

EatSafe: Evidence and Action Towards Safe, Nutritious Food

Multi-Country Market Report: Vendor and Consumer Perspectives on the COVID-19 Crisis

Quarter 3: April – June 2021

January 2022

This EatSafe report presents evidence that will help engage and empower consumers and market actors to better obtain safe nutritious food. It will be used to design and test consumer-centered food safety interventions in informal markets through the EatSafe program.

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EXECUTIVE SUMMARY

Insights on the rapidly changing situation from vendors in traditional markets and the consumers that rely on these markets can provide vital information for decision making that supports the availability and affordability of safe and nutritious food during the Coronavirus (COVID-19) pandemic. The Keeping Food Markets Working (KFMW)/EatSafe market data presented in this report provide timely information and unique insights on 1) vendors' and consumers' attitudes and behavior in a set of key markets in Bangladesh, Ethiopia, Kenya, and Nigeria and 2) market systems resilience during the pandemic. This report summarizes cross-country analysis of data from rapid surveys undertaken in Bangladesh, Ethiopia, Kenya and Nigeria during the third quarter of 2021 (Q3; i.e., April to June).

While the situation in terms of infection burden during the COVID-19 pandemic in Ethiopia, Kenya and Nigeria has slightly improved since the second quarter of 2021 (Q2; i.e., January to March), Bangladesh experienced record high infections. The pandemic continues to affect food and nutrition security despite businesses staying open with strict conditions to maintain appropriate safety protocols.

The KFMW/EatSafe data show that most market consumers and vendors continue to adopt safety measures and behaviors to mitigate the spread of the virus. Almost all vendors in Bangladesh and Kenya (98%), and 84% in Nigeria reported taking measures to reduce the risk of transmission to themselves, employees, and consumers (less common in Ethiopia, 75%). Mask wearing was the most common measure across all countries followed by reminding consumers to maintain appropriate distances while in the market in Bangladesh and Kenya, and cleaning surfaces in Nigeria and Ethiopia. Use of mobile money was another common measure particularly in Kenya, with no mention in Bangladesh.

Most vendors (76% - 88%) and consumers (76% - 85%) in Kenya, Nigeria, and Ethiopia complied with market safety measures. However, in Bangladesh only 28% of vendors and 38% of consumers adhered to these safety measures. Vendors were more likely to follow market safety measures and described them as useful, compared to consumers, in Kenya and Nigeria. In contrast, consumers were more likely to observe the safety measures, compared to vendors, in Bangladesh. The most reported useful measures to both vendors and consumers were masking mandates for both vendors and consumers, and handwashing/sanitizer stations.

Impacts on vendors' businesses due to the pandemic were reported across all countries but most prevalent in Kenya (98%), followed closely by Bangladesh (97%), and less prevalent in Nigeria (69%). Demand-side difficulties were more prevalent than supply-side difficulties across countries. Across the three countries, 45% - 80% of vendors reported decreased number of consumers and sales. Supply side challenges (i.e., difficulty in accessing products) to sell was perceived by 30% - 46% of vendors whereas difficulty transporting products was mentioned by 21% - 42% of them. Finance challenges, particularly, difficulty accessing financing (13% - 32%) and limited financial reserves (8% - 20% across countries) remains low.

Consumers were also impacted financially by the pandemic as reported by all consumers in Kenya and most consumers in Bangladesh (82%) and Nigeria (76%). Loss of job/business/source of income was the most reported impact in Bangladesh (99%) while the most reported impact in

Kenya and Nigeria was reduced income due to fewer business opportunities (79% and 68% respectively). Most consumers in Bangladesh relied on savings to mitigate the effects of the pandemic, while in Kenya and Nigeria it was engaging in other income earning activities. Of particular concern was reports of decreased consumption of food in Kenya (35%) and Nigeria (10%) suggesting that the pandemic is affecting people's food security in these countries.

Market systems resilience was also assessed in [Bangladesh](#), [Kenya](#), and [Nigeria](#) (GAIN, 2021c, 2021d, 2021e) based on the [USAID market system resilience framework](#) using six of the eight domains to characterize resilience capacities: diversity, fairness, connectivity, competition, and cooperation. On diversity, more than half of vendors (53%) in Bangladesh sold only one commodity whereas in Nigeria and Kenya, 53% and 43% of vendors respectively sold between two and five products. Unlike in Bangladesh where a small share of vendors (22%) sold more than 30 commodities, there were no vendors in Nigeria and Kenya that sold more than 30 commodities. On equity and fairness, most vendors in Bangladesh (97%), Nigeria (75%) and Kenya (72%) did not find it difficult to follow new rules and regulations put in place due to COVID-19. On connectivity, most vendors across all three countries experienced decreases in the number of customers per day, but particularly so in Bangladesh (99%). On competition, none of the vendors in all countries reported changing their own practices based on competitors. In contrast, consumers reported changes to places where food was bought. Other markets were a common alternative to surveyed markets in Bangladesh and Nigeria, while in Kenya it was supermarkets. On cooperation, most vendors shared resources in Kenya (94%), whereas there was little resource sharing in Nigeria (37%) and none in Bangladesh. The most common resources shared were new hand washing facilities, sanitizers and masks. In Kenya, vendors also shared transportation (55%) and suppliers (52%). On business strategy, use of marketing strategies was more apparent in Kenya (62%) as compared to Nigeria (20%) and in Bangladesh (1%).

BACKGROUND

Since early 2020, the necessary COVID-19 lockdowns have placed a spotlight on the weaknesses of food systems across the world. In the COVID-19 context, a critical part of supporting the health and resilience of people and economies is to protect the nutritional status of current and future generations. The Global Alliance for Improved Nutrition (GAIN) has developed the [Keeping Food Markets Working \(KFMW\) program](#) as an emergency response to the COVID-19 crisis, providing rapid support to food system workers involved in the supply of nutritious foods, and to fresh food markets. While disease control responses to the pandemic are essential, they may also disrupt food systems, depress income, and put a strain on social protection programs, which can threaten the nutritional status of the most vulnerable. The KFMW program is focused on mitigating those risks and keeping affordable nutritious foods flowing in African and Asian markets to the people who need it the most.

Through KFMW, the USAID-funded programme EatSafe: Evidence and Action Towards Safe, Nutritious Food is working to better understand the rapidly changing situation in traditional food markets from the vendor and consumer perspectives in order to help markets stay open and operate safely. EatSafe is a five-year project aiming to enable lasting improvements in the safety of nutritious foods in traditional markets by focusing on the consumer. EatSafe is led by GAIN, and partners include the International Livestock Research Institute (ILRI), Pierce Mill Entertainment and Education, and Busara Center for Behavioral Economics.

While traditional markets are an important source of food and income for the nutritionally vulnerable, they also create ideal conditions for transmission of the virus. Market vendors in traditional markets, already operating on very tight margins, must now make difficult choices on whether to return to their food sales workplaces or to shutter them. Working in crowded, risky environments, and falling ill could have devastating effects not only on their family finances and the nutrition security of the entire household, but also for their consumers; these decisions have potentially far-reaching consequences.

While rich and valuable information is now emerging on the resilience of supply chains that move food to traditional markets, the situation for market vendors and consumers in these markets remains unseen. Understanding the rapidly changing situation—especially related to health and safety procedures, the availability of nutritious foods, and the resilience of traditional market—will help ensure the availability of affordable, safe, nutritious food under COVID-19 and provide vital information for further programming.

The analysis presented here provides a unique perspective, delving into the perceptions and actions of vendors and consumers on the ground and how their businesses, products, and supply chains are responding to critical limitations and uncertainty. Rapid information gathering, assessment, and dissemination of COVID-19 prevention best practices in traditional markets builds on GAIN's established relationships with traditional markets where nutritious foods are traded and sold. Surveys were conducted in adherence with GAIN's internal ethical guidelines on COVID-19 prevention and control.

1. INTRODUCTION

This report presents multi-country results from rapid assessments in urban markets in Bangladesh, Ethiopia, Kenya and Nigeria, for the April–June 2021 timeframe. The report is divided into three main sections: a) a snapshot of the COVID-19 situation in each country to provide context for the market assessments; b) descriptive results on vendors’ and consumers’ attitudes and behavior in traditional markets in response to the COVID-19 pandemic; and c) descriptive results related to vendor and consumer resilience, based on a market resilience approach.

2. COVID-19 SITUATION

Second and third waves of the COVID-19 pandemic from April–June 2021 have resulted in a rise in the number of confirmed new cases both globally and in KFMW countries, per the WHO COVID-19 Dashboard). The pandemic continues to affect food and nutrition security through economic and social systems shocks, food system disruptions and gaps in coverage of essential health and nutrition services (Carducci et al., 2021). Depending on the severity of caseloads and government directives on combatting the spread of COVID-19 in KFMW countries, domestic movement restrictions, land and border and international flight controls vary across the KFMW countries (GAIN, 2021b).

Below is the summary situation for the Q3 of 2021 in Bangladesh, Ethiopia, Kenya, and Nigeria. Showing recent data from Our World in Data, **Figure 1** displays recent trends (through June 2021) in new cases per million people in each country, though recorded cases are likely an underestimate of the true scale of the outbreak.

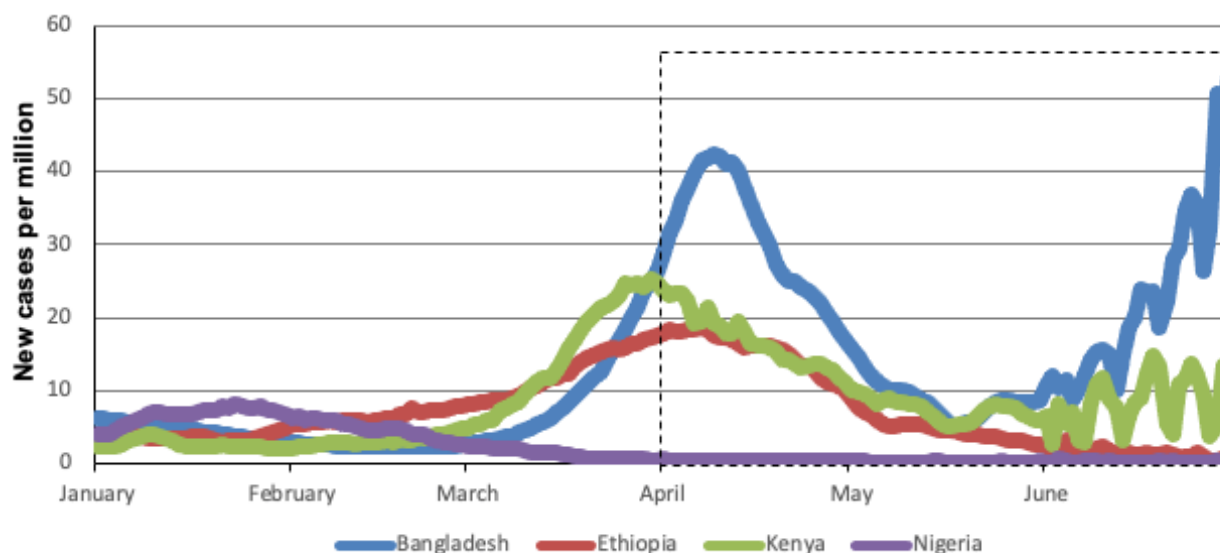


Figure 1. New confirmed cases of COVID-19 per million people, in Bangladesh, Ethiopia, Kenya and Nigeria (seven-day smoothed)

Bangladesh was one of the four countries in Asia with the highest number of reported weekly confirmed new cases as of June 2021, mainly attributed to the highly infectious Delta variant of COVID-19. The rise in caseloads from Q2 continued through June, with April and June seeing record highs in infections since the pandemic hit the country in March 2020 (bdnews24.com,

2021). Restrictions on public movement across the country were extended in early April with a second nationwide lockdown put in place to curb the spread of COVID-19. However, businesses remained open with strict conditions to maintain appropriate safety protocols.

In Ethiopia, the steady surge in confirmed cases that started in January 2021 continued through April, before a significant decline that started in May. By the end of June, cases were at their lowest. Restrictions focusing on preventive measures such as mask wearing and limiting the number of participants in face to face meetings to 50 are still in place (UNHCR, 2021a). Further to this, the government has updated its requirements for travelers' entry, exit or transition through Ethiopia in line with African Union's Trusted Travel Guidelines. As of July 2021, travelers will be required to present digital COVID-19 certificates as opposed to paper certificates currently in use (UNHCR, 2021b).

Kenya, coming out of a third wave, experienced a significant decline in cases from April until June when cases began to fluctuate every few days. At the end of the June, cases began rising again which prompted government to extend the existing night-time curfew and mask mandate to the end of July. Public gatherings and in-person meetings remain suspended though businesses, religious places, and schools remain open for operations (ANVIL, 2021).

Nigeria has had a sustained downward trend in the number of confirmed cases since late January 2021 and is yet to experience a third wave. The number of cases had decreased by 28% in June (iMMAP, 2021). Despite the decline in number of cases, control measures including the use of facemasks, physical distancing, avoidance of public gatherings, non-essential travel, a nationwide curfew, travel bans for specified countries and mandatory quarantine remain in place. Additionally, areas with a rapid increase in cases are mandated to a 'precision' lockdown (ANVIL, 2021) while businesses have resumed, with set limitations such as social distancing and capacity.

The KFMW/EatSafe rapid assessment market survey provides timely information on vendors' and consumers' attitudes and behavior in traditional markets in response to the COVID-19 pandemic.

Data were collected from two markets within each country, approximately every two weeks. In consultation with local officials, two markets were chosen in or near the capital cities of the focus countries. Criteria for choosing markets included that it be an open-air market selling fresh foods, engage in direct sales to consumers, and be a major market serving the urban population. Countries rolled out the surveys at different times and thus have conducted different numbers of survey rounds to date. In each round approximately 40 consumers and 40 vendors were interviewed per country. For vendor surveys, a non-random stratified sampling approach was taken in each round, aiming to represent both the gender composition of the market vendors and the distribution of different commodity categories. A convenience sampling approach was taken for consumer surveys. While the sample may not be representative of the population, it provides critical insights into the perceptions of vendors and consumers over time in the focus countries.

3. VENDORS' AND CONSUMERS' ATTITUDES AND BEHAVIOR

This report presents data from Bangladesh, Ethiopia, Kenya, and Nigeria between April-June 2021. In Bangladesh, data collection was in Islambagh and Bonolota markets in Dhaka. The analysis represents six rounds of bi-weekly data collected from a cumulative total of 440 vendors and 440 consumers. In Ethiopia, data collection was in Kera and Jane-Meda markets in Addis Ababa. Analysis includes data from two rounds of data collection involving 262 consumers and 238 vendors. In Kenya, data collection was in Madaraka and Machakos markets, outside of Nairobi. The analysis represents six rounds of bi-weekly data collected from 540 vendors and 542 consumers. In Nigeria, data collection took place in Utako and Gosa markets in Abuja. The analysis represents four rounds of bi-weekly data collected from 360 vendors and 360 consumers.

3.1. SURVEY POPULATION

As shown in **Table 1**¹ female vendors represented 66% of those interviewed in Kenya, 40% in Nigeria, 22% in Ethiopia and none in Bangladesh. Restrictive norms related to gendered participation in commerce in South Asia can explain the lack of female vendor respondents in Bangladesh. In Bangladesh, 80% of consumers interviewed were male. In Nigeria about half were female (52%). While in Kenya and Ethiopia, interviewed consumers were mostly female; 32% and 37%, respectively. Comparable to vendors, the age distribution for interviewed consumers was mostly young in all the four countries.

Table 1. Market assessment respondent demographics

	GENDER		AGE GROUP					
	Males	Females	18–24	25–30	31–40	41–50	51–65	66–75
Bangladesh								
Consumers	80%	20%	6%	15%	43%	32%	3%	1%
Vendors	100%	0%	7%	21%	29%	31%	11%	1%
Kenya								
Consumers	37%	63%	19%	29%	31%	13%	7%	1%
Vendors	34%	66%	6%	20%	29%	23%	18%	4%
Nigeria								
Consumers	52%	48%	10%	28%	39%	19%	4%	0
Vendors	60%	40%	4%	20%	43%	27%	6%	0
Ethiopia								
Consumers	32%	58%	13%	38%	32%	13%	2%	2%
Vendors	78%	22%	11%	37%	35%	16%	1%	-

Major commodity sold was one of the sampling criteria to capture sales of nutritious commodities of interest (**Table 2**). This allows us to assess characteristics of commodities with nutritional and value chain similarities. Bangladesh had the highest proportion of vendors who sold poultry, meat and/or fish (60%) as compared to Nigeria (19%) and Kenya (11%). Ethiopia, however, was the only KFMW

¹ The sample was not random: care should be taken in generalizing the results to the broader population

country where none of the sampled vendors sold poultry, meat and/or fish as their major commodity. A small share of vendors (4% in Bangladesh, 9% in Kenya, 25% in Nigeria and Ethiopia) specialized in two or more commodities.

Table 2. Major commodities sold by vendors

KFMW Country	Fruits and vegetables	Grains, legumes, packaged	Poultry, meat and/or fish	Eggs and dairy	Mixed commodities*
Bangladesh	2%	18%	60%	16%	4%
Kenya	39%	10%	11%	31%	9%
Nigeria	11%	23%	19%	22%	25%
Ethiopia	42%	1%	-	32%	25%

* of two or more commodities

3.2. VENDOR AND CONSUMER PERCEPTIONS OF MARKET SAFETY DURING COVID-19

Consumers in all four countries reported having concerns when shopping in the market due to COVID-19 (**Figure 2**). Kenya had the highest proportion of concerned consumers (80%). In Ethiopia, the proportion of concerned consumers was 66% whereas in Bangladesh it was 51%. Nigeria had the lowest proportion of concerned consumers (44%). Fear of contracting COVID-19 was the most common concern across all countries.

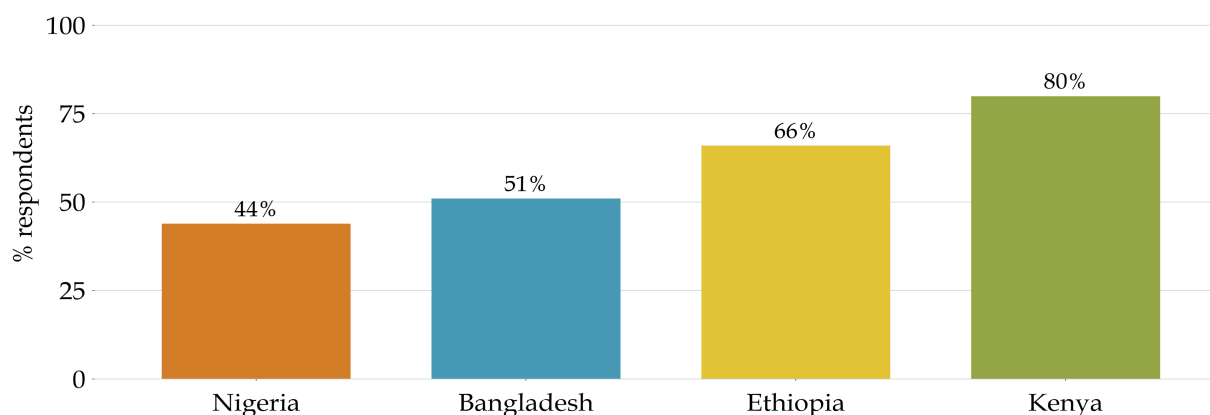
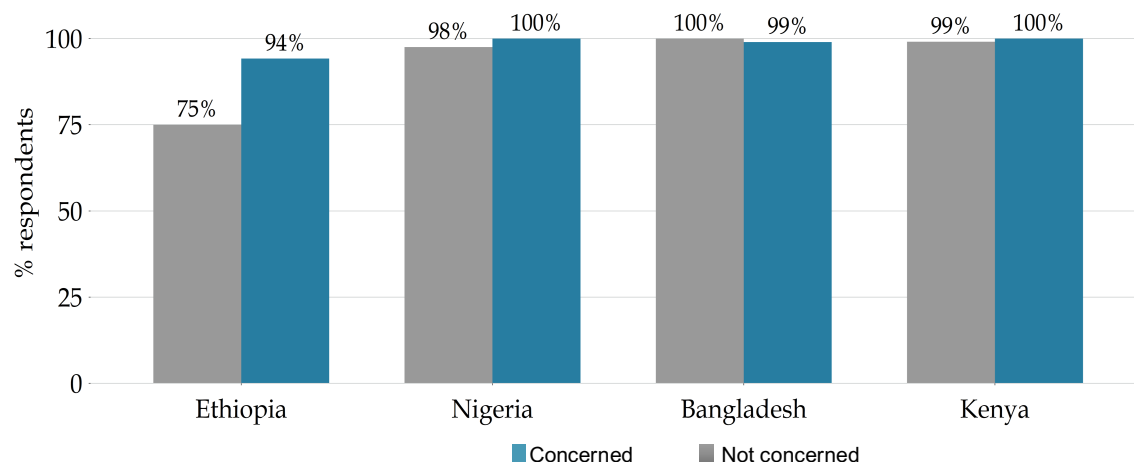


Figure 2. Proportion of consumers who had concerns shopping in the market

All consumers (concerned and not concerned) were asked if they understood how to avoid contracting COVID-19 while shopping in the market, and if they had any knowledge on measures to protect themselves (**Figure 3a** and **3b**). The differences between the two groups were very small, almost none. Almost all consumers (98% - 100%) in Nigeria, Kenya and Bangladesh understood how to avoid COVID-19. Ethiopia, however had slightly lower proportions of consumers who understood how to avoid COVID-19 (75% – 94%). The most common preventative measure mentioned was wearing a mask, almost identical for the concerned and non-concerned consumers. The second most common measure was washing hands frequently. Other identified measures included social distancing and using sanitizers frequently were reported more by concerned consumers.

Proportion of consumers with knowledge on how to avoid COVID-19



Knowledge of protection measures against COVID-19

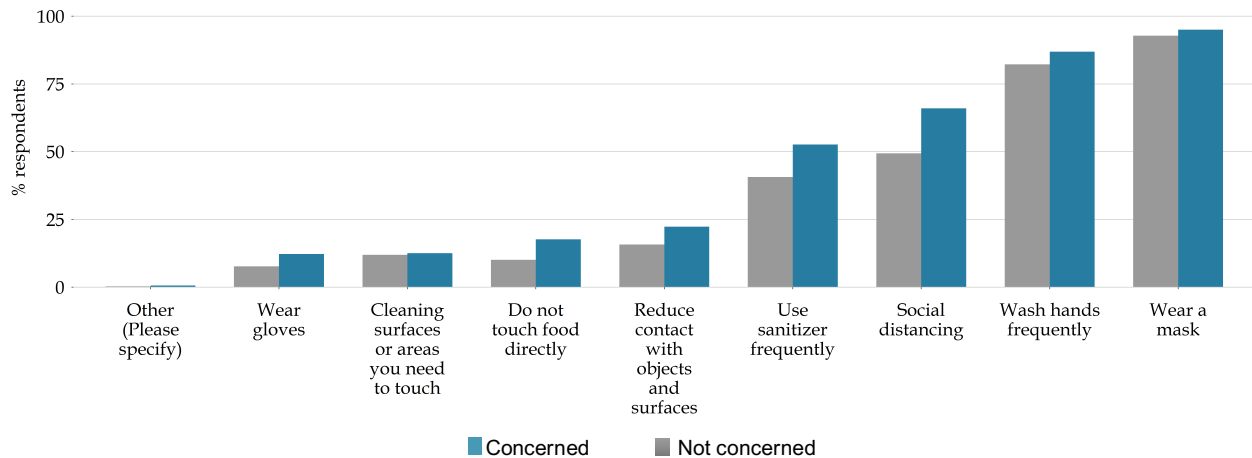


Figure 3. Proportion of consumers with knowledge on (a) how to avoid COVID-19 and (b) knowledge protection measures against COVID-19

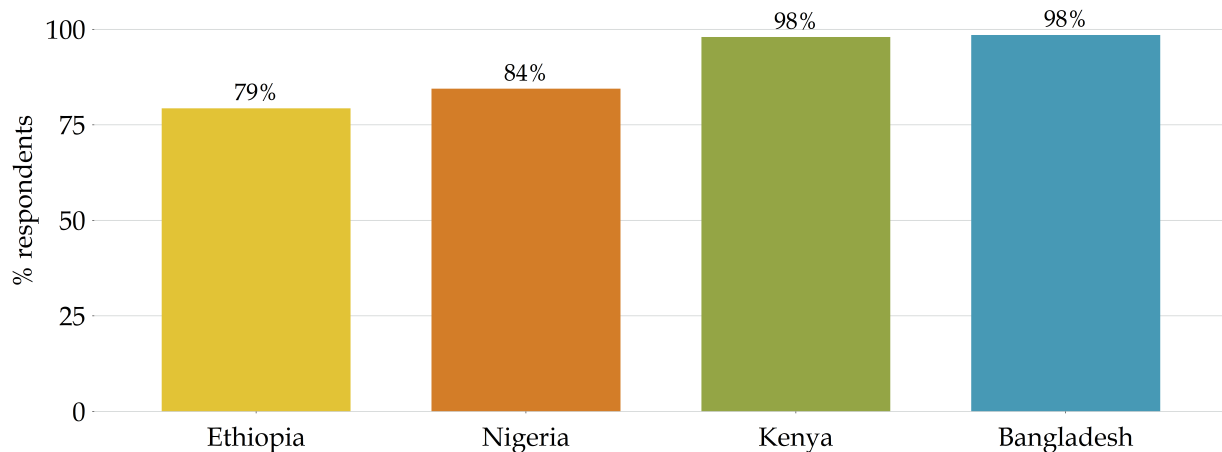
3.2.1. PREVENTIVE MEASURES ADOPTED BY VENDORS

Vendors were asked about measures taken to reduce the risk of COVID-19. As shown in **Figure 4a**, the highest proportions were in Bangladesh and Kenya where almost all vendors (98%) reported taking some measures to reduce the risk of transmission to themselves, employees, and consumers. The proportions were consistent through from April to June. The lowest proportion of vendors taking preventive measures was observed in Ethiopia (79%).

For the vendors that reported taking measures, the most common measure taken was mask wearing across all four countries (**Figure 4b**). The second most common measure for vendors in Bangladesh and Kenya was to remind consumers to maintain appropriate distancing while in the market. In Nigeria and Ethiopia, the second most common measure was cleaning surfaces. Offer of mobile money to minimize contact was the third most common measure for vendors in Kenya.

While mobile money was a measure also taken by vendors in Nigeria and Ethiopia, it was reported by a smaller proportion in these two countries. None of the vendors in Bangladesh reported mobile money as a preventive measure.

(a) Proportion of vendors who report taking preventive measure to reduce the risk of COVID-19 spread



(b) Commonly reported preventive measures taken by vendors

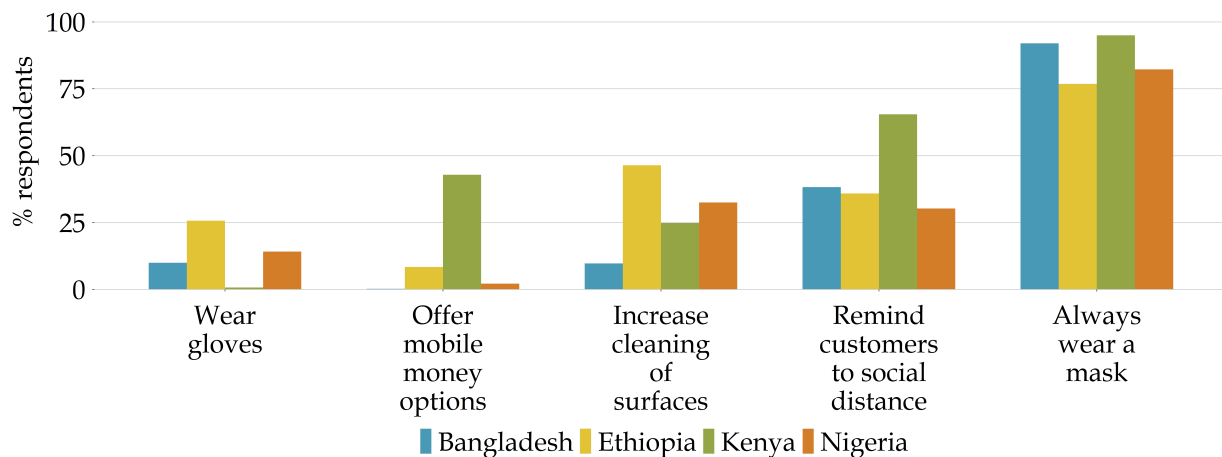


Figure 4. Proportion of vendors who (a) report taking preventive measure to reduce the risk of COVID-19 spread and (b) the commonly reported preventive measures taken by vendors

3.2.2. USEFUL AND SUGGESTED SAFETY MEASURES

Vendors and consumers were also asked a number of questions about measures they observed that were put in place by market associations with guidance from local municipal authorities.

Figure 5 compares consumer and vendor responses as to whether they had observed any safety measures put in place by the market. In Kenya, Nigeria and Ethiopia, most vendors (76% - 88%) and consumers (76% - 85%) observed safety measures, and with similar responses by gender across all countries. In contrast, in Bangladesh, only 28% of vendors and 38% of consumers

overall, observed safety measures put in place by the market, with more women (61%) than men (30%) observing the safety measures. These differences between consumers and vendors were statistically significant. While there was a decline in proportion of consumers and vendors observing safety measures for Bangladesh, Kenya and Ethiopia, it was particularly concerning for Bangladesh (52% in May – 13% in June).

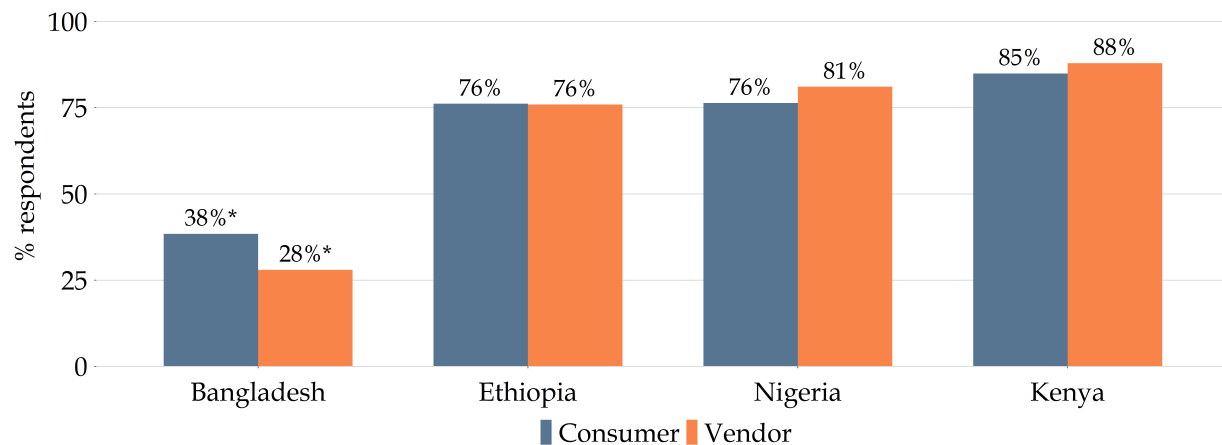
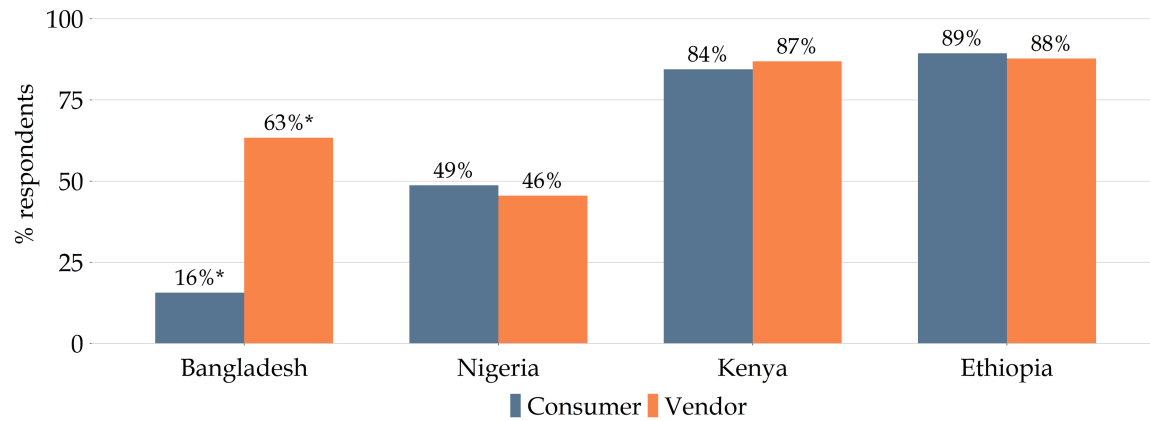


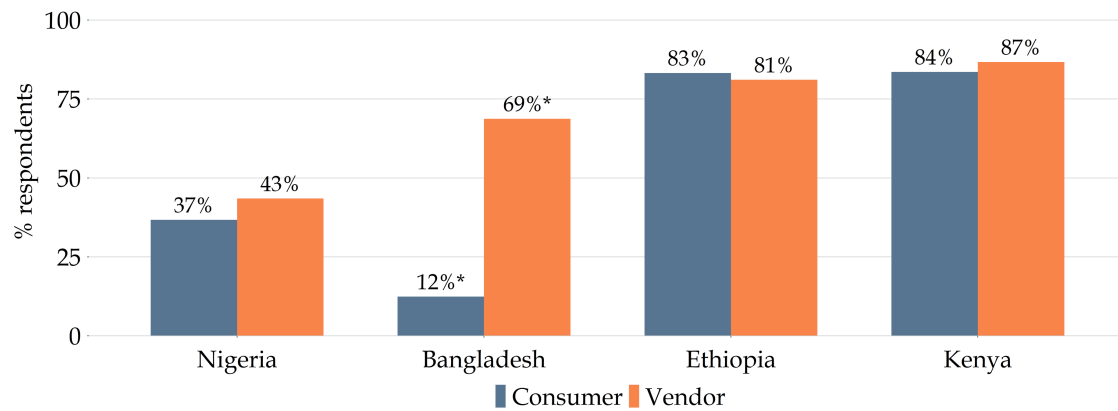
Figure 5. Proportion of respondents (vendors and consumers) who observed any safety measures put in place by the market²

For those respondents who did observe measures, they were asked which of them they considered useful for reducing their individual risk of contracting COVID-19. The most reported useful measures to both vendors and consumers were masks mandates for consumers and vendors and handwashing/sanitizer stations. As shown in **Figure 6a-c**, reported useful measures were largely similar between consumers and vendors in Nigeria, Kenya, and Ethiopia. Whereas in Bangladesh there were large, statistically significant differences: vendors considered mask mandates for consumers to be the most useful while consumers considered handwashing stations to be the most useful. In Nigeria, Kenya and Ethiopia, the highest share of respondents (consumers and vendors) found consumer mask mandates useful, followed by vendor mask mandates, and finally handwashing stations.

(a) Mandatory masks for consumers



(b) Mandatory masks for vendors



(c) Handwashing/sanitizer stations

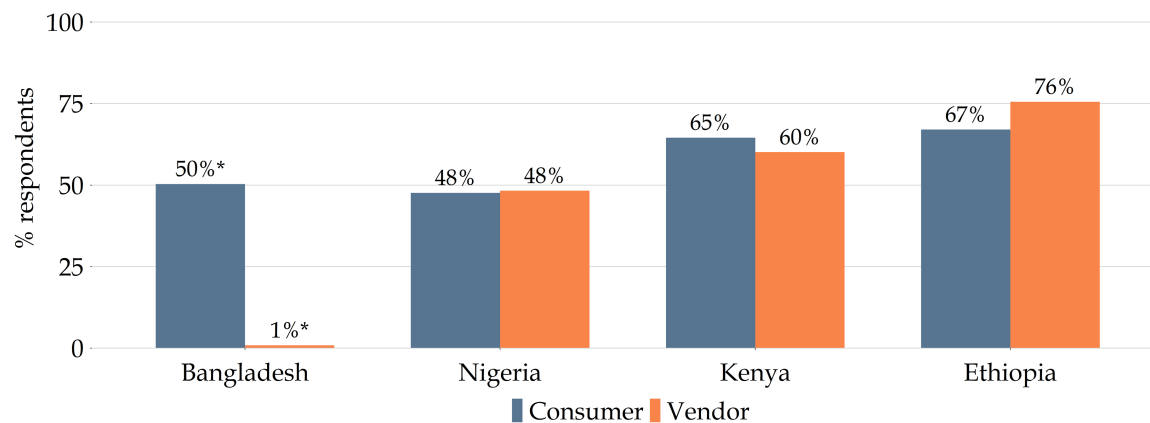


Figure 6. Market measures considered most useful for reducing individual risk by role: (a) mandate masks for consumers, (b) mandate masks for vendors, and (c) handwashing/sanitizer stations

Note: * Indicates statistically significant difference ($p \leq 0.05$)

3.3. PERCEIVED EFFECTS OF COVID-19 ON FOOD PURCHASE AND SALES

3.3.1. CHANGES IN CONSUMER SHOPPING BEHAVIOR

Consumers were asked about changes in shopping behavior due to COVID-19 in the two weeks prior to the survey. Changes in shopping behavior suggest risk awareness and mitigation by consumers, but some risk mitigation behaviors also have negative implications for vendor livelihoods (GAIN, 2021a).

Consumers in all four countries reported changes in shopping behavior due to COVID-19 in the two weeks prior to the survey (**Figure 7**). Kenya had the highest rate of consumers (77%) who reported changes to their shopping behavior, overall, as compared to other countries. In Ethiopia, the proportion of consumers who changed their shopping behavior was 59% overall with more men (65%) than women (55%) changing their shopping behavior. In contrast, Nigeria had a low proportion of consumers changing their shopping behavior (35%), a fall from 40% in May. Bangladesh had the lowest proportion of consumers who changed their shopping behavior at 9% and the changes were consistently less than 10% over survey rounds.

There has been a consistent and statistically significant decline (95% level) in the reported changes compared to previous quarters for Nigeria (from 53% in Q1 to 44% in Q2 and 35% in Q3) and Bangladesh (from 34% in Q1 to 14% in Q2 and then 9% in Q3). On the other hand, and increased number of consumers in Kenya, reported changes in shopping behavior of 14% between Q1 and Q3. These differences were also statistically significant.

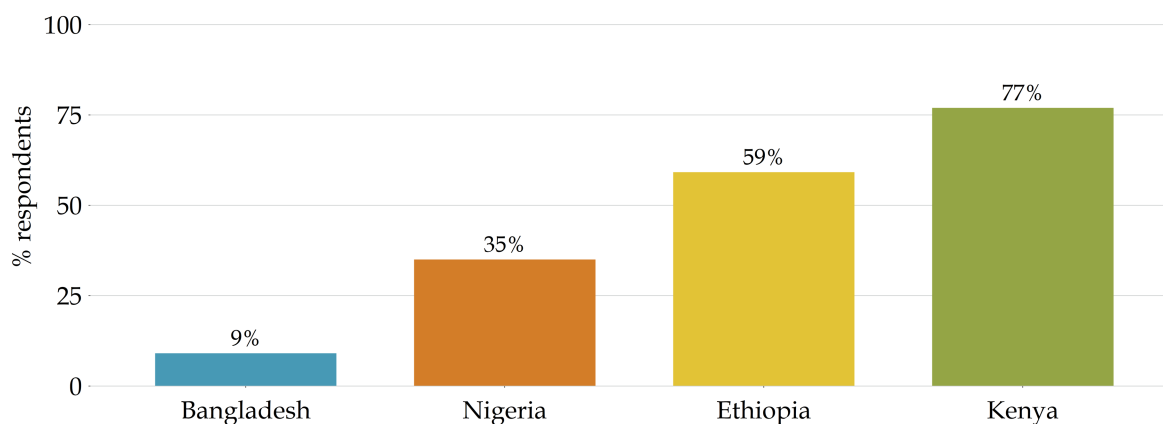


Figure 7. Changes in consumer's shopping behavior due to COVID-19

Consumers that reported changing their shopping behavior in response to COVID-19 were asked to specify what they were doing differently. The most common behavior change reported was reducing the frequency of shopping trips (**Figure 8**). Other common changes included avoiding the market during peak shopping hours and demanding cleanliness from vendors. In Ethiopia, Nigeria and Kenya, consumers also reported demanding more flexible shopping hours, buying different kinds of food, and reducing in-store shopping hours. Once again, increased use of mobile money was a common response in Kenya (36%) but not in other countries (3% in Nigeria and 1% in Ethiopia).

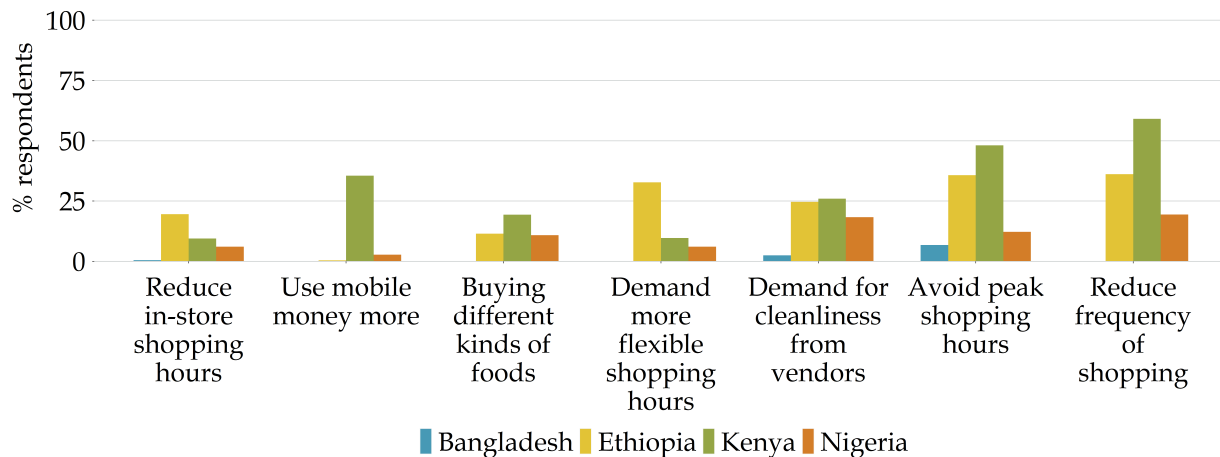


Figure 8. Most common changes in consumer's shopping behavior due to COVID-19

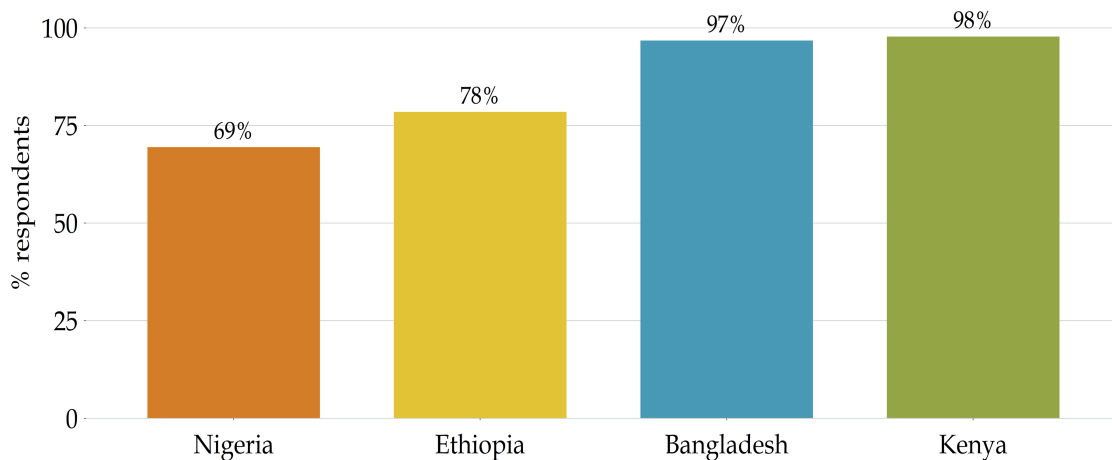
3.3.2. EFFECTS FELT BY VENDORS

Vendors were asked about impacts on their businesses due to COVID-19 in the two weeks prior to the survey (**Figure 9a**). The proportion of vendors reporting impacts on their business was highest for Kenya (98%), followed closely by Bangladesh (97%), and was constant across the three quarters. In Ethiopia, the proportion of vendors reporting impacts on their businesses was 78%, a decline over time (89% in Q1 and 84% in Q2). Nigeria had the lowest proportion (69%) among all countries but also the highest decline over time from 94% in Q1 to 69% in Q3. Changes over time were statistically significant at the 95% level for Kenya, Ethiopia and Nigeria, while there were no significant differences in responses between male and female vendors.

The most common impacts on vendors' businesses were demand side challenges (i.e., decreased number of consumers and sales; **Figure 9b**). Bangladesh, Nigeria and Ethiopia saw a drop in proportion of vendors who reported decreased consumer numbers from Q2 (7%, 21% and 9% respectively). In Kenya, however there was no change. Statistical differences were observed in responses between Q2 and Q3 for all countries on decreased consumer numbers. Similarly, the proportion of vendors who reported decreased sales in this quarter was lower than in Q2 for Bangladesh (85% and 88%), Ethiopia (49% and 66%), and Nigeria (47% and 52%). In Kenya, however, there was an increase from Q2 of 2%.

There were three supply side challenges reported by vendors. Difficulty in sourcing products to sell was perceived by 46% of vendors in Ethiopia, 39% in Kenya and 30% in Nigeria. Difficulty transporting products was mentioned by 42% of vendors in Ethiopia, 28% in Nigeria and 21%. Difficulty accessing other goods was mentioned by 28% of vendors in Ethiopia, 12% in Nigeria and 9% in Kenya. However, approximately 1% of vendors in Bangladesh had these challenges. The other challenges were related to access to finances namely difficulty accessing financing (13% to 32% across countries) and limited financial reserves (8% to 20% across countries). Overall, demand-side difficulties were more prevalent than supply-side across countries.

(a) Impacts on vendors' business due to COVID-19



(b) Most reported impacts on vendors' businesses due to COVID-19

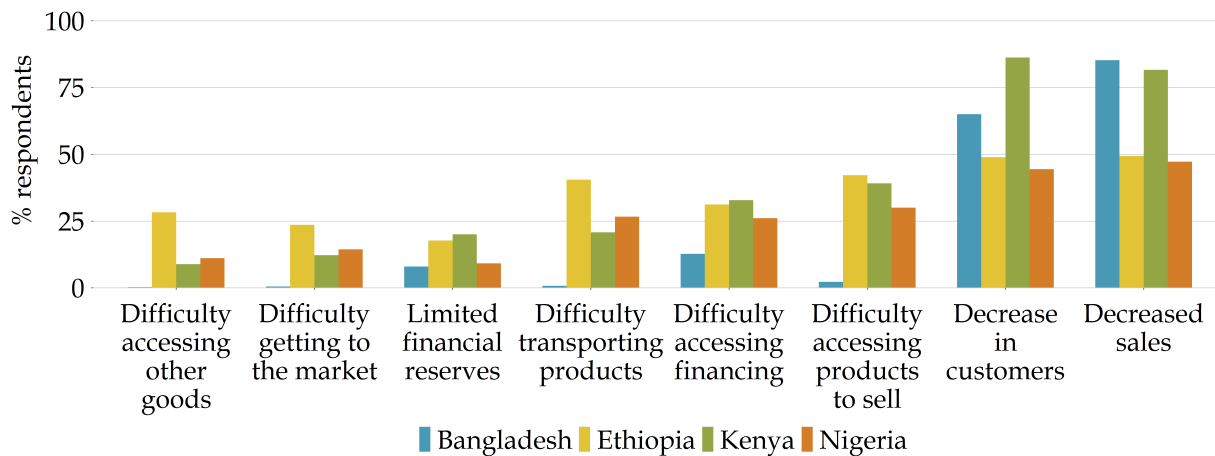
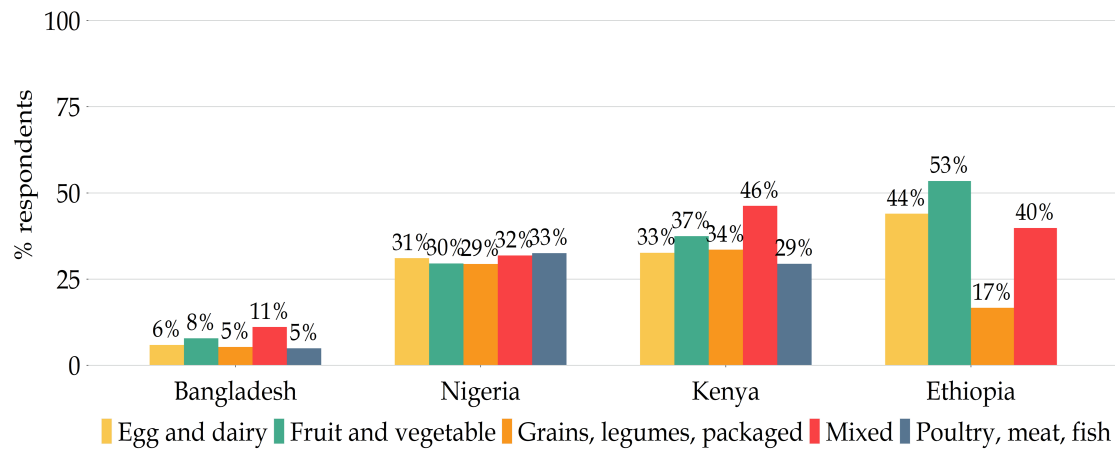


Figure 9. Impacts on vendors' (a) business due to COVID-19 and (b) most reported impacts on vendors' businesses due to COVID-19

This analysis also compared the extent to which vendors of different food types reported two important challenges: difficulty sourcing products to sell and decreased sales (**Figure 10a**). Comparing these two challenges can help in identifying where food systems may be constrained during the pandemic for specific nutritious foods. For all countries and food groups, demand difficulties were more prevalent than supply difficulties (**Figure 10b**). The contrast was particularly high for Bangladesh where sourcing difficulty prevalence was very low (between 5-11% across food groups) while prevalence of decreased sales was highest. Furthermore, grain vendors in Ethiopia were the least affected by sourcing difficulties or decreased sales.

(a) Proportion of vendors: Difficulty sourcing products to sell



(b) Proportion of vendors with decreased sales

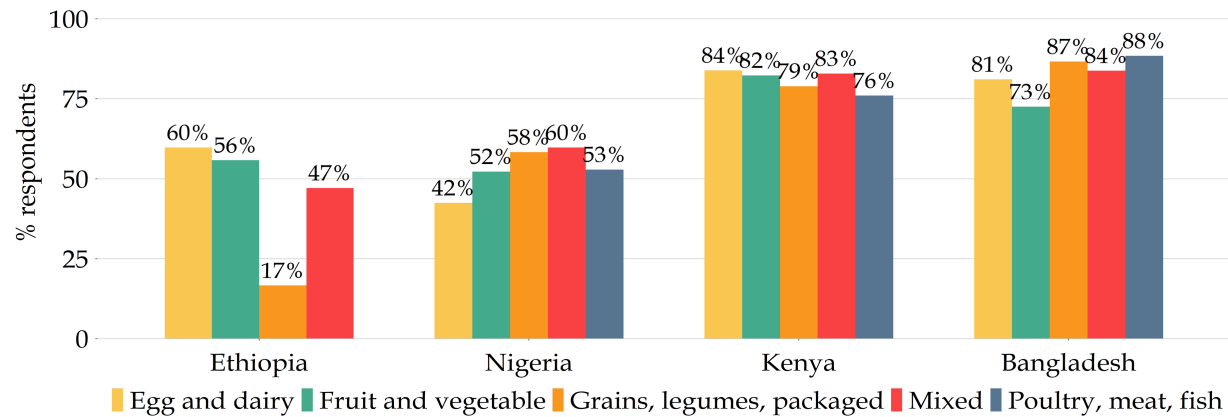


Figure 10. Comparing vendor challenges by food group/commodity: (a) difficulty sourcing products to sell vs. (b) decreased sales³

³ Differences in prevalence were not statistically significant by vendor's gender or food sold.

4. MARKET RESILIENCE

The KFMW/EatSafe market resilience assessment tracks a set of consumers and vendors through the pandemic to understand the implications for market system resilience.

Food market systems have been significantly stressed during the pandemic. Beyond the initial shock of strict lockdowns and trade disruptions, it is important to consider how food market systems serving the poor will cope with the ongoing pandemic and what support may be needed to support eventual recovery. A market resilience framework considers how market actors (vendors and consumers) react to the shocks and stresses they have faced such as the COVID-19 pandemic—it emphasizes the patterns of behavior and the interconnectedness of impacts, rather than the state of individual actors (Downing et al., 2018).

Market resilience surveys explore the perceptions and behaviors of a small panel of respondents in each market over time. KFMW/EatSafe follows up with the same set of approximately 30 vendors and 30 consumers, purposively sampled based on age and gender, with a monthly phone survey. Many aspects of resilience are not implicitly negative or positive, so individual data points may be of limited value. However, over time, this data will provide critical information on the state of different resilience capacities and the orientation or directionality of market resilience.

This section presents resilience data for Bangladesh, Kenya and Nigeria. Data was collected monthly between April and June 2021. As shown in **Table 3**, in Bangladesh there were more male consumers and vendors interviewed (72% and 100% respectively) as compared to Nigeria (31 % and 67% respectively) and Kenya (41% and 30% respectively). Bangladeshi consumers were more likely to have completed schooling past secondary school (55%) compared to Kenya (25%) and Nigeria (3%). But they were also more likely to have no schooling (10%) than the other countries which had no consumers in this category.

More than half of vendors in Nigeria have never attended school, compared to none in Kenya and 13% in Bangladesh. Majority of the vendors interviewed reported selling in the surveyed market for more than 10 years. Some vendors in Bangladesh and Kenya had recently began selling in the market (7% and 10%), while none in Nigeria had been operating for less than one year.

Table 3. Market resilience assessment respondents' demographics

	Bangladesh		Kenya		Nigeria	
	Consumers (n=87)	Vendors (n=90)	Consumers (n=89)	Vendors (n=90)	Consumers (n=96)	Vendors (n=90)
GENDER						
Males	72%	100%	41%	30%	31%	67%
Females	28%	0	59%	70%	69%	33%
AGE						
18-24	14%	13%	14%	40%	0	0
25-30	24%	17%	14%	30%	9%	20%
31-40	28%	23%	32%	3%	44%	50%
41-50	14%	20%	21%	23%	6%	3%
51-65	14%	17%	14%	3%	41%	27%
66-75	6%	10%	5%	0	0	0
HIGHEST LEVEL OF SCHOOL ATTENDED						
None	10%	13%	0	0	0	52%
Primary	21%	40%	34%	62%	47%	24%
Secondary	14%	23%	41%	19%	50%	14%
Higher	55%	24%	25%	19%	3%	10%
# OF YR LIVING IN CITY (CONSUMERS) OR # OF YR AS A VENDOR IN SURVEYED MARKET						
< 1 year	3%	7%	0	10%	0	0
1 – 3 years	7%	3%	3%	7%	6%	3%
3 – 5 years	3%	7%	7%	10%	3%	13%
5 – 10 years	24%	10%	17%	3%	28%	30%
10+ years	62%	73%	69%	70%	63%	53%

4.1. CONSUMER RESILIENCE

Figure 11 shows the share of consumers and their households who experienced financial challenges related to the pandemic in the Q3 2021. All interviewed consumers and their households in Kenya indicated that their finances were negatively affected by COVID-19. In Bangladesh and Nigeria, most consumers reported that their finances and that of their households were negatively affected by COVID-19 (82% and 76% respectively).

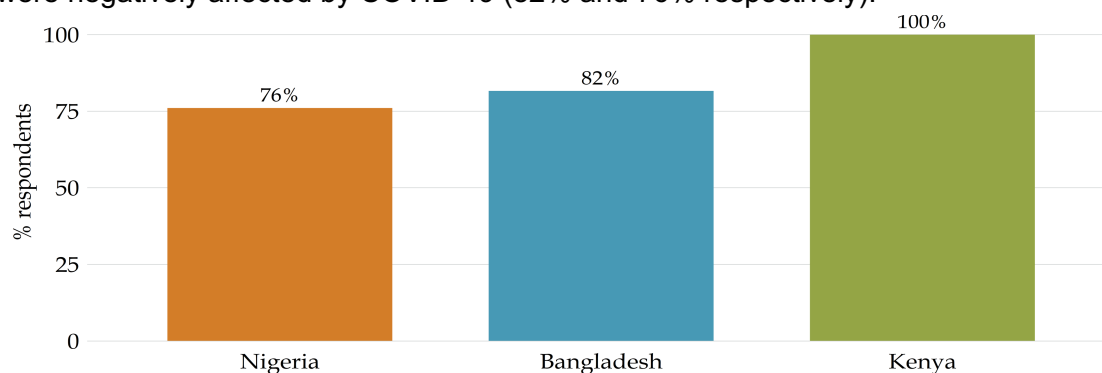
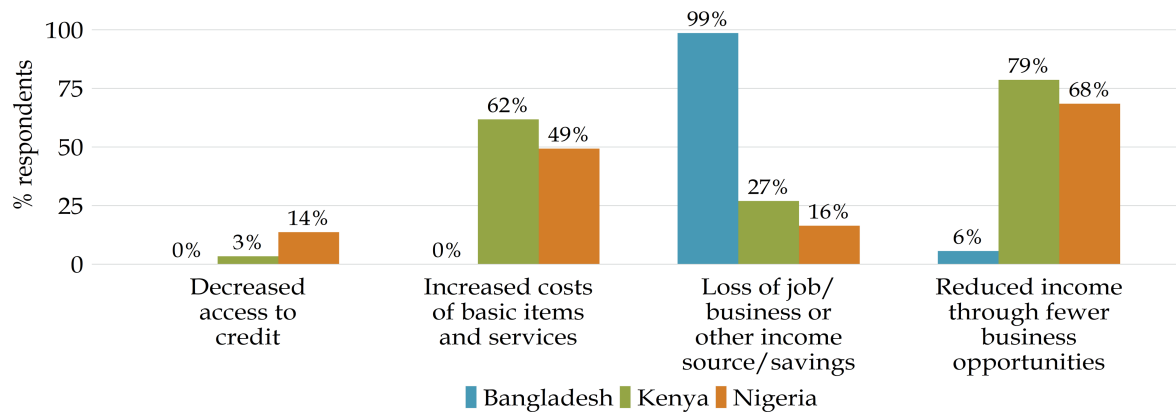


Figure 11. Proportion of consumers and households facing financial hardship due to COVID-19

In Bangladesh, among the consumers affected financially by COVID-19, a startling 99% reported a loss of income due to the loss of a job or business (**Figure 12a**). While in Kenya and Nigeria, the most reported cause of financial hardship was loss of income due to decreased business opportunities (79% and 68% respectively) and the second most reported was the increased cost of basic goods and services (62% in Kenya and 49% in Nigeria).

(a) Causes of COVID-19 related financial hardship



(b) Household coping mechanisms

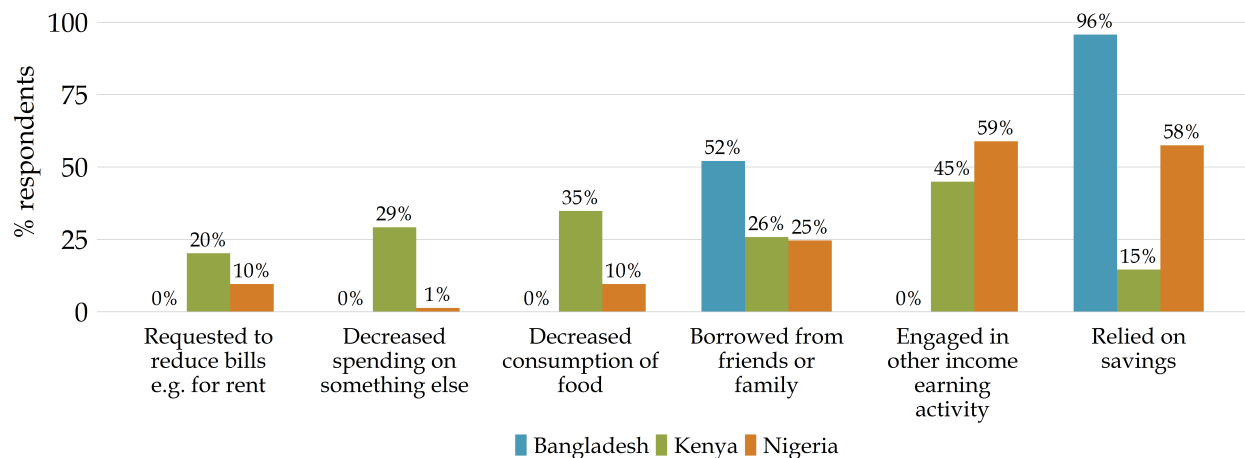


Figure 12. (a) Causes of COVID-19 related financial hardship and (b) Household coping mechanisms

Figure 12b shows how consumers reported their households were coping with COVID-19 related financial hardship. In Bangladesh, approaches were limited to reliance on savings (96%) and borrowing from friends or family (52%). In Nigeria, coping mechanisms were much more diverse, the most prevalent of which were engaging in an additional income earning activity (59%) and reliance on savings (58%). Kenya was most evenly spread across approaches, with the largest proportion of consumers engaging in an additional income earning activity (45%), and a concerning 35% reporting decreased food consumption.

4.2. DIVERSITY

Diversity has multiple dimensions, including i) the amount of variation in a system (including the frequency and purpose of visiting the markets from consumer perspective); ii) the balance between different types (e.g., types of products, firm sizes, marketing channels, or end markets); and iii) market system composition (i.e., how aspects of a market system relate to each other). In this assessment, diversity was measured using vendors' observations on number of commodities sold.

As shown in **Figure 13**, there were variations within and across countries in number of commodities sold. In Bangladesh, more than half of vendors (53%) sold only one commodity whereas 22% sold more than 30 commodities. In Nigeria, 53% of the vendors sold between two and five products, followed by 31% who sold six to 15 commodities. In Kenya, 43% sold six to 15 commodities and 13% sold only one commodity. Of the respondents that sold only one commodity, there were more men (31%) than women (6%) and the differences were statistically significant. Unlike in Bangladesh where a small share of vendors (22%) sold more than 30 commodities, there were no vendors in Nigeria and Kenya that sold more than 30 commodities.

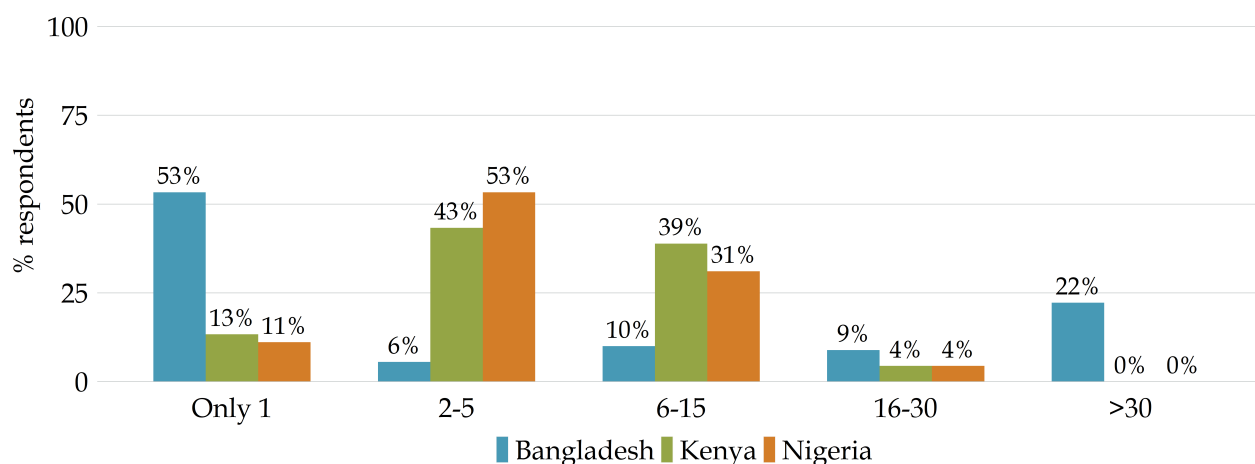


Figure 13. Usual number of commodities/products sold by vendors

4.3. EQUITY AND FAIRNESS

Equity and fairness from a systems perspective refer to the level or degree of equality and fairness inherent in formal and informal rules and laws. In this assessment, vendors were asked how difficult it was for them to follow the new rules and regulations put in place due to COVID-19.

Shown in **Figure 14**, most vendors in Bangladesh (97%), Nigeria (75%), and Kenya (72%) did not find it difficult to follow new rules enacted due to COVID-19. By contrast, 28% of vendors in Kenya, 25% in Nigeria, and 3% in Bangladesh found it difficult to follow the new rules.

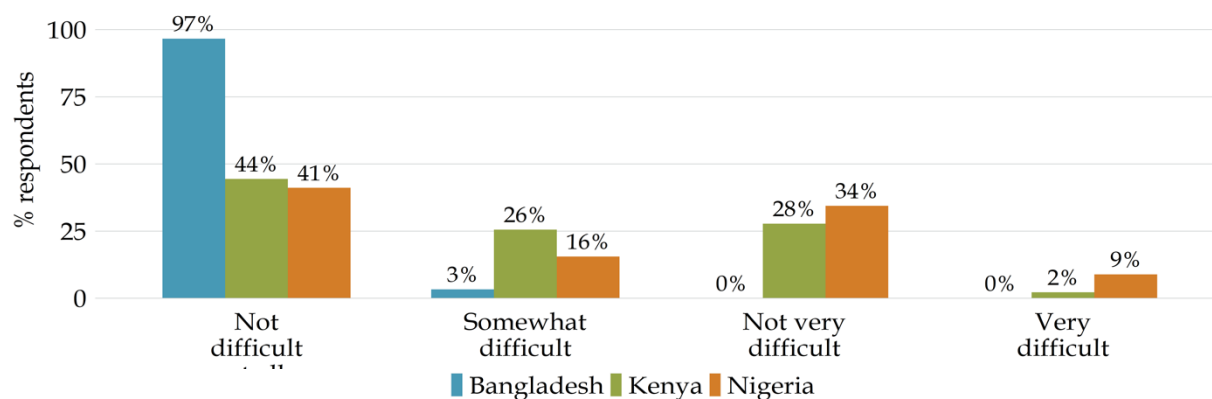


Figure 14. Vendors: Difficulty to follow new rules and regulations put in place due to COVID-19

4.4. CONNECTIVITY

Connectivity includes not only the extent of connections vendors or other market actors might have but also the quality of relationship between connected actors. An optimal “window” of innovation implies a trustful relationship and a balance between a few powerful groups and too many connections in a system. Too many or too few connections can hamper the capacity to generate or sustain the growth of the market system. To keep track of the number of connections vendors are having with their customers and suppliers, vendor connectivity was measured by assessing the number of (and changes to) customers nine months preceding the monthly surveys.

Figure 15 shows the number of customers reported on a typical day. In Bangladesh, most vendors had more than 25 customers on a typical day (72%). In contrast, in Nigeria more than half of vendors had less than 25 customers on a typical day (57%). Kenya, however, had an equal share of vendors between those who had less than and more than 25 customers on a typical day. There were significant differences by gender on share of vendors in Nigeria (3% females versus 23% males) with more than 35 customers on a typical day.

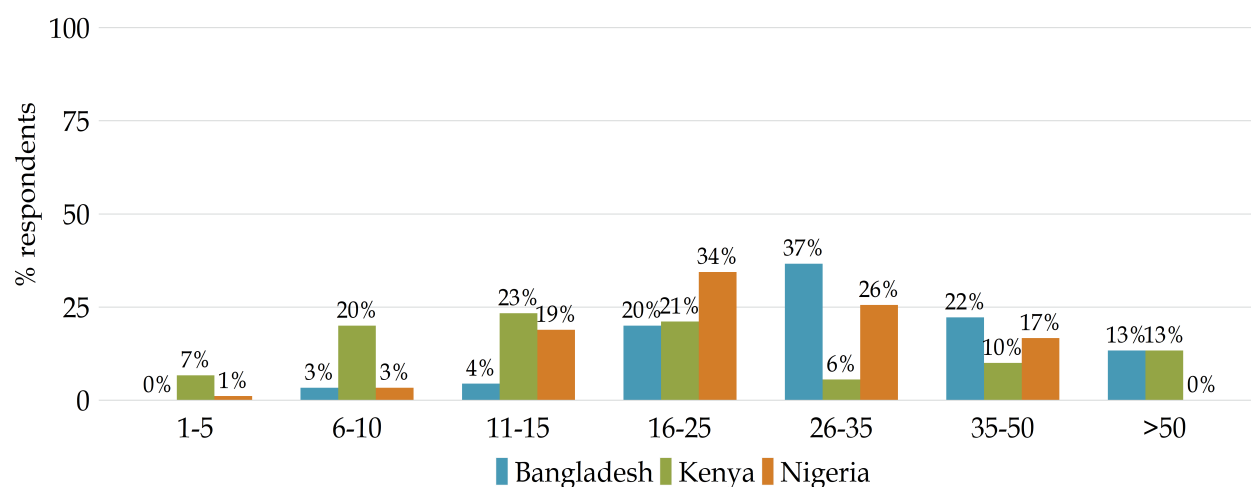


Figure 15. Number of customers on a typical day

Figure 16 shows the number of suppliers as reported by the vendors. Most of the vendors in Nigeria (94%), Kenya (92%) and Bangladesh (77%) had more than one supplier. Bangladesh, however, had more vendors (23%) than in Kenya (8%) and Nigeria (4%) who reported having one supplier.

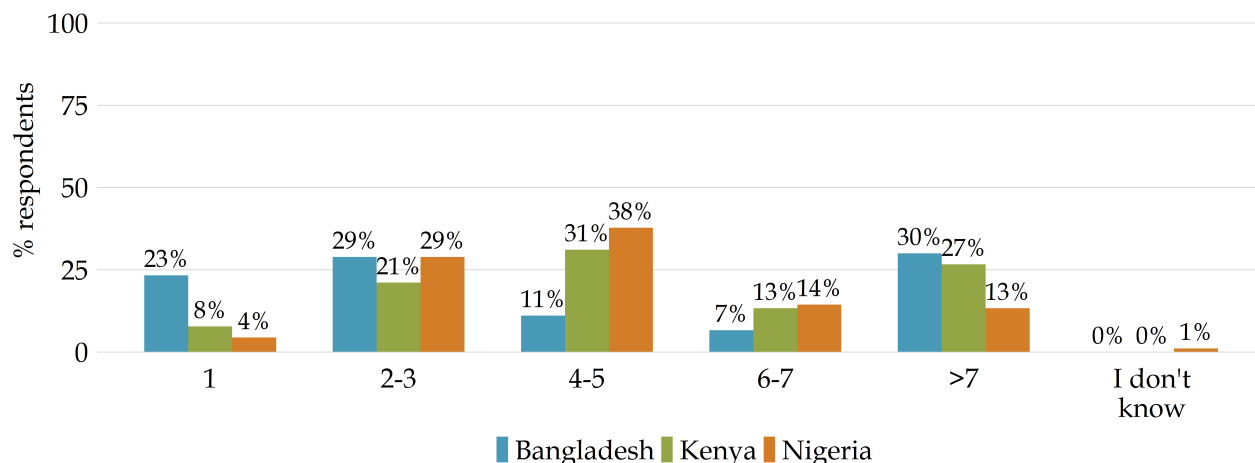


Figure 16. Number of suppliers

4.5. COMPETITION

Competition is rivalry between two or more entities. Like cooperation, competition can be negative or positive. Its contribution to system resilience capacities depends on how and why the entities are competing. Competition in this context is characterized by i) consumers' food outlet preferences and ii) perceptions of trustworthiness of vendors.

4.5.1. CONSUMERS' FOOD OUTLET PREFERENCES

Consumers reported on other food outlets frequented besides the surveyed markets (**Figure 17**). In Bangladesh and Nigeria, other markets were the most common alternative to surveyed markets (59% and 32% respectively) while in Kenya it was supermarkets (44%). Small shops were another shared alternative among the three countries. Kiosks were an alternative in Nigeria (16%) and in Kenya and they are the most reported response (39%) after supermarkets, highlighting their importance. Food vans (16%) were another alternative in Bangladesh and from the results, more important than small shops (10%) and supermarkets (1%). The main reasons in the surveyed countries for choosing a different food outlet included convenience/proximity to homes, good quality or freshness of food, good selection of foods, and good prices. Relationships with vendors and getting credit was specifically mentioned by consumers in Kenya especially among those buying from small shops. Of note, cleanliness and lots of space (easy to maintain social distance) were reported by consumers who purchased from supermarkets in Kenya and Nigeria.

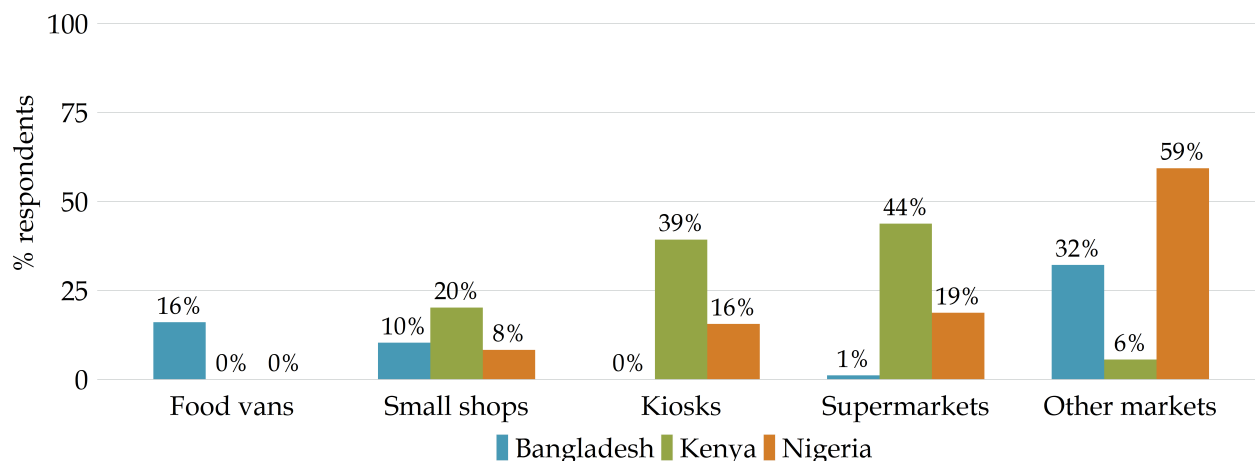


Figure 17. Alternate food purchase outlets used by consumers

4.5.2. PERCEPTIONS OF TRUSTWORTHINESS OF VENDORS

Consumers were asked about vendors' trustworthiness in general (not specific COVID-19 preventive measures). Vendors from all three countries were mainly considered trustworthy by consumers who bought food from them (**Figure 18**). In Bangladesh, consumers tended to be more trusting, with 81% reporting that the majority of vendors were trustworthy, or all were extremely trustworthy. Incongruously, Bangladesh also had the highest share of consumers with no trust in vendors (13%).

Kenya was the only country where none of the interviewed consumers reported the extreme: mistrust of vendors or extreme trust in vendors. In Kenya and Nigeria, most consumers fell in the middle, reporting that a few were trustworthy (52% and 44%, respectively) or the majority were trustworthy (48% and 47%, respectively).

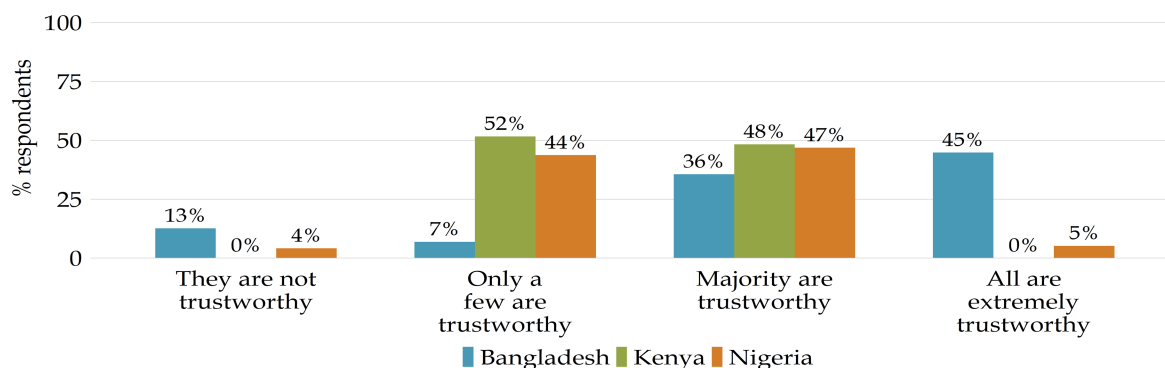


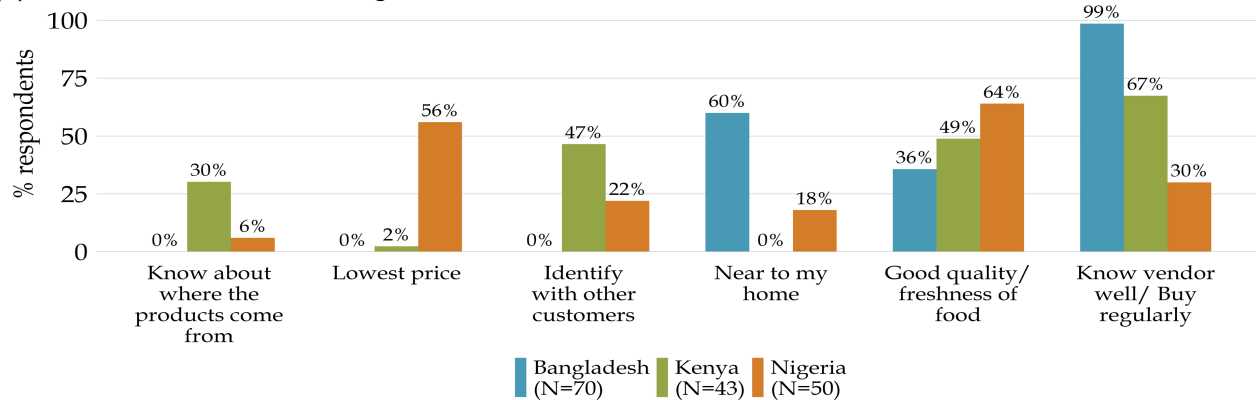
Figure 18. Consumers' level of trust for vendors they buy food from

Based on the responses given, consumers were asked reasons for having either a good level or low level of trust for vendors (**Figure 19a** and **19b**). There were three reasons reported by consumers in Bangladesh on having good level of trust (**Figure 19a**). Consumers mentioned

knowing the vendor very well/buying regularly (99%) followed by vendors being near to their home (60%) and good quality/freshness of food (36%). In Kenya, besides knowing the vendor very well (67%), good quality/freshness of food (49%) and lowest price (2%), other reasons included identifying with other customers (47%) and knowledge of where products come from (30%). Proximity to consumers' homes was not a reason for having good level of trust for vendors in Kenya. On the other hand, proximity to consumers' homes was one of the reasons mentioned by consumers in Nigeria in addition to all the other reasons mentioned by consumers in Kenya. However, lowest price (56%) a second most important reason for consumers in Nigeria.

The reasons for having low level of trust for vendors were mostly similar for the three countries namely changing prices, not knowing the vendor very well, changing quality of food, and vendors using different methods (**Figure 19b**). Despite the similarities, the main reasons varied across countries. For Bangladesh, the main reasons were not knowing the vendor very well (65%) and changing prices (53%). For Kenya, it was not knowing where products came from (57%) and changing quality (48%). For Nigeria, it was vendors using different methods (37%) and changing prices (35%). Notably, there were three more reasons that were only reported by consumers in Kenya and Nigeria (i.e., high prices, lowest quality of food and not knowing where products come from).

(a) Consumers reasons for high levels of trust for vendors



(b) Consumers reasons for low levels of trust for vendors

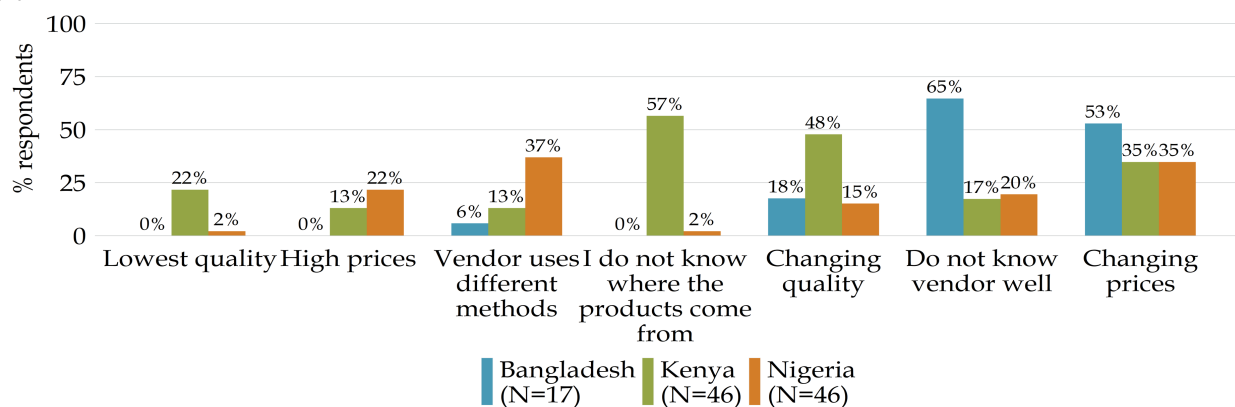


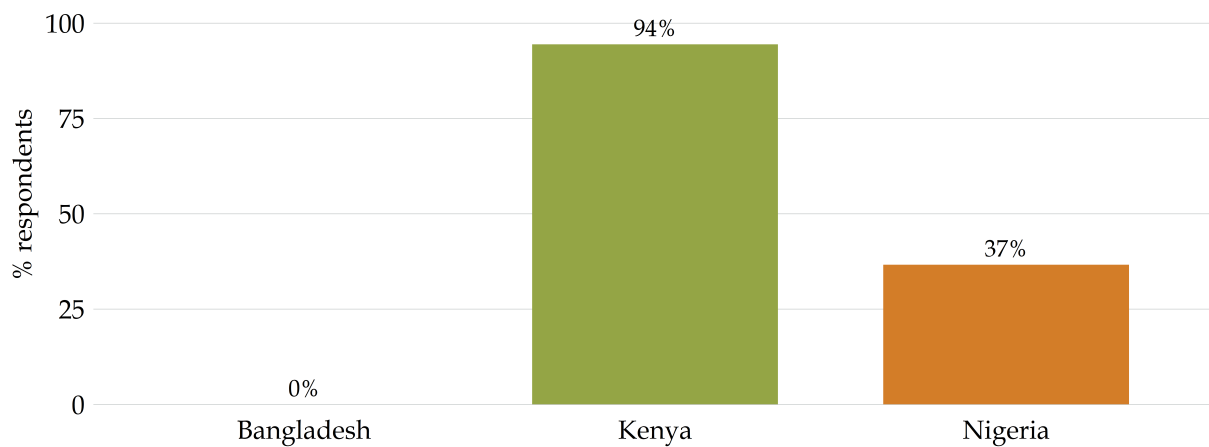
Figure 19. Consumers reasons for (a) high levels of trust and (b) low levels of trust for vendors

4.6. COOPERATION

Cooperation refers to market actors collaborating to achieve a common purpose or function. Cooperation is neither good nor bad and the contribution of cooperation depends on the purpose. Here, cooperation was measured by asking vendors if they had started sharing resources with other businesses due to COVID-19.

As shown in **Figure 20a**, none of the interviewed vendors shared resources with other businesses in Bangladesh. In contrast, almost all vendors (94%) in Kenya and 37% of vendors in Nigeria shared resources with other businesses. Except for storage rooms (9%), all resources shared by vendors in Nigeria were pandemic related, such as sharing hand sanitizers (79%), new hand washing facilities (67%), and masks (42%) as shown in **Figure 20b**. In addition to the aforementioned pandemic-related resources, vendors in Kenya also shared essential business resources namely transportation (55%) and suppliers (52%).

(a) Proportion of vendors who reported sharing resources with other businesses



(b) Types of resources shared by vendors

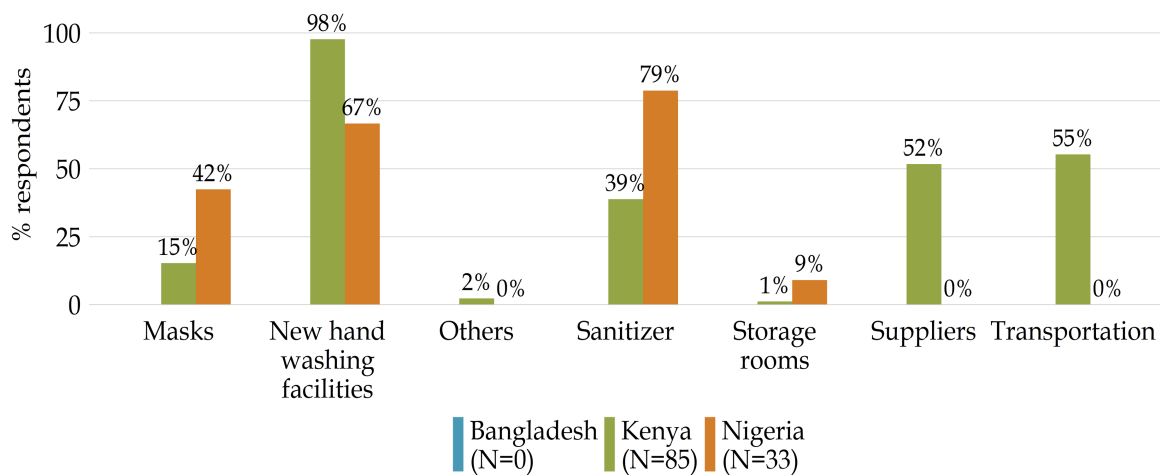


Figure 20. Proportion of vendors who (a) reported sharing resources with other businesses and (b) types of resources shared by vendors

4.7. BUSINESS STRATEGY

Business practices are oriented toward generating value for customers. They can be investments in understanding customers, in building customer relationships, in tracking customer retention and growth, in investing in staff and firm capacity, and in merit-based hiring. To measure business strategy, both consumers' and vendors' perspectives were used. Consumers were asked whether market officials/vendors have solicited feedback from them. Whereas vendors were asked of market strategies used, trainings or any support offered by the market, and sources of financing.

4.7.1. CONSUMERS PERSPECTIVES ON BUSINESS STRATEGY

Of the three countries, soliciting feedback from customers was more prevalent among Nigerian vendors, though still low (21%), as shown in **Figure 21**. In Kenya, 5% of the interviewed consumers were asked by market officials/vendors to provide feedback. In Bangladesh, however, no feedback was sought from consumers.

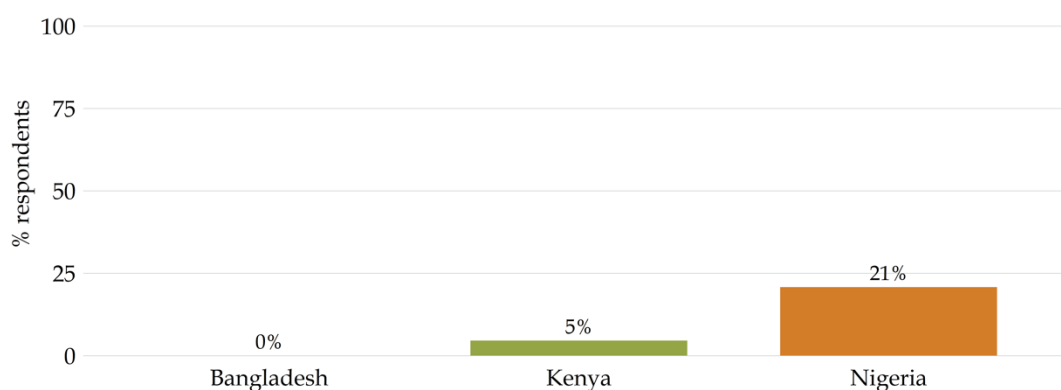


Figure 21. Proportion of consumers who were asked to provide feedback by market officials/vendors

4.7.2. VENDORS PERSPECTIVES ON BUSINESS STRATEGY

Vendors in all three countries were aware of support provided by their markets related to COVID-19 (**Figure 22**). The highest proportion of vendors' reporting support provision was in Bangladesh (83%) followed by Kenya (30%), and Nigeria (23%).

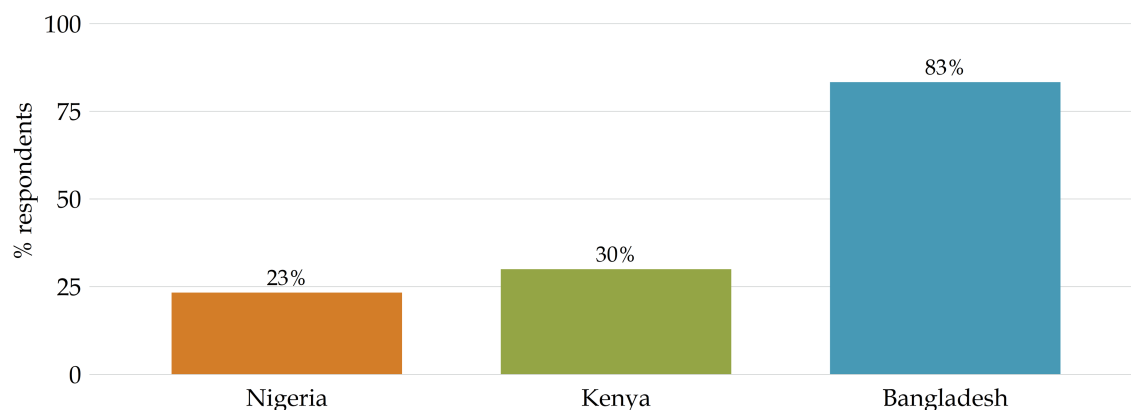


Figure 22. Vendor's awareness of any training/support offered by markets due to COVID-19

Additionally, vendors reported the use of marketing strategies to increase number of customers or sales in last nine months prior to the data collection month in all three countries (**Figure 23**). In Kenya, the use of marketing strategies was more pronounced, as 62% of vendors reported use of such strategies. In Nigeria, a fifth of the vendors reported using marketing strategies and this was statistically significant by gender (7% females versus 27% males). Bangladesh only had 1% of vendors using marketing strategies.

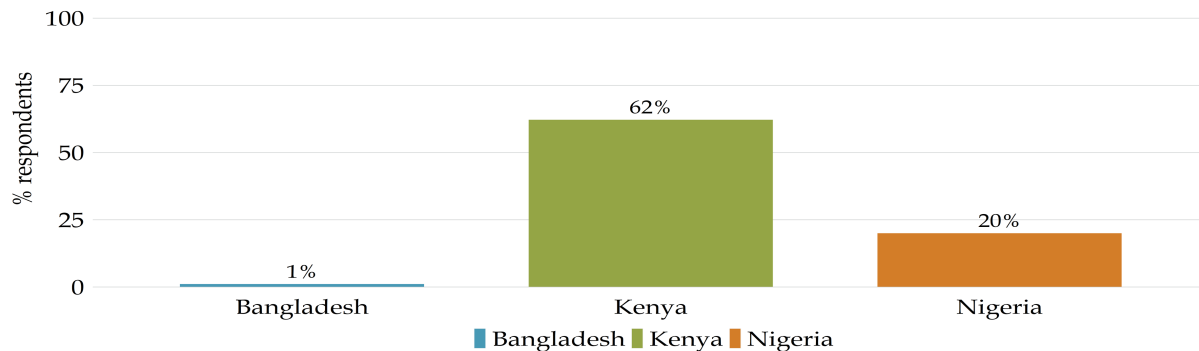


Figure 23. Vendors using marketing strategies to increase number of customers/sales in the last nine months

To cover unexpected expenses due to COVID-19, vendors reported borrowing money from different sources. Almost half of the interviewed vendors in Kenya (46%) and Nigeria (44%) borrowed money. In Kenya, the difference between female (55% and male (27%) vendors was statistically significant. Bangladeshi vendors were much less likely to borrow money.

Among those who borrowed money, the most common source was informal cooperatives: 63% in Kenya, 38% in Bangladesh, and 25% in Nigeria (**Figure 24**). Borrowing from friends was more prevalent in Nigeria (30%) and equally prevalent in Bangladesh. Borrowing from formal banks was surprisingly common in the three countries (12% - 29%) with Kenya in the lead at 29%, suggesting that these vendors benefit from some degree of formal financial inclusion.

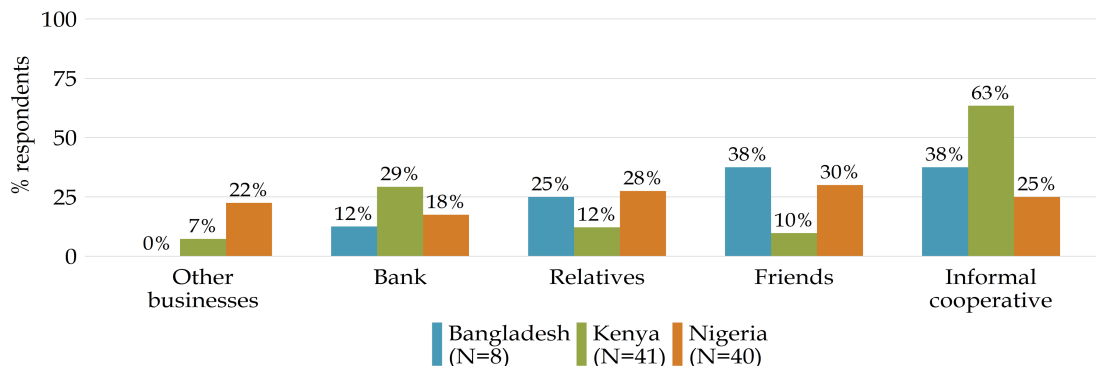


Figure 24. Source of vendor loans to cope with COVID-19 effects

Figure 25 shows the share of vendors that aim to continue with the same business despite the persistence of COVID-19. The highest proportion of vendors who reported that they would continue with the same business even if COVID-19 persists was in Nigeria (97%). This was followed by 89% of vendors in Bangladesh. Kenya had the lowest proportion of vendors (70%) among the three countries who reported that they would continue with the same.

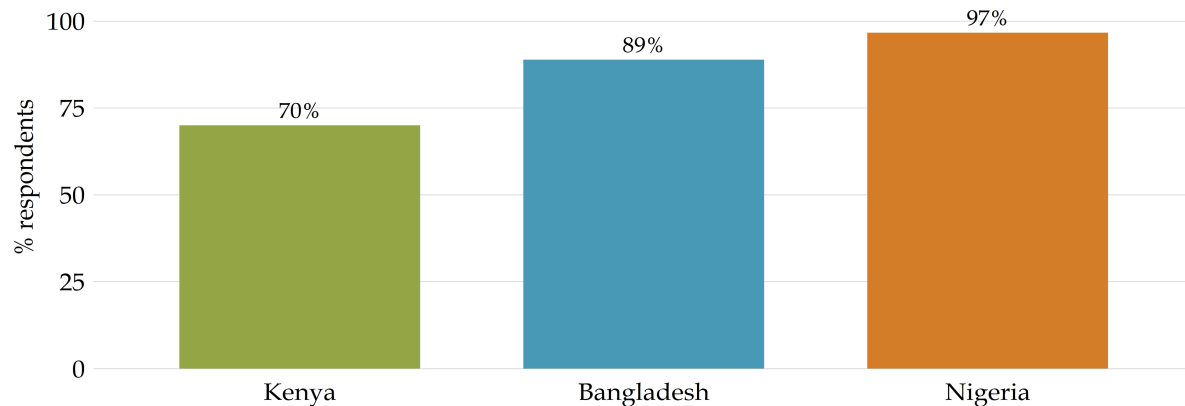


Figure 25. Share of vendors that will continue same business even if COVID-19 persists

5. CONCLUSIONS

While the COVID-19 caseload varies across KFWM countries, the pandemic continues to affect food and nutrition security through economic and social systems shocks, food system disruptions and gaps in coverage of essential health and nutrition services (Carducci et al., 2021). Taking a localized view on the challenges, this work offers a unique perspective of the effects of the pandemic, exploring the perceptions and actions of vendors and consumers on the ground and over time.

The first half of the analysis explores vendors' and consumers' attitudes and behavior in a set of key markets in Bangladesh, Ethiopia, Kenya, and Nigeria. Consumers in all four countries had concerns when shopping in the market due to the pandemic: 80% in Kenya, 66% in Ethiopia, 51% in Bangladesh and 44% in Nigeria. Fear of contracting COVID-19 was the most common concern across all countries. Most consumers had knowledge on preventive measures against COVID-19 with mask wearing and washing of hands frequently as the most commonly reported measures. This may be attributed to coordinated efforts on awareness in preventive measures and enforcement of safety measures across all countries.

Most vendors implemented safety measures to protect themselves, their employees, and customers (98% in Bangladesh and Kenya, 84% in Nigeria, and 75% in Ethiopia). Most common safety measures were masking, reminding customers to social distance, cleaning surfaces, and using mobile money (most prevalent in Kenya and not mentioned in Bangladesh).

Across all countries, decreased customers and sales were the most common challenge faced by vendors. While supply side challenges, like difficulty sourcing or transporting goods to sell, were also reported in Kenya, Nigeria, and Ethiopia, they were infrequently reported in Bangladesh with less than 5% of vendors reporting difficulty in accessing products to sell. There were few variations in the reported business challenges by commodity sold, except grains and legumes in Ethiopia, for which far fewer constraints were mentioned for supply and demand.

The higher prevalence of vendors' demand side challenges compared to those on the supply side suggest that consumer risk avoidance and income constraints may be constraining purchasing behaviors. Most consumers in Kenya (77%) and Ethiopia (59%) continued to report changes in shopping behavior due to COVID-19. In Nigeria about one-third alter their behaviors, while only 9% in Bangladesh did so, remaining low from Q2, despite the surge in cases and subsequent lockdown during the same time period. Common behaviors reported by consumers include limiting the number of shopping trips, avoiding peak shopping hours, buying different kinds of foods, and demanding cleanliness from vendors. While almost no Bangladeshi consumers reported making such changes, most vendors complained of decreased sales and customers, suggesting that some consumers may be avoiding the market entirely.

Data on market resilience for Bangladesh, Kenya and Nigeria confirm the high prevalence of consumers' finances negatively affected by the pandemic in all three countries (76% in Bangladesh, 82% in Nigeria and 100% in Kenya) due to losses of income sources and reduced income because of fewer business opportunities. In Kenya and Nigeria, other challenges included increased costs of basic food items and services, and decreased access to credit. Consumers had to employ various coping mechanisms to mitigate these impacts such as relying to a great extent on their savings, borrowing from friends and family, or seeking out alternative sources of income. Some consumers specifically in Kenya (35%) and Nigeria (10%) resorted to reducing food consumption, a more concerning response. In Kenya, the share of consumers who reduced their food consumption as a coping mechanism increased by 6% compared to Q2, while in Nigeria there was an improvement as it decreased by 10%.

In the domain of business cooperation, vendors in Kenya and Nigeria (94% in Kenya and 37% in Nigeria) reported sharing resources, with Kenya appearing to be the most collaborative of the three countries in terms of proportion of vendors collaborating and types of resources shared. Conversely, Bangladesh did poorly on this domain as none of the vendors reported sharing their resources with others. Shared resources included sanitizers, new hand washing facilities, masks, transportation, suppliers and storage rooms, some of which could have been communally pooled resources.

While more than half of vendors in Bangladesh sold only one commodity, 53% and 43% of vendors in Nigeria and Kenya respectively sold between two and five commodities. Interestingly, some Bangladeshi vendors were the only ones that sold more than 30 commodities and also are more likely to be reported as completely trustworthy consumers. Finally, Nigeria appeared strong in the domain of business strategy based on the relatively high proportions of consumers asked for feedback on their shopping experience.

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