

**ANALYSIS OF THE EFFECT OF THE COVID-19
PANDEMIC ON AGRICULTURE SMALL AND MEDIUM
ENTERPRISES IN KENYA**

STRATEGY AND POLICY RECOMMENDATIONS

Master of Global Business Administration Program Capstone Project

Submitted by CHRISTABELL MAKOKHA

10 APRIL,2021

© 2021 CHRISTABELL MAKOKHA

<http://fletcher.tufts.edu>



THE FLETCHER SCHOOL

TUFTS UNIVERSITY

Contents

List of Acronyms / Specialized Terminology	i
Abstract	1
Introduction to the White Paper	2
Introduction and Background	3
<i>A Brief Overview of the Kenya Agriculture Sector</i>	3
<i>Definition of Small and Medium Enterprises</i>	4
<i>Situation of COVID-19 Pandemic in Kenya</i>	5
An Assessment of the Impact of COVID-19 on AgriSMEs in Kenya.....	6
1.1. Disrupted logistics and supply chains	6
1.2. Reduced cash flow and overall income	7
1.3. Downsized workforce	8
1.4. Reduced access to working capital and other forms of financing	8
1.5. Increased use of technology	9
Strategy and Policy Recommendations to Mitigate the Effects of the COVID-19 Pandemic on AgriSMEs in Kenya.....	10
<i>Business Strategy Recommendations</i>	10
1. <i>Fortifying supply chains by building redundancy</i>	10
2. <i>Developing a disaster preparedness and recovery plan</i>	12
3. <i>Building agile systems</i>	12
<i>Policy implications</i>	13
1. <i>Introducing friendly banking policies</i>	13
2. <i>Leveraging taxation policies to stimulate investments in Agribusinesses</i>	14
3. <i>Establishing a national development bank to facilitate the flow of institutional credit to AgriSMEs</i>	15
Conclusion and Recommendations	16
<i>Key Takeaways on the Impact of the Pandemic and Implications for AgriSMEs and the Agriculture Sector</i>	16
<i>Opportunities for Further Research</i>	17
References	18

List of Acronyms / Specialized Terminology

AgGDP	Agriculture Gross Domestic Product
AgriSME	Agriculture Small and Medium Enterprise
CBK	Central Bank of Kenya
GDP	Gross Domestic Product
SME	Small and Medium Enterprises
TNS	TechnoServe

Abstract

COVID-19 has affected all major industries globally, and we are seeing a shift in the way businesses operate in the wake of the pandemic disruptions. Small and medium enterprises (SMEs) in Africa are no exception. However, a year into the pandemic and beyond experts' speculations, it is unclear how and to what extent these businesses have been affected. The goal of this research project was to gain an understanding of how SMEs in the Agriculture Sector in Kenya have been affected by the COVID-19 pandemic; how they are coping with these stresses; and most importantly, identify the opportunities for these businesses to build back better, more resilient and robust operations.

Given the evolving nature of the pandemic and restrictions on movement, the insights in this white paper are drawn from exploratory research i.e., a review of available secondary literature and analysis of qualitative data from primary interviews with industry experts, development actors, and agribusinesses. This white paper provides descriptive insights into trends we are seeing; it is not intended to be a rigorous scientific study.

Research insights suggest that most, but not all, AgriSMEs were negatively impacted by the COVID-19 pandemic. Businesses did adopt digital technology to adapt to new consumer behavior trending toward e-commerce. However, majority of businesses are cash-strapped and struggle to access financing. On the basis of these insights, this paper provides business strategy and policy recommendations to build the resilience and robustness of AgriSMEs. It also explores the role that government, development actors and private sector actors can play in creating an enabling environment for AgriSMEs to thrive during and post the COVID-19 pandemic.

Introduction to the White Paper

The purpose of the exploratory research presented in this white paper was to investigate the effects of the COVID-19 pandemic on small and medium enterprises in the agriculture sector in Kenya (AgriSMEs). The study had the following key objectives:

1. Identify current and expected long term challenges that AgriSMEs in Africa face as a result of the COVID-19 pandemic.
2. Understand coping strategies that SMEs are currently using to mitigate the risks and economic stresses of COVID-19.
3. Provide business strategy and policy recommendations to practitioners (AgriSMEs and organizations that work with them) to build stronger, more resilient and robust business operations.

The findings from this research project are important for a range of actors including agribusinesses, donors, market support and research organizations¹, financial service providers, investors, to name a few. The insights can provide a blueprint for design of new program interventions, as well as products and services that are better tailored to the needs of AgriSMEs and are responsive to COVID-19 disruptions. The report is also designed to promote public policy discussions that strengthen and build the resilience of AgriSMEs.

This white paper outlines the major findings of research conducted over a three-month period from January to March 2021; this study included desk research, expert interviews, and interviews with AgriSMEs. The paper is organized into the following six sections: (1) Abstract; (2) Introduction to the White Paper; (3) Introduction and Background; (4) An Assessment of the Impact of COVID-19 on AgriSMEs in Kenya; (5) Strategy and Policy Recommendations to Mitigate the Effects of the COVID-19 Pandemic on AgriSMEs in Kenya; and (6) Conclusion and Recommendations.

¹ Such as Financial Sector Deepening (FSD) Kenya, Consultative Group for the Poor (CGAP), International Financial Corporation (IFC) SME Finance Forum

Introduction and Background

A Brief Overview of the Kenya Agriculture Sector^{1;2;3;4}

Agriculture is the most important economic activity in Kenya, providing employment to over 60% of the population (closer to 80% in rural areas), while contributing to approximately 30% of the country's GDP. The Kenyan agricultural sector comprises the following six major sub-sectors:

- **Industrial crops:** the main industrial crops in Kenya are tea, coffee, sugar cane, cotton, sunflower, pyrethrum, barley, tobacco, sisal, coconuts, and, bixa. These contribute to 55% of agricultural exports and 17% of AgGDP.
- **Food crops:** these include cereals (maize, wheat, sorghum, rice, millet); pulses (beans, pigeon peas, cowpeas, chick peas, green grams); and root tubers (sweet potatoes, Irish potatoes, cassava, arrow roots, and yams). They account for 0.5% of GDP, and 32% of AgGDP.
- **Horticulture:** products in this industry include cut-flowers, fresh fruits and vegetables, nuts, herbs and spices. The largest subsector contributing to 38% of export earnings and 33% of AgGDP.
- **Livestock:** the livestock sector contributes ~7% to the GDP, 17% to the AgGDP, and provides employment to about 50% of the agricultural labor.
- **Fisheries:** demand for fish is rising with the increasing shift towards healthy living, meaning the aquaculture sub-sector has the potential to contribute significantly to the national economy.
- **Forestry:** Kenya's national forest cover is at less than 3% compared to international standards of at least 10%.

Definition of Small and Medium Enterprises

There is no universally accepted definition of what an SME is. However, the definitions are typically dependent on the number of employees, revenues, and company assets. In Kenya, SMEs are defined as having between 1 and 99 employees, with a turnover of not more than KES 100 million (USD 1M). Table 1 below provides sample definitions of SMEs from a range of institutions. For the purposes of this study, an SME is described as a business with 10-100 employees.

Table 1: Definitions of Small and Medium Enterprises⁵

Business grouping	# of employees	Annual turnover	Source
Small enterprise	11 – 50	USD 100,000 - 3M	World Bank
	10 – 49	USD 50,000 – 500,000	Kenya 2012 MSE Act
	6 – 50	<USD 500, 000	Kenya Commercial Bank
Medium enterprise	51 – 250	USD 3M – 15 M	World Bank
	50 -99	USD 50, 000 – 8M	Kenya 2012 MSE Act

SMEs play an important role in developing economies, contributing significantly to economic growth, job creation, and poverty mitigation (Luper and Kwanum, 2012). A 2018 National Economic Survey report by the Central Bank of Kenya (CBK) showed that SMEs accounted for 98% of Kenyan businesses, created 30% percent of jobs annually, and contributed 3% to the country's GDP⁶.

AgriSMEs in Kenya make up an estimated 16% of all SMEs in Kenya. They are typically involved in the following agriculture-related activities: farming and production, supply of agro inputs, product aggregation and storage, transportation and distribution, agro-processing, and import and export.

Situation of COVID-19 Pandemic in Kenya

The first case of the COVID-19 virus was confirmed in Kenya on 12th March 2020 following the December 2019 virus outbreak in China, prompting the Kenyan government to introduce the following key measures to curb the spread of the virus and mitigate the economic shock arising from the pandemic⁷:

- Placing restrictions on travel from countries with any case of the virus, as well as locally between Nairobi and other counties.
- Introducing a nationwide curfew from 8pm to 4am (revised to start at 10pm).
- Introducing a ban on social and formal gatherings, including closure of schools and institutions of higher learning, as well as transitioning employees to work from home with the exception of those providing essential services.
- Pushing for cashless transactions.
- Mandating provision of soap and water / hand sanitizers at public locations like hospitals and shopping malls.
- Introducing tax law amendments, including 100% tax relief for persons earning up to Ksh. 24,000, reduction of personal income and corporate tax from 30% to 25%, reduction of value added tax from 16% to 14%, and reduction of turnover tax rate for SMEs from 3% to 1%⁸.
- Lowering interest rates from 8.25% to 7.25% and cash reserve ratio from 5.25% to 4.25% to stimulate lending to distressed businesses⁹.

As of 01 March 2021, the number of COVID-19 cases in Kenya was recorded at 111,935 and a positive test rate of 13%. Although restrictions on movement and social gatherings have since been relaxed to stimulate economic growth, they are not completely lifted and the government has extended the nationwide curfew until May 2021 to battle the third wave of infections¹⁰.

An Assessment of the Impact of COVID-19 on AgriSMEs in Kenya

Although the pandemic is technically a health crisis, it has had a cascading effect on other sectors beyond health such as financial markets, business, education, and global politics. The agriculture sector is no exception. Following the first COVID-19 case in Kenya, the pandemic disrupted agricultural value chains, and was considered a threat to household food security. Amongst AgriSMEs in Kenya, the following key challenges emerged, shifting their day-to-day operations:

1.1. Disrupted logistics and supply chains

Across the entire agricultural value chain, the biggest challenge that all agribusinesses faced is the global and local restriction of movement of goods and people which resulted in limited access to products and services. Specifically, travel restrictions (international and inter-county), night curfews, fourteen days quarantine on cargo vessels at Mombasa Port, and stricter checks at the country's borders, resulted in logistics challenges for businesses¹¹. A rapid country assessment done by Wageningen University in partnership with SNV showed that 40% of SMEs involved in agriculture reported a significant negative impact on their ability to source agricultural inputs for sale, while 55% of businesses involved

in the processing of food reported not having enough raw materials to meet current demand¹².

“There are delays of deliveries because it’s taking longer to get port clearance and because of the curfew. For example, we had a shortage of DAP fertilizer in Mombasa. Goods that took 1 day to transport now take 3 days!”
- Input supplier, Kenya

To control inventory level, sourcing cycles moved from 1 month to 2 weeks because you might end up holding more stock than you can sell...”
- Input supplier, Kenya

”There is an increased demand for irrigation equipment because farmers want to be independent and not rely on government subsidies. However, we can’t meet this demand because our shipment is stuck at the port because priority is given to medical supplies.”
- Solar-powered irrigation provider, Kenya

SOURCE: Webinar hosted by Mercy Corps AgriFin and World Food Programme, FtMA on 22nd April 2020

1.2. Reduced cash flow and overall income

As a result of social distancing recommendations and curfew restrictions, businesses across the entire agriculture value chain noted a reduction in business activity, and subsequently in revenue. This decline was both due to direct challenges within the agriculture value chains, as well as secondary effects from other sectors. For example, there was a visible reduction in foot traffic to markets as well as a decline in rural labor markets, which put a strain on agribusinesses that are involved in production and relied on seasonal laborers to plant and manage their farms. Research conducted by TechnoServe in the food processing sector showed that more than two-thirds of firms reported a decline in overall sales (TNS, 2020)¹³. A slowdown in other sectors such as the hospitality industry also had secondary effects in the agriculture sector given the decline in demand for agriculture produce.

One survey respondent noted that not all businesses saw a reduction in revenues; on the contrary, some input distributors saw sales grow last year, likely due to the

restrictions at the border that subsequently allowed for local input suppliers to compete. However, further research is needed to understand if this observation is consistent with other input suppliers and why this is the case.

“I suspect that the premise of your survey – that businesses were negatively affected – is wrong. Most input distributors saw sales grow last year!”

- Input supplier, Kenya

SOURCE: Survey conducted February 2021

1.3. Downsized workforce

Agribusinesses surveyed indicated that they were forced to implement cost-saving measures, including letting go of employees, reducing employees’ pay, and/or closing operations for several months. Some business took out bridging loans to keep their operations running. Businesses also reported a decrease in overall productivity of their workforce as a result of declining employee motivation. In its research, TechnoServe noted of a dairy in Kenya that reported “its workers felt demotivated by travel restrictions that prevented them from visiting retailers and carrying out their work” (TNS, 2020).

1.4. Reduced access to working capital and other forms of financing

Decreased lending through both formal and informal channels resulted in a liquidity crunch for Agribusinesses. Despite a reduction in Central Bank rates and in the mandate cash reserve ratio, banks were still unwilling to lend to AgriSMEs as they are deemed to carry a higher risk. In addition, suppliers who typically provide alternative financing for businesses were no longer extending the same credit terms to their clients. In May 2020, CBK reported that at least 75% of SMEs were facing closure due to a lack of funds, prompting the government to set up a

KES 10 billion Credit Guarantee Scheme to be disbursed in two tranches of KSh5 billion in the current financial year 2020/21 and Financial Year 2021/22¹⁴. Currently, there is no publicly available data detailing the scheme's performance and/or impact.

For AgriSMEs who receive grant funding from donors to run some of their operations, there was a decline in funding as donor priorities shifted to emergency programs focused on COVID-19 interventions.

“We used to provide inventory to our agro-dealers on credit because we had favorable terms from our suppliers. Our suppliers have now reduced credit terms and we also cannot extend credit to our agro-dealer network.”
- Input supplier, Kenya

“Collections [on outstanding loans] are low, hence we've stopped our pay-as-you-go options right now which means we are also selling less [irrigation kits] than before.”

- Solar-powered irrigation provider, Kenya

SOURCE: Webinar hosted by Mercy Corps AgriFin and World Food Programme, FtMA on 22nd April 2020

“[We saw a] disruption of donor funding [driven by a] reprioritization of donor funds in response to COVID.”

- Aggregator/Farmer Organization, Kenya
SOURCE: Survey conducted February 2021

1.5. Increased use of technology

The restrictions in movement and requirements for social distancing resulted in an increase in digitization of distribution channels. Agribusinesses leveraged digital technology (primarily SMS and WhatsApp) to manage delivery of product and services, train farmers, aggregate produce, and manage payments.

“We have adjusted our [field agents and local enumerator] trainings to happen digitally. This actually comes with significant cost savings.”

- Agriculture insurance provider, Kenya/Ethiopia/Nigeria

SOURCE: Webinar hosted by Mercy Corps AgriFin and World Food Programme, FtMA on 22nd April 2020

“The current business conditions brought about by COVID-19, have changed the way our organization is doing business. We have continued to re-prioritize digital vs in-person service delivery - including farmer-led trainings and access to markets.”

- Aggregator/Farmer Organization, Kenya
SOURCE: Survey conducted February 2021

Strategy and Policy Recommendations to Mitigate the Effects of the COVID-19 Pandemic on AgriSMEs in Kenya

While the future remains uncertain and it is still unclear what the longer-term effects of the COVID-19 pandemic are, it is clear the pandemic, despite being a health crisis has had significant impact on Kenya’s food system. In a similar manner, the 2014-16 Ebola Crisis in West Africa demonstrated the tremendous effect that a public health crisis can have on food systems. The 2019-21 Locust Infestation, the worst in 70 years in East Africa also threatened agriculture supply chains and the overall food system. These examples demonstrate that the COVID-19 pandemic is not the first and likely not the last major global or regional challenge to affect food systems. Therein lies a challenge:

How might AgriSMEs build stronger, more resilient and robust systems to mitigate the impact of external shocks? How might businesses plan for an unpredictable future?

Business Strategy Recommendations

1. Fortifying supply chains by building redundancy

Globalization has turned the world into an integrated economy, subsequently creating more wealth and lifting global living standards¹⁵. Hyper-globalization, the dramatic acceleration in size, scope, and velocity of globalization, began in the late 1990s, creating hyper-global supply chains that are extremely complex and tightly

coupled. Consequently, any challenges experienced in one “node”, would result in cascading failures throughout the system (Buldyrev et.al, 2010). This is evident currently with the COVID-19 pandemic, a health crisis that has disrupted global supply chains, and whose repercussions are felt in other sectors beyond health, in financial markets, business, food systems, education, and global politics.

For AgriSMEs in Kenya, part of their COVID-19 recovery process has to include an evaluation of their business to identify systemic risks and build redundancy (i.e., establishing multiple “nodes”) throughout the supply chain in order to build resilience. This might include, identifying local suppliers and building new partnerships to diversify their supply chain.

While building redundancy might seem counter intuitive to “lean initiatives”, wasteful, and often small business might not have the financial bandwidth to do so, redundancy (and subsequently fortification of supply chains) allows businesses to prevent slowdowns and/or complete shutdowns. Rather than build in this redundancy as individual business units, AgriSMEs can build clusters and business networks which not only introduce some slack into the supply chain, but also allows businesses to leverage economies of scale and increase their negotiating power, as well as enabling coordination to allocate supply most efficiently thus reducing waste. These clusters might be organized according to the service they provide in the agriculture value chain, or according to common challenges faced. Lessons learnt from other industry associations targeting corporates such as Kenya Association of Manufacturers and Kenya Agribusiness and Agroindustry Alliance can inform the setup of a similar alliance for AgriSMEs.

Lastly, introducing multiple nodes stimulates more local demand and not only provides more opportunities for businesses to serve the sector (thus creating opportunities for employment), but also strengthens the overall agriculture sector.

2. Developing a disaster preparedness and recovery plan

The 1997 Asian Financial Crisis, the 2008 Financial Crisis, 2014 Ebola Crisis, the 2019 Locust Infestation, the 2020 COVID-19 Pandemic...these regional and global crises have illustrated that global systems can and will fail in ways we might not be able to predict. Every business needs to create a disaster preparedness and recovery plan as part of its risk management planning. A Risk Matrix for AgriSMEs in Kenya might include the components that explore political, regulatory, environmental, and operational risks at a national, regional, and global level.

3. Building agile systems

While building the **resilience** of AgriSMEs is an important component of ensuring the business continuity **following** a disruption, equally important is the need to build **robust** systems that enable business stability **during** a disruption. Resilience is defined as “ability to return to normal operations over an acceptable period of time, post-disruption”. Robustness on the other hand is “the ability to maintain operations during a crisis”¹⁶. In the face of the COVID-19 pandemic many elements of business operations changed, including: changes in consumer behavior as more people turned to digital marketplaces, reduced consumer spending power as incomes declined, and decreased productivity with introduction of curfews and intra-county movements. As a result, AgriSMEs needed to pivot quickly to continue their operations in the present moment, but also post the

pandemic, given a “return-to-normalcy” might not be feasible; the world has been thrown into uncharted territory with a new “normal”.

As business environments become more complex and volatile, agility in business operations and strategy is as important, if not more important than having the right 5-year strategic plan.

Policy implications

As discussed earlier, Agriculture is the most important economic activity in Kenya, accounting for ~21.9% of the country’s GDP and providing employment for over 60% of the population. In addition, Kenya Vision 2030 agenda seeks to achieve a sustainable annual economic growth of 10% with agriculture identified as one of the four critical sectors to drive this growth¹⁷. Consequently, it is imperative to have an enabling environment that builds the resilience of AgriSMEs to exogenous shocks arising from a commodity-dependent economy. To fully realize the potential that AgriSMEs hold in ensuring a food secure Kenya and in creating unemployment opportunities, the government and other non-state actors needs to implement policies that promote growth and investment in the sector.

1. Introducing friendly banking policies

Despite the role that agriculture plays in the Kenyan economy, it is still considered a risky sector, and receives less than 5% of commercial bank lending¹⁸. Research conducted by Aceli Africa and Dalberg Advisors shows that the risk associated with lending to agribusiness is perceived to be 2x higher than in any other sectors served by the same lenders in Africa. This higher risk profile is associated with unpredictable external risk factors such as weather shocks, higher operational

costs, and volatility of cash flows¹⁹, as well as a false perception of empirically-determined risk associated with agriculture finance (Maurer, 139-163).

While financial tools such as Credit Guarantee Schemes, blended finance mechanisms, and microfinance have emerged as solutions to accelerate access to finance, they are yet to bridge the estimated global \$240 billion funding gap²⁰ in the agriculture sector and rural markets. There is a gap for more innovative financial tools that can bridge this financing gap in agriculture.

2. Leveraging taxation policies to stimulate investments in Agribusinesses

Tax policies play a significant role in stimulating economic growth – in fact, tax incentives can be leveraged to encourage favorable outcomes in the agriculture sector. For example, Israel, to stimulate local investment in agriculture provided benefits for agribusinesses in accordance with the Law for Encouragement of Capital Investment in Agriculture. These benefits included: accelerated depreciation for equipment and buildings, reduced tax rate from 25% to 20% on dividends from agriculture enterprise, a 5-year tax holiday for agribusinesses, to name just a few²¹. Ghana, the largest recipient of FDI in West Africa created Special Economic Zones (SEZs) which offered a 10-year tax holiday for companies that invest over \$10 million. The four SEZs in Ghana attracted FDI worth \$90 million in 2018²².

There is an opportunity for the Kenyan government to adopt tax policies and incentives that can stimulate investments in agriculture from local, regional, and foreign investors. This is particularly important given the newly-formed African

Continental Free Trade Area (AfCFTA), which will provide AgriSMEs with access to regional markets.

3. Establishing a national development bank to facilitate the flow of institutional credit to AgriSMEs

Building off the recently established KES 10 billion credit guarantee scheme for MSMEs, and in alignment with the Ministry of Agriculture's Agricultural Sector Transformation Strategy, the Kenyan Government can start playing a more significant role in facilitating the flow of capital, specifically affordable institutional credit, to AgriSMEs. India's National Bank for Agriculture and Rural Development (NABARD) sets a precedence for the role that government can play. Established as an apex regulatory agency of the Ministry of Finance, NABARD has been instrumental in driving growth in agriculture and rural development through financial and non-financial interventions²³.

For Kenya, the role of an institution such as a national development bank might include:

- (i) Providing direct financing (in the form of loans) to businesses in order to fund development of infrastructure such as warehouses, cold storage units, agro-processing hubs etc.
- (ii) Providing financial and non-financial incentives for banks and social lenders to encourage lending to AgriSMEs. These incentives will be focused reducing the level of perceived and actual risk associated with agrifinance
- (iii) Extending credit facilities to banks and social lenders, thus expanding their lending resources and capacity to meet the demand for credit.

Conclusion and Recommendations

Key Takeaways on the Impact of the Pandemic and Implications for AgriSMEs and the Agriculture Sector

Based on secondary literature review and primary research, this assessment on the impact of the COVID-19 pandemic on AgriSMEs in Kenya has shown that:

- The restrictions put in place to curb the spread of the virus negatively impacted most agribusinesses.
- However, the impact is starting to lessen as businesses adopt technology and new business partnerships, and as government eases restrictions on movement.
- To build the resilience and robustness of AgriSMEs to mitigate the economic shocks of future pandemics and disruptions, businesses must balance the need for redundancy in supply chains with the need to operate lean businesses. They should also have a disaster preparedness and recovery plan, and build agile businesses that can pivot with shifts in their operating environment and in consumer behavior.
- As AgriSMEs rebuild following the pandemic, access to finance remains a key challenge. Government, private sector, and development actors all have a role to play in designing policy interventions and market incentives that can unlock financing in the agriculture sector.

Opportunities for Further Research

Given the evolving nature of the pandemic and limited ability to conduct rigorous in-person research, there are still outstanding questions that businesses, government, and development actors are grappling with. These include:

Short-term implications of the pandemic:

- What is the impact of the COVID-19 pandemic by business type? Is there a significant difference in the impact on agribusinesses in the input sector vs. output sector vs. agriservices sector?
- Beyond technology adaptations, how are AgriSMEs innovating to mitigate the impact of the pandemic?

Long-term implications of the pandemic:

- Have AgriSMEs organized themselves differently as a result of the pandemic?
- What types of Agribusinesses have been rendered obsolete in light of the pandemic? What new Agribusinesses have emerged?

Gender dynamics in the impact of and responses to the pandemic:

- How has the pandemic affected female-led/female-owned AgriSMEs differently, if at all?
- How have female-led/female-owned AgriSMEs mitigated the impact of the pandemic?

In conclusion, as the pandemic continues and eventually comes to an end, the impact on AgriSMEs and the Food System in Kenya as a whole, will no doubt to lead to new business models, products and services, as businesses reorganize to remain relevant in a volatile environment.

References

Buldyrev, V. Sergey et.al. *Catastrophic Cascade of Failures in Interdependent Networks*. Nature. Vol 464 April 2010.

Luper, I., & Kwanum, I. M. 2012. *Capital structure and firm performance: Evidence from manufacturing companies in Nigeria*. Research Journal of Finance and Accounting, 3 (5), 151-158

Maurer, Klaus. *Where Is the Risk? Is Agricultural Banking Really More Difficult than Other Sectors?* Finance for Food Towards New Agricultural and Rural Finance. Springer Open. 2014

¹ World Bank, FAO, Republic of Kenya – Agricultural Sector Development Strategy (ASDS) 2009 – 2020

² United Nations Economic Commission for Africa - An Assessment of Agricultural Sector Policies and Climate Change in Kenya, Dec 2013

³ DANIDA - Kenyan agricultural sector programme support 2005-2010

⁴ Mercy Corps AgriFin Kenya White Paper – Ecosystem Study

⁵ Mercy Corps AgriFin Kenya White Paper – Ecosystem Study

⁶ <http://viffaconsult.co.ke/wp-content/uploads/2018/07/2018-SME-Finance-Survey-Report.pdf>

⁷ <https://sokodirectory.com/2021/02/covid-19-precautions-and-guidelines-in-kenya-shots-and-misses/>

⁸ <http://www.kra.go.ke/en/covid-19>

⁹ <https://www.centralbank.go.ke/rates/central-bank-rate/>

¹⁰ <https://news.yahoo.com/kenya-extends-nationwide-covid-19-123949777.html>

¹¹ <https://data2.unhcr.org/en/documents/details/78194>

¹² [COVID-19 Food System - Rapid Country Assessment-Kenya \(July\)](#).

¹³ [COVID-19 Challenges and Responses \(technoserve.org\)](#)

¹⁴ <https://www.the-star.co.ke/business/kenya/2020-09-14-one-third-smes-face-closure-in-less-than-three-months/>

¹⁵ [Ten very good things 9: Globalization – Adam Smith Institute](#)

¹⁶ <https://voxeu.org/article/resilience-versus-robustness-global-value-chains>

¹⁷ [The Big 4 - Empowering the Nation \(delivery.go.ke\)](#)

¹⁸ [Opportunity - Aceli Africa](#)

¹⁹ https://ams3.digitaloceanspaces.com/aceliafrica/wp-content/uploads/2020/09/08173725/Aceli-Africa_Full-Benchmarking-Report.pdf

²⁰ <https://smebanking.news/resources/17501-rural-and-agricultural-finance/>

²¹ [Israel | Taxation in Agriculture | OECD iLibrary \(oecd-ilibrary.org\)](#)

²² <https://www.africaeconomiczones.com/wp-content/uploads/2020/03/African-Economic-Zones-Outlook-1.pdf>

²³ <https://www.nabard.org/content.aspx?id=2>