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“Sitawahi Sahau Hasara Nilipata” (I Will Never Forget the Losses I Incurred): Impact of Covid-19 on Food System Actors at the Eldoret Food Market in Kenya

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ABSTRACT

The corona virus disease of 2019 (COVID-19) is a global public health crisis that disrupted the food supply chain. The aim of the study was to investigate the impact of COVID-19 on food vendors at the Eldoret Food Market in Kenya. A qualitative study was conducted and data was collected using in-depth interviews among 12 food vendors. Data was analyzed using thematic analysis and three themes emerged: challenges faced, lessons learnt, and government interventions needed. Market food vendors are an integral part of the food system and should work at improving the quality of their food system to make it resilient.

KEYWORDS

Covid-19; food vendors; food systems; food systems actors; kenya; food security

Introduction

The corona virus disease of 2019 (COVID-19) is a global public health crisis that has affected many countries worldwide. Even before COVID-19, 223 million people were food insecure and as a result of the pandemic the number is expected to increase to 330 million by the end of 2021.¹ COVID-19 has affected food systems (FS) globally and locally.² Measures adopted by many countries to curb the spread of COVID-19 have disrupted the global food supply chains leading to increase in food prices.³ This is likely to push more people to food insecurity by the end of 2021.¹ This is because the affected food domains of food security are linked with the food system: access (affordability, affordability, access to markets), availability (food production, food distribution, food storage to reduce loss, transportation), utilization (food safety, nutritional value) and stability (in accessibility, affordability, and utilization).^{4,5}

The global food system was affected by disruptions such as movement restrictions, closure of borders, and closure of small-scale enterprises (SMEs), all which disrupted the food supply chain.^{6,7} This greatly affected

the urban food system. In many developing countries agriculture is labor intensive and the curfews and lockdowns affected the movement of this labor greatly impacting on food production.⁸ The COVID-19 containment measures led to loss of employment as a result of partial and in many cases permanent closure of businesses. Reduction and loss of income for many households has reduced the amount of money available for food and this could push more people in the continent toward hunger and starvation⁹ as the African food system has been affected by the COVID-19 pandemic.

Most of the food producers, suppliers and vendors of food in African countries are small-scale business people. Africa has been disproportionately affected by the adverse effects of the COVID-19 pandemic since majority of her population depend on small-scale enterprises and informal sector for livelihoods.^{10,11} Africa is experiencing rapid urbanization and the urban population is rapidly increasing and two-thirds of Africa's population will be living in urban cities by 2050.¹² Most if not all of the food sold in Africa urban cities and towns is sourced from the rural areas and sold in open-air markets; however, formal retail markets like supermarkets within the cities have started selling fresh produce.^{13,14} The actors involved in the African urban food systems supply chain are mainly small holder farmers, transporters, suppliers, formal and informal retailers and consumers. A majority of the African urban population get their food from open-air markets and street vendors^{15,16} who offer the food in affordable small quantities, which in Kenya is referred to as the "*kadogo economy*"¹⁷ and some also offer food on credit.^{15,18}

The Kenya agriculture sector which is dominated by smallholder farmers contributes 26% to the country's Gross Domestic Product (GDP) and employs over 40% of the total population, 70% of which are in the rural areas.¹⁹ Like elsewhere in Africa, Kenya's food retail environment which is part of her food system has grown to include supermarkets alongside open air markets, grocery shops, and street food vendors.^{20,21} These supermarkets are now selling fresh vegetables and fruits which they source from contracted smallholder farmers who meet their stringent health and safety requirements.^{22,23} This has reduced the market share of vendors in these markets, not only in Kenya but also across Africa.^{24,25} Market vendors are important in the African urban food system as they are a source of food for majority of the population.^{15,16,26} These vendors operate within open-air markets, while those who cannot afford stalls within these open-air markets sell outside the market or by the roadside or in neighborhoods (estates). Across Africa many of these food vendors who are outside the main markets frequently clash with municipal police and risk arrest or confiscation of their produce, which greatly impacts their income and livelihoods.^{27,28}

In Kenya, food prices have increased due to increase in transportation costs²⁹ and this has made it difficult for many households to afford food³⁰ and the number of food insecure people in the country has increased as a result of the

pandemic.³¹ Even before COVID-19, Kenya was grappling with high food prices, high unemployment rate, locust invasion, and floods. COVID-19 has exacerbated the situation as many businesses were closed affecting households' income. In Kenya, most of the farmers in the rural areas were unable to move their food to the urban markets due to the movement restrictions and many of them incurred losses.^{3,32,33} Food vendors also incurred losses due to the dusk-to-dawn curfew.³² This curfew was in effect from March 27th, 2020 to October 20th, 2021. This led to an increase in food prices that made food unaffordable to many consumers, leaving the vendors with little income.³⁰ Although food markets vendors are integral actors within the food system, no study has looked at the impact of COVID-19 on their livelihoods and this study hopes to fill that gap.

The study was conducted in Eldoret, Kenya. Eldoret town is the fifth-largest town in Kenya and has a population of 475,716. It is in the larger Uasin Gishu County which is largely an agricultural area with most of the farmers in the area growing maize and practicing dairy farming. Uasin Gishu County is located in the Rift Valley and has an area of 3392.2 km², a population of 1,163,186, 304,943 households and an average household size of 3.8.³⁴ The town is surrounded by prime agricultural land where farmers mostly grow maize and wheat. In addition, the town is also a major trading center in the county. The town is along the Kenya–Uganda highway making it easily accessible. Most of the foods sold in Eldoret are sourced from nearby agricultural small towns within the county like Burnt Forest, Turbo, Soy, Kapseret, and other neighboring counties like Trans-Nzoia, Nandi, Bungoma, and Elgeyo Marakwet. Like other urban towns in Kenya, food vendors in Eldoret also import food from Uganda and Tanzania.³² Eighty-five percent of food sold at the Eldoret Town Food Market is imported from other counties and countries.³⁵ Due to COVID-19 the supply and distribution of the food to the Eldoret Food Market was disrupted by movement restrictions within the town's environs and also at the Uganda and Tanzania borders. Although the Eldoret Town Food Market remained open during the lockdown and curfews, the food supply chain was negatively impacted as most of the food system actors are in the informal sector. The COVID-19 pandemic has brought to the forefront the fragility and unsustainability of Kenya's food system⁸ and this affects all food system actors. It is against this backdrop that this study sought to investigate the impact of COVID-19 on livelihoods of food vendors at the Eldoret Food Market in Kenya.

Methods

Study Site

This was a qualitative study that collected data using in-depth interviews. This allowed the respondents to express their beliefs, perceptions, and thoughts

while allowing the researchers to probe so as to provide further explorations and explanations from the respondents.^{36,37} The study was conducted among food vendors at the Eldoret Town Makert in Eldoret in Uasin Gishu County. The market is located within Eldoret town Center (0°31'05.7"N 35°16'20.0"E). The Eldoret Food Market is the main market in Eldoret town and many town residents, hotels and restaurants, and small-scale food vendors from the town's estates (neighborhoods) buy their produce from here. The small scale food vendors later sell their produce in the estates.

Sample Recruitment and Data Collection

Twelve food vendors were recruited and interviewed between December 2020 and April 2021. Convenience sampling was used to recruit the vendors. Ten of the food vendors had stalls inside the market while two of the vendors were selling their produce outside the market as they could not afford to rent the stalls inside the market. Convenience sampling was used as many of the vendors who were approached by the researchers refused to participate while others would agree but would later refuse to participate. This method was deemed appropriate for this study as many among the target population were not willing to participate.^{38,39} The vendors were afraid that the research would publicize them, many felt the researchers wanted to use their data to get money, while a few wanted incentives in order to participate. Out of the nine vendors who declined to participate in the study, three were male and only two of the vendors were selling their produce in both wholesale and retail. All the nine vendors had stalls within the market. As the researchers had difficulties in securing interviews, the use of convenience sampling was deemed appropriate. Interviews were conducted in Swahili to ensure the participants fully participated. Swahili is the language that is commonly used in Kenya.

Participants were interviewed at their stalls in the market. The interviews lasted an average of 40 min. Participants were asked their business experiences during the current pandemic and the effect of the pandemic on their businesses. As the interviews were conducted at the market stalls, the interviews would be paused to allow vendors to attend to their customers. The interviews were not tape recorded as the participants declined to be recorded and notes were taken during the interviews to make the participants comfortable with the process.⁴⁰ Two researchers conducted the interviews, took detailed notes that they compared after the interviews to ensure they did not miss anything as well as ascertain the credibility of the process.⁴¹ In-depth interviews were used to allow the participants to freely express themselves and provide detailed responses.⁴² The researchers also made observations and made notes on types of foods the vendors were selling, available stock as well as quantities purchased by their customers. Interview transcripts were prepared in the evenings after the interviews to ensure nothing was missed. The transcripts were also

reviewed to identify if any information was needed to assist in the interpretation of the findings.

Thematic analysis was used to identify themes and a line-by-line analysis was conducted to codify themes. The researchers familiarized themselves with the data after transcribing and identified initial codes, merged the codes to identify initial themes, and reviewed them to ensure they were coherent and covered all the coded data.⁴³ Constant comparison was done to ensure that similar themes and codes are merged.⁴⁴ This was done to identify repeated patterns and their meaning in the data.⁴⁵ This study was approved by the Chuka University Institution Review Board (CUIERC/NACOSTI/146) and NACOSTI (P/21/ 13,737). All the study participants provided verbal consent.

Results

Twelve food vendors participated in this study. Majority of the participants were married and eight were women, as shown in [Table 1](#). The average age of the participants was 44.2 year (± 10.4) and they had been in business for an average of 9.4 years (± 4.9). All but one of the participants had never missed work since the first corona virus disease case was detected in Kenya in March 20th, 2020.

Three themes emerged: challenges faced (loss of income, extra expenses, loss of savings, stalling of development plans), lessons learnt (having savings, business diversification, vegetable gardening) and government interventions needed (provision of vaccines, provision of loans and negotiating with banks to review loan repayment period for their customers, and gradual closure of businesses).

Challenges

Loss of income was mentioned by all the vendors as one of the challenges that they encountered during this corona pandemic. One of the reasons was due to the reduction of the number of customers as customers stopped coming to the market for fear of contracting Covid-19. The closure of learning institutions who were their major customers also led to loss of income as many of their customers were “*teachers who used to buy to sell in their kiosks near the schools but they stopped buying after the schools were closed*” (ID2). Additionally, the closure of hotels and restaurants also led to a reduction of their income. For instance, the small businesses that were selling chips (fries) in the estates, commonly referred to as *chips mtaani (estate chips)*, were also affected as there were unable to sell in the estates.

You know before corona I was also selling cereals in bulk to schools that were closed. Then those who I had already supplied to took a very long time to pay. (ID4)

The curfews also contributed to low customer turnout as people rushed home to beat the curfew and the vendors also had to leave early. This also led to a decrease in sales that resulted to food spoilage that led to wastage as the vendors had food stocks before the curfews were imposed.

Table 1. Participant characteristics.

ID	Gender	Age	Business*	Produce Sold	Source of Produce		Period in Business (in years)
					Kenya	Outside Kenya	
1	Female	34	W & R	Avocados Green bananas Mangoes	Western Kenya Elgeyo Marakwet	Uganda	2
2	Female	55	W & R	Green bananas		Uganda	15
3	Male	40	W&R	Onions	Nyeri Mt Elgon	Tanzania	Refused
4	Female	43	W & R	Beans Spices, Rice, Groundnuts		Uganda Tanzania	6
5	Male	35	W	Potatoes	Elgeyo Marakwet		12
6	Female	60	R	Potatoes, Hoho Tomatoes Dhania Onions Ginger	Elgeyo Marakwet Senet Burnt Forest Nyeri		10
7	Female	60	R	Rice		Uganda Uganda	7
8	Female	28	R	Sweet potatoes Green bananas	Bungoma Serem		5
9	Female	43	R	Traditional vegetables (<i>kunde</i> (cowpeas), pumpkin leaves, <i>mito</i> (slender leaf), <i>murende</i> (jute mallow))	From farmers who sell their produce at the Eldoret Food Market		8
10	Female	40	W & R	Beans Ndengu (green grams/mung beans)	Elgeyo Marakwet		8
11	Female	52	W & R	Beans Rice	Nairobi, Nakuru	Uganda Uganda	20
12	Male	40	R	Hoho Pumpkin Garlic Butternut	Burnt Forest Elgeyo Marakwet Nakuru Elgeyo Marakwet		10

*W=Wholesale; R=Retail.

The months of June and July 2020 were the worst and I will never forget the losses I incurred. I had to throw away two boxes of ripe bananas and that cost me 30 thousand shillings (US\$274). That was a lot of money. I am yet to recover and I am now buying my stock on credit. (ID2)

I have to leave early because of the curfew so I am not able to sell a lot in the evening like before. Also the council askaris (guards) chase us in the evening. (ID9)

Increase in produce cost was another challenge that the vendors faced. As most of the vendors sourced their produce from neighboring countries like Uganda and Tanzania, the curfew and lockdown prevented them from traveling to these countries. They were forced to pay brokers to get their produce, increasing the cost of purchase and compromising the quality of products supplied as they were not able to choose what they wanted and there were also delays at the border.

I used to go to Uganda myself but now with corona I am using brokers who are very expensive. Also because of corona the food that I get from Uganda especially tomatoes are very expensive and it spoils at the border while waiting

for clearance so when it gets here it is bad and therefore I have nothing to sell. (ID6)

The high cost of fuel also contributed to an increase in food prices making it difficult for both the vendors and their customers. The researchers were present when a customer asked for bananas for 20 shillings (US\$ 0.2) and the vendor told her she no longer sells bananas for 20 shillings and was now selling the same at 50 (US\$0.5) shillings a bunch. The customer did not buy the bananas as she told the vendor the price was too high for her.

Life is hard. The vegetables are expensive to buy as the prices have increased. The vegetables are also not available. You can get one and miss another. Like you can get murenda (jute mallow) and miss mito (slenderleaf). The customers are also complaining the prices are high. Some are able to afford and buy but others are not able. (ID9)

The high fuel prices have increased transport cost and this has increased the cost of commodities. If the transport is 300 shillings you have to increase the price to recover your money so that you do not go at a loss. That is why I am not selling green bananas at 20 shillings as it is a complete loss (while the researchers were there a customer wanted bananas for 20 shillings but the cheapest bunch was 50 shillings). (ID8)

Loss of savings due to reduction in sales was reported by all the vendors. One participant in particular stayed away from her stall from March 2020 to January 2021, and thus depleted all her savings. Many of the vendors reported using their savings to meet their household needs, sometimes decreasing their “business capital” (ID5).

I was forced to use my savings for my household needs and this has decreased my business capital. (ID5)

My savings have become too little as I am not able to save as much as I used to before. (ID4)

Extra expenses were incurred by the vendors due to COVID-19 regulations that were introduced to limit the spread of the disease. One such regulation required traders to have hand washing stations at the entrance of their premises. This came as an added expense to the vendors as they had to purchase hand wash containers, soap as well as water. Although the vendors incurred extra costs purchasing the hand washing containers and soap, many of them saw it as an important way of “preventing COVID-19” (ID8).

To limit the spread of COVID-19, the government encouraged the use of electronic mobile payments to limit the exchange of money. Many of the vendors had to purchase mobile till numbers because their customers were afraid of handling money.

The expenses have also gone up as I had to get a till number as people were afraid of using cash money. You know they had said money can spread corona. At first I was using m-pesa (mobile money) where people would send me the

money but imagine some people were reversing the money. And you know when you call them (mobile provider) they cannot help you as they tell you the mode of payment should either be by using a paybill or till number. (ID4)

Personal development plans stalled for many of the food vendors. Due to loss of income and savings, many of the vendors were unable to complete some of their development projects as they “*only have money for food*” (ID9). Several of the vendors had plans to buy plots where they planned to build their homes, and another one had planned to buy new furniture for her house, but all these plans were put on hold due to the pandemic.

If Not for Corona I Would Have Bought a Plot but Now the Money I Have is Just for Food. (ID9)

Lessons learnt from the pandemic

Despite the above challenges the participants revealed they had learnt important lessons from this pandemic.

Saving was a strategy that many of the vendors reported had helped them during this pandemic and they would continue with the practice. They noted that saving was important as things come up unexpectedly “*and you do not know about tomorrow*” (ID5).

It is Important to Keep Some Money Aside. Also to Have Stock of Food in the House That Can Be Used in Difficult Times. (ID8)

Business diversification is a strategy that many of the vendors were planning to adopt. This is because they felt that relying on one product or business will not cushion them in case of another pandemic. For instance, one vendor who was supplying his produce to hotels and learning institutions suffered huge losses and was now planning to open a different business for his spouse.

I should not depend on one business. I should invest in something else. My spouse can do another business while I do this. (ID5)

If another disease comes I will do another alternative business. I will do something at home like rearing chicken or keeping cows. But now capital is still a challenge. (ID7)

Having a vegetable garden was mentioned by some of the participants as a strategy that would ensure they have food during lockdown as well as save on buying food that was expensive during the lockdown. The kitchen garden was seen as “*self-sufficient*” (ID11), during future lockdowns.

Government Interventions

The vendors wanted to be vaccinated against COVID-19. They mentioned that they had heard about the COVID-19 vaccine but they did not know where

they could go to get vaccinated. In addition the vendors wanted to learn more about COVID-19.

I Have Not Understood Corona. I Need Someone to Explain It to Me. (ID11)

Closing of businesses in phases was an intervention that the vendors felt would have saved their businesses from near collapse. For instance, “*everything was closed at the same time*” (ID5), and this meant the vendors lost almost all their customers at the same time. They felt that the next time the government closes down businesses due to a pandemic, the closure should be gradual. This way even if one institution for example schools were closed, the vendors would still be able to sell to the other open institutions like hotels and restaurants, before their closure. This would have enabled them to complete their stocks that would have saved them from incurring losses.

Provision of loans to support those whose businesses were affected by COVID-19 lockdowns and curfews was another intervention the vendors wanted the government to implement. Some of the vendors mentioned that many people were forced to close down their businesses and yet they have families to support. The loans would enable them get back on their feet and “*to meet our needs like school fees*” (ID7).

The government should provide people with capital. People have knowledge but no capital. (ID11)

Lifting of the curfew and lockdown was what most vendors wanted as this would enable them to sell to more customers especially learning institutions and hotels and also reduce the cost of produce.

The government should lift the lockdowns and curfew to help people sell and supply commodities to other markets. Like now the person who supplies to me cannot travel at night because of the 9pm-4am curfew. At the market the suppliers are supposed to offload the goods before 6 am so you wonder what time they will travel to be able to work within the set time. I have to be in the market by 5 am to buy the produce from the suppliers. (ID8)

The lockdown and curfew impacted negatively on the food market’s food supply chain as food suppliers were only able to transport their produce between 4am-9pm. This meant that there was no overnight transportation that decreased the amount of food transported leading to an increase in food prices.

Discussion

The effects of COVID-19 on the food vendors at the Eldoret Town Market have been resonated in this study. First, the vendors reported loss of income which was as a result of the measures introduced by the government to curb the spread of COVID-19. Due to the lockdowns and curfews, many businesses

in Kenya were closed to adhere to health regulations set by the government. Hotels and schools that were major buyers of the vendors' products were closed and this heavily impacted their businesses leading to loss of income, and this has also been witnessed in other countries.^{46,47} In addition, the vendors who had supplies before the pandemic mitigation measures were declared experienced losses due to food spoilage. This is an unfortunate trend that has been witnessed and is still being witnessed worldwide.^{48,49} Although majority of Kenyans in urban areas purchase food from market food vendors, the fear of contracting COVID-19 kept many consumers away from the food markets and vendors.⁵⁰

The increase in the cost of produce as a result of the lockdowns and curfews saw the vendors increase the price of their produce. Due to the lockdowns and curfews, the suppliers were not able to transport their produce at night and as most of the produce are sourced from outside the town, this forced suppliers to pay for accommodation to avoid violating curfew laws. Additionally, the disruptions and delays at the borders especially the Ugandan and Tanzanian borders also led to increased food loss due to spoilage and reduction in the amount of food imports that led vendors to increase food prices.³² The vendors also used brokers to buy them food from Uganda and Tanzania and this led to an increase in produce price. This made food unaffordable to many and contributed to an increase in the number of people facing food insecurity in Kenya.^{51,52} Although the Kenyan government together with local private organizations and international development partners provided food assistance and cash transfers especially among the urban poor in informal settlements, not all Kenyans who were in need of food received assistance.^{53,54} The increase in the number of people facing food insecurity globally has been attributed to the increase in food prices due to the breakdown in the food supply chain in the food system in many countries.^{51,52} Moreover, many people lost their jobs due to the pandemic and regulations associated with measures to prevent and reduce the spread of COVID-19, and this contributed to their inability to afford food. This has increased the proportion of the population facing economic hardship.⁵⁵ This is a great hindrance to the SDG2 that aims at ending hunger and attainment of food and nutrition security for all by 2030.⁵⁶

Majority of the food producers, suppliers and vendors in Kenya are small-scale business traders. Africa has been disproportionately affected by the adverse effects of the COVID-19 pandemic since majority of her population depend on small-scale enterprises and the informal sector for livelihoods.^{10,11} This caused decline and loss of both income and savings among many small-scale traders making them and their household more vulnerable during and even after this pandemic. Several studies^{31,57,58} have also reported that the pandemic caused households to use their savings due to loss of income and

many have been left without savings.⁵⁸ This not only devastates livelihoods but also risks complete destruction of their livelihoods that may lead them to poverty. This pandemic has led to the derailment of SDG 1 on poverty reduction across many nations.

However, despite these challenges, the vendors reported learning important lessons that would help them in case of another pandemic. Saving was identified as a strategy that would enable them face future pandemics. All the vendors were in *chamas* (rotating savings and credit associations) thus they will be able to continue saving. In Kenya *chamas* are informal groups that were initially began by women who met in groups within their neighborhoods or workplaces and contributed money weekly or monthly, which was given to members in turns.⁵⁹ Currently, some of these *chamas*, have constitutions, are officially registered and have grown to include men, but many still remain informal. *Chamas* promote women economic and social empowerment contributing to wealth accumulation for women.^{59–62} These *chamas* also provide social support networks which have been reported to be beneficial in supporting mental wellbeing and promoting household food security during this current pandemic.^{63,64}

The disruption in the food supply chain affected the food vendors hence many saw business diversification as a key in surviving future pandemics as it will provide them with an alternative livelihood. This has been resonated by small scale traders in food systems across the globe.^{65,66} However in future pandemics, local and national governments should help facilitate the movement of food produce to ensure that food is available, accessible and affordable during such times. This will also ensure actors such market food vendors are able to sustain their livelihoods during such times. Kitchen gardens are a key component of food systems and having a vegetable garden was a strategy mentioned by a vendor that would enable her have food during future lockdowns and curfews. After the start of the pandemic, the Kenya government started an initiative that encouraged both rural and urban households to setup kitchen gardens to enable them access healthy diets during the pandemic period.⁶⁷ This could also have contributed to low sales among the vendors as probably households with kitchen gardens were getting vegetables from their gardens. Several studies have reported growth of kitchen gardens during the pandemic which enabled households to access fresh food ensuring nutrition security during the pandemic.^{68,69} Thus home vegetable gardens should be encouraged as an alternative food source within the local food system.

Although the government intervention strategies such as lockdowns and curfews were aimed at preventing the spread of COVID-19, many businesses were negatively impacted. The businesses should have been closed gradually to ensure continual supply of goods and to lessen losses especially food wastage. In addition to the vaccine, there is need to provide the vendors with correct information about COVID-19 as several vendors in the study reported that

they did not know much about COVID-19. This will prevent misinformation on the disease that may lead to spread of disease.^{70,71} As of July 17th, 2022, Kenya had administered over 19.6 million vaccinations and out of these 9.3 million were fully vaccinated which is only 17.4% of her total population.⁷² There is need to provide vaccines in sub-county hospitals to ensure more people have access to the vaccines. Only 228,000 doses of Covid-19 vaccines have been administered in Uasin Gishu county where the food market in the study is situated.⁷³

The study is not without limitations. It was difficult to get willing participants from the population of interest, hence a non-probability sampling method was used. Convenience sampling may have resulted in a non-representative sample. Additionally, the study was only conducted in the main town market and the vendors may not be generalized to other vendors in similar settings. However, the researchers tried to include vendors who had stalls within and outside the market as well as those selling their produce in wholesale as well as retail. Future studies should be longitudinal and collect both quantitative and qualitative data to provide more information on the impact of COVID-19 on the food vendors as well as their households. This will provide more detailed information on long-term impact during the pandemic and post-COVID-19.

Conclusions

The present study provided evidence that COVID-19 negatively impacted the food vendors who are major actors within the food system. As much as the government introduced tax relief measures at the beginning of the pandemic to mitigate impact on households,⁷⁴ most of the tax relief measures were applicable to salaried workers and not small-scale traders. The government should provide financial assistance to businesses that shut down due to the pandemic in order to enable them restore their livelihoods and promote economic recovery in the informal sector.

Market food vendors as food system actors should actively participate toward making the food system resilient. Several researchers have identified qualities that make food systems resilient.^{75,76} As the food vendors in our study are already in *chamas*, they can channel their contributions to buy cold storage infrastructure to minimize food losses. In addition the mobile network connectivity in the study area is good, and vendors should connect with their customers and work with local motorcycle drivers (*boda boda*) to deliver food to their customers. This will enable them to increase their sales as they will be able to reach customers who have kept away from the market due to COVID-19 as well as those who are unable to find convenient parking for their vehicles. These actions will contribute toward a resilient food system that will lead to preservation of their livelihoods and will also

make produce more accessible and affordable to both the vendors and consumers.

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