant to modify their strategy (Wan and Yiu, 2009).

Indeed, based on firm level data from across Africa, Zoogah (2018) found a negative effect of informal institutional risk on firm performance. As he argues (2018: 402), “*Even though African economies represent a great potential for return on investment marked by opportunities in the agriculture, retail, banking, infrastructure, natural resources, and telecommunications sectors [...] the dominance of the informal economy represents institutional risks to firms because of lack of access to education, inadequate and meaningful employment, poor quality housing and health care, water, and basic sanitation.*” Presumably, the COVID-19 pandemic will exacerbate the formal and informal institutional risks in Africa. The potential losses associated with high levels of uncertainty may therefore push firms even

¹⁰ Milliken (1987) categorize three types of uncertainty according to 1) uncertainty relating to the state of the environment (state uncertainty); 2) uncertainty relating to how changes in the environment will effect our organization (effect uncertainty); and 3) uncertainty relating to how we can respond to the changes in the environment (response uncertainty).

¹¹ <https://www.bbc.com/news/world-africa-53637506> (accessed November 6, 2020)

further away from risky strategic decisions (Holmes et al., 2011). As such, the pandemic can cause detrimental psychological responses by ‘paralyzing’ or procrastinating decision making.

At the same time, there are also reasons to believe that a crisis like the COVID-19 pandemic can spur a wave of entrepreneurial activities by fostering new business models and strategic solutions. Entrepreneurship can be defined as “*the scholarly examination of how, by whom, and with what effects opportunities to create future goods and services are discovered, evaluated, and exploited*” (Shane and Venkataraman, 2000: 218), where entrepreneurial opportunities refer to those situations where new products, services or organizing methods can be introduced at a lower price than their production costs (Casson, 1982). The process of entrepreneurship can therefore be understood through the stages of opportunity recognition and opportunity exploitation in which “*the doing of new things or the doing of things that are already being done in a new way*” (Schumpeter, 1947: 151) is facilitated (Shane & Venkataraman, 2000). Interestingly, the Global Entrepreneurship Monitor (2015) finds that sub-Saharan Africa is home to the highest number of individuals engaged in nascent entrepreneurship (14.1%) or early stage entrepreneurial activity (26%) in the world.

While the entrepreneurship literature has predominantly concerned topics relating to market creation, such as self-employment (Hamilton, 2000), spin-offs (Anton and Yao, 1995) and new firm and venture formation (Mudambi and Zahra, 2007), the concept of entrepreneurship has also been used in broader terms that do not necessarily relate directly to market creation. Schumpeter (1934) defined entrepreneurship to include product, organizational and process innovations. Thus, entrepreneurship is not restricted to only new ventures, spin-offs or small businesses, but can also be applied to larger, more established organizations in a variety of ways (e.g. Naman and Slevin, 1993). For example,

entrepreneurship in Africa is an important mechanism whereby it ensures country development and poverty alleviation (Vermeire and Bruton, 2016). Entrepreneurship research in Africa is often examined on level of the individual entrepreneur, small and medium enterprises (SMEs), and family businesses, as well as within the informal and formal sectors of the economy (see Devine and Kiggundu, 2016, for an extensive literature review). Entrepreneurship has also in other areas been viewed as a characteristic of organizations (Baumol, 1990, Covin and Slevin, 1991) as well as it can be seen as a distinct managerial style (Stevenson and Jarillo, 1990, Miller, 1983). In contrast to a bureaucratic firm, an entrepreneurial firm can be distinguished by its persistent ability to initiate change (Naman and Slevin, 1993) and organizational or management innovations (e.g. Birkinshaw, Hamel and Mol, 2008).

Importantly, entrepreneurs perceive uncertainty differently, and thus vary in their willingness to bear uncertainty when assessing entrepreneurial opportunities. Knight (1921) sees entrepreneurs as unique in their willingness to bear the uncertainty that surround a potential profitable business opportunity. Entrepreneurs with the appropriate knowledge and motivation to assess the feasibility and desirability of an opportunity amidst uncertainty will be more likely to initiate entrepreneurial action (McMullen and Shepherd, 2006). As such, African firms may actually respond to the uncertainty caused by a crisis like the COVID-19 pandemic by presuming more, instead of less, risk. For example, research demonstrates a positive relationship between organizational slack and innovation during economic downturns (Zona, 2012). Relatedly, firms that underperform according to their aspirations may be more risk-seeking in contexts defined by high environmental uncertainty, and may therefore be more willing to alter strategies and exploit market opportunities (Cyert and March, 1963). In a study of Tanzanian food processing enterprises, Hansen et al. (2017: 1) found that firms cope with uncertainty in different ways emphasized by traditional strategic

management literature: *“Instead of focus strategies, Tanzanian enterprises diversify; Instead of competitive strategies, Tanzanian enterprises adopt network strategies; And instead of internationalizing based on strengths, Tanzanian enterprises internationalize to overcome weaknesses”*.

In sum, to understand how African firms respond to the COVID-19 pandemic, it will be likely that many African firms will see the turbulence and uncertainty caused by the COVID-19 pandemic as a threat that limits the scope to explore and exploit new business opportunities. At the same time, other African firms will use the uncertainty caused by the COVID-19 pandemic to tap into new, and perhaps unconventional, entrepreneurial opportunities. As such, we build on the entrepreneurship literature to suggest that the uncertainty caused by the discontinuous change in the environment associated with the COVID-19 pandemic may serve as a source of opportunity recognition and exploitation that can support short-term survival and long-term success.

In the following sections we explain our methodological approach, we briefly summarize the exemplar cases and convey our discussion about how firms strategically respond to COVID 19. We translate our inferences on these firms’ activities into a theoretical discussion that highlights how African firms respond to crisis. Finally, we examine the scholarly implications of our study.

METHODOLOGICAL APPROACH

We used a qualitative methodology to highlight illustrative examples of strategic responses to the crisis. African firms have actively transformed the COVID-19 crisis into new challenges and opportunities, resulting in the emergence of a number of innovations.¹² These innovations have largely been behavior-based with the purpose of minimizing the risk of virus

¹² For more examples, <https://ai4dev.africa.undp.org/young-african-innovators/> (accessed October 30, 2020)

transmission, and include a wooden hand-washing machine invented by Kenya's nine-year-old presidential awardee Stephen Wamukota; Police street robots to enforce lockdown measure in Tunisia; and barber booths minimizing person to barbers contact in Ethiopia. Other significant innovations involve health interventions such as a multifunctional robots designed to lower the risk of COVID-19 contamination from patients to caregivers (by Dakar Polytechnic School in Senegal); portable automatic ventilators to assist people with respiratory problems in Nigeria; and 3D-mask printing in South Africa(UNDP, 2020).

In this article, we provide three detailed cases of how African firms have successfully responded to the COVID-19 pandemic. The cases are selected based on the principle of theoretical sampling (Corbin and Strauss, 1990). Our main case selection considerations are as follows:

- a) We chose typical organizational forms in Africa i.e. an informal firm (Galdino, Kiggundu, Jones, & Ro, 2018), an entrepreneurial start-up (Kew, Namatovu, Aderinto, & Chigunta, 2015) and an a multinational firm (Barnard, Cuervo-Cazurra, & Manning, 2017). The three organizational forms provided diverse vantage points in accounting for firm actions and practices adopted in times of crisis.
- b) We selected organizations in three countries across Africa to expose how some country or region-specific nuances may influence enterprising or strategy during crisis times.
- c) We chose firms that could broadly inform the fields of entrepreneurship, management and international business. This way, we can contribute to the complimentary literatures by exposing interesting theoretical inquiries that can be developed further in future research.

Based on these considerations, we selected three cases that illustrate how African firms have responded to the COVID-19 crisis through entrepreneurial action. First, we illustrate how a Ugandan informal firm changed its business model to become increasingly community oriented. Second, we highlight how a Ghanaian new venture emerged as a result of a coordinated national innovation system. Finally, we show how a Nigerian multinational corporation boosted its digital online performance by embedding its activities with community needs.

The cases were used to make inferences about motivations, processes and practices from observable phenomena (Yin, 2003). Thus, our purpose of outlining these cases is to show how crises like the present COVID-19 pandemic may be an important source of novelty and innovation. To do so, we evaluated secondary data using online resources. The data collected in the study included news/media reports on the firms, company websites (where applicable), national reports and other documentary resources on COVID-19. Our observations and the secondary documents served as “texts”(Gephart, 1993) that we use to uncover conventions and practices that firms adopt. We then evaluated the observable features and interpreted their theoretical meaning. Table 1 shows the organisational structure and the different data sources we used.

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CASE ILLUSTRATIONS

Wakaliwood: Changing the business model for a more economically resilient community

Ramon Film Productions is a film company renowned for its ultralow budget movies. The firm, initiated in 2005, always oriented its films towards low-income consumers. Its storylines, informed by African myths and folklore with a taint of contemporary issues,

resonated with a wide audience. Thus, the firm sold directly to urban and rural poor and informal sector actors.

The founder, Isaac Nabwana is the CEO. He is a passionate, creative and committed filmmaker. As he asserted “*I had that art in me, I wanted to make a movie - I had to fulfil that dream*”.¹³ Nabwana created and directed all his movies. His wife, Harriet, played a complementary role in the business. She was the costume designer, who scavenged for cheap material used in the movies. Nabwana had stable coalitions with his crew and the Wakaliga community where his firm is located. Although he made most of the decisions, he co-operated with the team. The firm operated under the name Wakaliwood.

Wakaliwood’s business model may be regarded as a frugal and community centered model. Actors do the marketing in an overt door-to-door, man-to-man and region-to-region manner. However, since the film industry in Uganda is in its infancy, filmmakers suffer heavily from DVD piracy. Nabwana had the ambition for a global audience, so Wakaliwood trailers and movies surged social media, like YouTube and Facebook. His strategy appealed to an international audience and lured film lovers and tourists to the Kampala based studio. By 2019, up to 500 tourists had flown to Uganda to take part in various Wakaliwood movies.

Uganda instituted a total lockdown on March 18th, 2020 in response to the COVID-19 pandemic. The lockdown was extended until May 5th. During that period, most businesses remained closed. The lockdown amplified the severity of the economic consequences in informal firms like Wakaliwood. The film sector was overlooked in government economic stimulus so businesses had to dip into their meagre savings for survival. While Wakaliwood’s online presence was advantageous during the pandemic, the firm was still overwhelmed. Besides seeing its primary market, struggling to survive economically, the stringent social

¹³ <https://www.theguardian.com/global-development/2020/jul/17/ugandas-quentin-tarantino-rolls-his-camera-for-covid-19-comedy-fundraiser?CMP> (accessed July 17, 2020)

distancing implied that Wakaliwood could not congregate its community cast to keep up with its high film production rate. This created a strain on providing fresh content to the audience.

The founder Nabwana was thus pondering how to keep the firm afloat as well as how to support the community to remain resilient amid the pandemic. In this respect, the firm had a history of running successful fundraising campaigns. In 2016, it asked for \$160 on an online platform but raised \$13,000 from fans all over the world. Moreover, most of its work was based on humor and parody. The film director Nabwana decided to move away from his previous output. He instead started producing music videos for a crowdfunding appeal for a community that was hit hard by the consequences of COVID-19 lockdown. He was inspired to use humor to solicit for funds for a hard hit community in Bulambuli, eastern Uganda. As he justified, *“I normally do other sorts of stuff, but we are now in a state of sadness, we are in lockdown and that has changed everything”*.¹⁴ Without fear of losing market focus in a crucial time, he tweaked his business model through a collaboration with a charity, Communities for Development. The objective was to make the community more resilient to the adversity. As he argued, *“If there is any chance to help, I want to do it, I’ve seen life there, in rural Uganda, and it’s not good”*.¹⁵ They created a £30,000 online crowdfunding campaign, titled, Your Money Makes Money in Bulambuli, Uganda.

Communities for Development is an NGO that started in 2014, it works in rural Uganda by partnering with organizations, businesses and individuals to unlock new forms of economic participation to help communities become self-sufficient. Communities for development encourages village saving and loan associations (VSLAs) by training and supporting individuals, to leverage their skills and accumulate savings to pursue development

¹⁴://www.theguardian.com/global-development/2020/jul/17/ugandas-quentin-tarantino-rolls-his-camera-for-covid-19-comedy-fundraiser?CMP (accessed July 17, 2020)

¹⁵ <https://www.theguardian.com/global-development/2020/jul/17/ugandas-quentin-tarantino-rolls-his-camera-for-covid-19-comedy-fundraiser?CMP> (accessed July 17, 2020)

on their own terms. By September 2020, £17,000 had been raised¹⁶. The money has been used to create new savings groups, start an entrepreneurship school with a training and consultancy program for local businesses.

SolaWash: Innovating through collaborative ecosystems

As the pandemic raged on, the need for basic hygiene such as frequent handwashing was acknowledged. Yet, in places where access and conservation of water were challenging, maintaining proper hygienic standards was looking bleak. A solution, SolaWash, was invented in April 2020. Sola wash is a Ghanaian invention of a solar-powered hand-washing basin to fight the coronavirus. The machine is timed with a sensor to allow the 25-second hand-washing time as stipulated by the US Center for Disease Control and Prevention, and helps people to practice normal handwashing etiquette during the pandemic. Importantly, it enables individuals to wash their hands without touching the tap or knob of the water receptacle.

The innovator, Richard Kwarteng, is as an opportunity-seeking individual who initiated his venture amid the COVID-19 pandemic. At the announcement of the two-week lockdown in Ghana, he quickly shifted from an ideation to an exploitation phase by frugally acquiring resources required from a local market to establish the venture. As noted by CNN: *“They had less than 48 hours to gather supplies before the lockdown took effect. Without hesitation, they headed to a local market for supplies. On the shopping list: a sink, a faucet, a motherboard, a solar panel, a sensor, and an alarm”*.¹⁷

The innovator constituted a team to support his project. Working with his brother, he invited a skilled electrician friend to join the team. Together they were able to execute their

¹⁶ <https://www.justgiving.com/campaign/bulambuli> (accessed October 29, 2020)

¹⁷ <https://edition.cnn.com/2020/05/09/africa/ghana-coronavirus-handwash/index.html> (accessed September 5, 2020)

project within five days. The founding team is a coalition of the inventor's family and friends, who were committed to prolonged work hours because there were no competing demands on their time during the lockdown.

On completion, the team shared a video on social media, demonstrating how to use the device. The decision to share the innovation on social media was a trigger for visibility. It was two-pronged because it created awareness and motivated joint coordination of ecosystem actors to legitimize the innovation. Ghana's Ministry of Environment, Science, Technology, and Innovation contacted the brothers to determine if additional machines could be manufactured for cities throughout the country. In April, President Akufo-Addo commended the team and acknowledged that through this innovation the "*Ghanaian sense of enterprise and innovation is beginning to be felt*".¹⁸

The product was tested for safety and efficiency and quickly made ready for mass production. It met international standards for electrically controlled machines. Compared to the usual time of 21 days to certify an innovation in Ghana, this innovation was fast-tracked, and within four days Ghana Standards Authority (GSA) issued certification for the SolaWash. The certification gave the manufacturer approval to market the product globally. The GSA absolved all costs (approximately GH¢20,000) in the testing and certification. They argued that the innovation was essential to encourage safe handwashing practices. As the GSA director commented, "*We saw this as support for the president's call to increase local manufacturing so we absolved all the costs*".¹⁹ The innovation is now commercially available in Ghana and the entrepreneur plans to make it available to the rest of Africa. By November 2020, Kwarteng had sold 100 pieces and he employed 10 people²⁰.

¹⁸ CNN 2020 - <https://edition.cnn.com/2020/05/09/africa/ghana-coronavirus-handwash/index.html> accessed 5th September 2020

¹⁹ Ghana Standards Authority, 2020 - <https://www.gsa.gov.gh/2020/04/gsa-certifies-solar-automated-hand-washing-machine/> accessed 15th July 2020

²⁰ These figures are based on conversations with the founder.

Jumia: Increasing market share through strategic partnerships

Jumia is an e-commerce multinational corporation headquartered in Lagos, Nigeria. It was established in 2012 with the purpose of establishing an online platform that can deliver a wide range of items across many African countries, from furniture clothes, electronics, and books to alcohol. Jumia is a flagship online business for Africa Internet Group (AIG), a leading e-commerce group in Africa, supported by a wide range of investors such as Rocket Internet, MTN Telecommunications, Millicom, Orange, Axa, and Goldman Sachs. With over 1 billion people and 500 million internet users in Africa, Jumia believes that e-commerce makes people's shopping easier by helping them shop and pay for millions of products at the best prices wherever they live.

At the start of 2017, Jumia had a revenue of nearly €250 million and operated in 11 different countries in Africa. It had created a sustainable ecosystem of digital services and infrastructure through its online and mobile marketplace. Jumia's distinctive competence was in combating the initial challenges of infrastructural gaps, trust and acceptability relating to e-commerce in Africa. In 2019, it had more than 110,000 sellers including micro and small African companies. It bolstered small and medium sized enterprise (SME) growth and financial inclusion for Africa's unbanked population. It was also the first African venture capital funded tech company to list on the NYSE. After becoming listed, however, the company struggled with heavy price losses. The IPO price plummeted from \$14.50 on listing to \$4.43. Jumia was struggling before the COVID-19 pandemic, but the pandemic provided a lifeline opportunity for them through collaboration and partnerships. As the COVID-19 pandemic swept across the globe, the focal strategic decision at Jumia was how to increase outreach during the crisis. During the three months lockdown in Nigeria, Jumia saw orders skyrocket, as Nigerian consumers found relevance to the service. As a turnaround for Jumia,

in the second half of March 2020, orders for consumer goods quadrupled. It received 6.4 million orders, which helped the company to reduce accumulated losses.

The founders described themselves as focused executors. During the pandemic, the two co-CEOs and founders of Jumia, Jeremy Hodara and Sacha Poignonnet, cut their respective salaries by 25%. Jumia quickly instituted a master strategy in which it collaborated with governments, micro, small and medium sized enterprises, international brands such as Reckitt Benckiser, Coca-Cola, Unilever, and Procter & Gamble. As Jumia's chairwoman & Head of Institutional Affairs Juliet Anammah asserted, "*Now, it is about making sure we put in place — either through partnerships or other kinds of initiatives — ways to make sure we are in the middle of helping bring people online and into the Jumia platform as buyers and sellers*".²¹ In particular, Jumia used partnerships to bridge supply gaps in the widespread and diverse Africa. There was a high level of agreements and contracts among ecosystem actors in focus countries.

The company systematically collaborated with ecosystem actors in each of its geographical locations. The implementation of the strategy worked out uniquely with each country office and the partner they brought on board. For example, it donated certified facemasks to Health Ministries in Kenya, Ivory Coast, Morocco, Nigeria, and Uganda. Jumia shared important health information by collaborating with ministers of Health through their websites in Nigeria, Egypt, Ghana, Morocco, Ivory Coast, Uganda and South Africa. It collaborated with the Lagos State Government to launch a handwashing challenge aimed at encouraging regular handwashing to contain the spread of COVID-19. Jumia also collaborated with manufacturers like Reckitt Benckiser to distribute sanitary products, such as soap, disinfectants and liquid hand wash. In Kenya, Jumia collaborated with the Postal

²¹ PYMNTS, 2020 -<https://www.pymnts.com/news/ecommerce/2020/how-jumia-africa-is-navigating-overnight-digitization-expansion/> accessed 16th July 2020

Corporation of Kenya, Posta Kenya, to reduce its collection fee to KES116 (USD 1.10) from KES 300 (USD 2.84). The service was available to consumers outside Nairobi, enabling them to collect orders from postal stores. It partnered with Twiga Fresh Produce to deliver foodstuff to households through the crisis. This partnership alone connected Jumia to a network of 17,000 farmers and 8,000 vendors. During the lockdown in Uganda, Jumia partnered with the United Nations Development Programme (UNDP) to launch an online platform that enabled SMEs in the informal sector to connect with consumers. UNDP provided market vendors with smartphones, airtime and data as Jumia trained them on usage and quality assurance.

The retailer added contactless delivery for prepaid packages through its JumiaPay platform. It collaborated with MasterCard to offer 10% discounts to shoppers who use the JumiaPay service. The offer was available in five countries including Nigeria, Egypt, Kenya, Côte d'Ivoire and Ghana. Shoppers purchased products online then had them delivered without contact or cash exchange, adding to the convenience of social distancing and cashless measures into one solution.

The resulting strategy was extensive partnerships with key players in the crisis. Its execution was quick and adjusted as local conditions warranted. In July 2020 the company themed its anniversary, 'Stronger Together'. The theme resonated with the collaborative strategy they devised during the pandemic. Jumia used a highly participative approach in reaching out to sellers and buyers. They enabled their partners' extensive outreach while growing their market base. As expressed by Jumia's Chairwoman & Head of Institutional Affairs Juliet Anammah, *"If there is anything that we know about consumer behaviour, [it] is that once a consumer builds a new habit, they tend to continue along those lines,"* she said. *"We expect that consumers who have suddenly seen the benefit in ordering online and*

shopping and paying in a contactless manner, it's a habit consumers will want to continue going forward".²²

DISCUSSION

While the COVID-19 pandemic will leave deep economic scars, there are also reasons to embrace it as a catalyst for entrepreneurial action and innovation. Specifically, we suggest that firms can re-engineer their products, processes and services amidst the uncertainty caused by the COVID-19 pandemic. Different types of uncertainty (such as state, effect, and response uncertainty) spur entrepreneurship by occasioning new challenges and opportunities. For example, facing substantial uncertainty by experiencing that the lock-down undermined its ability to congregate its community cast for movie production, Wakaliwood decided instead to change its business model for a more economically resilient community. Given the uncertainty of not knowing how the crisis would evolve, the founder of SolaWash quickly established a venture to frugally exploit the new opportunities around hand sanitization. And given the uncertainty derived from not knowing how the COVID-19 pandemic would impact its troubled IPO, Jumia rapidly decided to increase outreach by collaborating with essential actors in its many markets.

We believe there are important insights to be extracted from studying how successful firms have responded to the severity of the COVID-19 pandemic. As suggested with the cases discussed above, when firms are faced with high uncertainty (e.g., unable to determine when to resume operations due to lockdown restrictions), they may revitalize their business model through entrepreneurial action. For example, in uncertain times firms can create solution-based ventures to institutional and community needs that may fast-track the

²² PYMNTS, 2020 - <https://www.pymnts.com/news/ecommerce/2020/how-jumia-africa-is-navigating-overnight-digitization-expansion/> accessed 16th July 2020

implementation of those strategies. As evidenced by the case of Jumia, firms can achieve this by focusing on their capabilities and the communities' needs and identify ways to apply these capabilities to new opportunities that benefit the community. Relatedly, firms can create value by coordinating national innovation systems with the purpose of developing innovations that cater for opportunities that arise in association with the discontinuous change marked by the COVID-19 pandemic. As seen in the case of SolaWash, new opportunities arose amidst sudden changes and altered consumer preferences. Thus, ventures that are able to detect novel opportunities as well as are willing to presume the risk of exploiting such opportunities can benefit from the uncertainties caused by the COVID-19 pandemic. Finally, firms can respond to crises by forming new, and perhaps unconventional, strategic partnerships to solve newly breed opportunities arising due to the suddenly changing environment. Jumia saw the potential to alter its business model to cater for novel community needs through a range of partnerships that would allow further value creation. As such, while we have only focused on how a selected number of African firms successfully responded to the COVID-19 pandemic, it is evident that the uncertainty caused by the disruptions may also give birth to a number of new opportunities.

At the same time, however, the cases clearly illustrate that the potential success of their responses is closely associated with their ability to rapidly discover and exploit entrepreneurial opportunities. As such, the identification of entrepreneurial skills or a mindset will be crucial for the extent to which African firms may be able to reap benefits of novel features in the environment. Jelinek and Litterer (1995: 137–138) suggest that firms with an entrepreneurial mindset “*repeatedly initiate new product or service ideas*” and “*reconverting their people and assets to new uses, bringing new ideas from many sources into good currency*”. For example, Krauss et al. (2005) study the relationship between business owners' entrepreneurial opportunities and business performance in southern Africa, and aspects such

as personal initiative, achievement, and risk-taking orientation are important predecessors of performance (see also Campos, Frese, Goldstein, Iacovone, Johnson, McKenzie, & Mensmann, 2017). As such, to adapt to changing conditions and to grasp fleeting opportunities, firms need to act entrepreneurially (Shepherd, McMullen and Jennings, 2007). In doing so, firms can more easily adapt to emerging threats (Covin and Slevin, 1991) and stay ahead of new competition (Zahra, 1993).

Moreover, it also becomes clear that firms' ability to convert the current crisis into business opportunities depends on their willingness to take risks. As mentioned, there is important variation in how firms respond to uncertainty. Some firms will avoid risk, whereas other firms will become more risk-seeking. In a recent study of informal entrepreneurship in South Africa, Musara and Nieuwenhuizen (2020) argue that the propensity of informal sector entrepreneurs to take risk is a key characteristic of entrepreneurial leadership behavior. In this respect, the behavioral theory of the firm (Cyert and March, 1963) posits that firms performing under their aspirations will be more inclined to seek risk and engage in 'problemistic' search to find novel solutions that may allow them to manage the uncertainty. Firms performing above their aspirations, however, are more risk-avoiding, as the need for solutions to improve firm performance is reduced (Greve, 2003). In the cases discussed above (and in particular with the cases of Jumia and Wakaliwood), the outbreak of the COVID-19 pandemic signified lower performance compared to aspirations. It is thus likely that the underperformance incentivized the firms to search for other, more risky solutions, such as altering their business models to cater for community needs.

In sum, we believe these insights have important practical implications for African management. First, uncertainty breeds entrepreneurial opportunities. While we have focused on a selected set of opportunities, we are clearly not offering an exhaustive list of how African firms respond to the COVID-19 pandemic. Instead, we emphasize that firms should

be alert of new, and at times unconventional, entrepreneurial opportunities that may give rise to business model innovation and value creation. Second, to grasp such opportunities, African firms need be entrepreneurially oriented by constantly exploring new ideas and solutions. While the success of embracing an entrepreneurial mindset will depend on a number of contextual issues, it is important to proactively search for new solutions to complex problems, such as the COVID-19 pandemic. Finally, it is important to acknowledge that firms will differ in their risk preferences, and that this will have implications on their willingness to embrace the uncertainty caused by the pandemic as a source of new business opportunities. The strategic responses that we have documented in this article are both costly and risky. Firms thus need sufficient slack resources to undertake the necessary changes such as business model innovation to successfully exploit the entrepreneurial opportunities associated with the COVID-19 pandemic.

CONCLUDING REMARKS

In conclusion, we encourage future research to further investigate how African firms respond to distortions associated with high uncertainty (such as the current COVID-19 pandemic). While we have emphasized the value of entrepreneurial action in times of distortion and uncertainty by aligning business model innovation with community needs, coordination of national innovation ecosystem, and strategic partnerships, a number of relevant related questions for future research emerge. For example, how sustainable are the COVID-19 inspired changes? Will the COVID-19 changes translate into permanent overall business goals? How do firms with an increase in balance of social and economic outcomes compete with those that stick to economic goals? How does the accelerated digitization of African firms affect firm performance? How has COVID-19 attenuated the socio-economic inclusion of the informal sector? What does the uncertainty mean for the formalization of informal

enterprises? What should policymakers focus on when it comes to boosting firm positive response to the COVID-19 pandemic?

In conclusion, given the economic and social structures in which businesses in Africa operate, it is impressive to witness how many firms have responded to the COVID-19 pandemic. Indeed, entrepreneurship—in terms of new venture creation and solutions—revamps business morale. Therefore, we hope that our article provokes others to engage in research that explores firm peculiarities, entrepreneurship and behavior under disruption.

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Table 1: Description of cases and data sources

Firm	Wakaliwood	Solawash	Jumia
Attribute			
Location	Uganda	Ghana	Nigeria
Year of establishment	2005	2020	2012
Size- no. of employees	Unknown, mainly works with part timers and volunteers	10	5100
Legal status	Unregistered	Registered	Registered
Structure	Informal	Entrepreneurial startup	International
Industry	Entertainment	Health	Marketing/platform
Data sources	Social media (Facebook) pages, online media reports, company website	National pages, media and documentary outlets, social media (Facebook and Instagram pages.	Company websites, online media reports, partner websites