Food and Nutrition Security Update: April 2020

Report on the Implications of Covid-19 and Related Containment Efforts on Food and Nutrition Security for Rural and Urban Households in Zimbabwe

Food & Nutrition Council

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REACH

ACCELERATING THE SCALE-UP OF FOOD AND NUTRITION ACTIONS

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ZIMBABWE Vulnerability Assessment Committee

Table of Contents

List of Tables

EXECUTIVE SUMMARY

The outbreak of corona virus disease 2019 (COVID-19) has rapidly spread across the world, affecting thousands of lives and livelihoods. As of 26 April 2020 Zimbabwe had 31 confirmed cases, five (5) recoveries and four (4) deaths. The full impact of the virus on food security is not yet known but what is clear is that it will have significant negative effects on food and nutrition security. Considering that the 2019 Zimbabwe Vulnerability Assessment Committee (ZimVAC) Rural Livelihoods Assessment (RLA) report projected that about 5.5 million of the rural population would be cereal insecure during the peak hunger period (January to March 2020). The COVID-19 pandemic risks further escalating the 5.5 million estimated figures as a considerable urban population is envisaged to be also food and nutrition insecure as a consequence of the pandemic itself and of some of the containment efforts. It's is against this background that on the basis of the 2019 ZimVAC livelihoods assessment data, the main objective of this position paper is to provide an overview of the food and nutrition situation in the face of COVID-19. Major findings in the study presented in this paper are that:

Access to Water, Sanitation and Hygiene (WASH)

The results indicate that 94.8% of the urban households had access to improved water sources versus the 71.6% recorded for the rural households. The difference in proportion of 23.2% is statistically valid at the 1% level of significance. Results of inferential analysis of access to Water Sanitation and Hygiene show that rural households are less likely to have access to improved water sources by 19.1% than their urban counterparts. Furthermore ceteris paribus, rural households have more likelihood of practising open defecation than their urban counterparts. Results indicate that whilst female headed households are 2.31% more likely to have access to improved water sources than their male counterparts, they are also 12.5% less likely to practise open defecation. Whilst the results indicate that access to improved water sources, such as tap water, the high incidences of water borne diseases (cholera,

dysentery and typhoid), especially in the urban areas is an indication that the tap water is of poor quality. The shortage of clean water in urban areas may inhibit the efficacy of hand-washing solutions to COVID-19 and exacerbate the impact of the virus.

Access to health facilities

The results reveal that the majority (87%) of urban households are within 5 km radius whilst only 40.8% of the rural households have health facilities located within such a radius. In addition, the results indicate that 36.5% of the rural dwellers travel between 5 to 10 km to reach the nearest health facility, whilst only 12.2% of the urban dwellers travel long distances to access the nearest health facility. Furthermore, the results show that for 22.7% of the rural sampled households, the nearest health facilities are located more than 10 km away. The results indicated a dire situation for the rural households with regards to access to health facilities. In the case of high incidence of COVID-19 infections, the rural dwellers are at high risk and more vulnerable.

Social distancing measures

The results indicate that rural households are less likely to cite that they can lean on their social relations in times of need than their urban counterparts. The implication of this result in relation to COVID-19 is that social distancing is easy to implement in the rural areas where households rely less on their neighbours or relatives as compared to urban households who seem to lean more on rural (48.3%) and urban relatives (46.2%). In such a scenario, the lockdown is likely to limit the support households are able to mobilise through their networks, leading to food and nutrition insecurity, especially in urban areas. For instance, in most high density areas in Harare, households rely on community boreholes for clean and safe drinking water and the concern is around the need for social distancing.

Coping and recovering from health related shocks

The results indicate that rural households are more prone to experience health related shocks than their urban counterparts by a margin of 5% at the 1% level of significance before controlling for observed confounders. However, the results indicate that the rural households are more able to cope with the health shocks than urban households. In relation to COVID-19, these results indicate that rural households are likely to be more vulnerable to the impact of COVID-19 to their food and nutrition situation as compared to urban households. However, the rural households are more likely to be able to cope with the impact of COVID-19 than their urban counterparts. The most probable explanation of rural households likely to better able to cope with COVID-19 impact on food and nutrition security include increased social protection in rural areas from the government and UN/NGOs and in rural areas than urban areas, for instance the expansion of the unconditional cash transfer program for the poor and social beneficiary groups in rural areas and also limited food expenditure shocks in the presence of health shocks in rural areas as compared to urban areas.

Prevalence of food insecurity

The results show marked urban versus rural differences in the prevalence of food insecurity in Zimbabwe. At the 1% level of significance the difference in the proportion of food insecure households in urban and rural areas is 20.6% before controlling for observed covariates. Inferential analysis results indicate that a household that is located in rural areas is ceteris paribus more likely to be food insecure than a household that is located in urban areas. The implication of these results is that rural households are already food insecure and chances are high that the impact of COVID-19 will worsen the food insecurity in the rural areas as compared to the urban areas. Considering that the 2019 ZimVAC Rural Livelihoods Assessment report projected that about 5.5 million of the rural population would be cereal insecure during the peak

hunger period (January to March 2020), the impact of COVID-19 is likely to see the figure of the food insecure population increasing.

Social Protection/Social Nets

The results show that traditionally, more social protection programmes are directed towards rural households as compared to urban households. More so, the results show that government is the largest source of support for rural households in Zimbabwe. Only 6.2% of the surveyed urban households indicated that they receive support from government as compared to 56.4% of rural households that indicated they receive support from the government. Furthermore, the results show that a household in rural areas has 42.1% more likelihood of receiving any form of government support than its urban counterpart holding all things equal. Urban relatives and rural relatives constitute the second and third largest source of support for the rural households with UN/NGOs constituting the fourth most important source of support for the rural households. The results also indicate that government support is not statistically gender specific and that age of the household head increases the probability of the household receiving support from the government. As for the sources of social support for the urban households, urban and rural relatives form the first and second largest forms of support. In addition the results show that the probability of a household receiving support from UN/NGOs is gender heterogenic targeting with female headed households more likely to receive social support from UN/NGOs than their male headed counterparts. The targeting of rural households by both the government and UN/NGOs is highly commendable given the high prevalence of food insecurity in rural areas in Zimbabwe.

Remittances

The results show that rural households are less likely to receive remittances than their urban counterparts before controlling for observed confounders. Furthermore, the amount of remittances received by rural households as

remittances is ceteris paribus lower than that of urban households. More so, female headed households are more likely to receive remittances or receive more remittances than their counterparts after controlling for observed confounding variables. In addition, an increase in the age of the household head increases the probability that the household receives remittances or the amount of remittances received all else being equal. The implications of the results are that urban households, which are the main recipients of remittances, are likely to suffer more during crisis periods such at the COVID-19 pandemic.

Treatment evaluation

The results of the treatment effects of health shocks and social distancing on food security reveal that rural households that experienced a health related shock increase the probability of being food insecure by 3.74% all things being equal. The implications of these results are that rural households are likely to be the worst affected due to the impact of COVID-19. Concerning social distancing, the results corroborate the results on social distancing, which points to social nets/social relatedness being likely to reduce the impact of COVID-19 on food security more in rural areas than urban areas as a result of rural households are more able to lean one each other than urban households. In addition, the containment measure of the lockdown and social distancing is likely to contribute to urban households being more food insecure due to the impacts of COVID-19 than in rural areas.

Current efforts by the Government of Zimbabwe to circumvent the impact of COVID-19 on Food and Nutrition Security

The results presented in this paper indicate the likely negative impact of COVID-19 and the related containment measures on food and nutrition security of both rural and urban populations. Whilst there is high likelihood of increased food and nutrition insecure households in both rural and urban areas it is crucial to acknowledge the great efforts and measures being put

in place by the Government of Zimbabwe (GoZ) and its development partners to circumvent a potential disaster due to hunger. On the 2nd of May 2020 the GoZ announced an $18 billion economic recovery, stimulus and social package aimed at reviving Zimbabwe's economic sectors affected by the global COVID-19 pandemic. The $18 billion stimulus package is broken down as follows: Agriculture support ($6,08 billion), Working Capital Fund ($3,02 billion), Mining Sector Fund ($1 billion), SME Support Fund ($500 million), Arts Sector Fund ($20 million), Liquidity Release from Statutory Reserves ($2 billion), Health Sector Support Fund ($1 billion), Broad Relief Measures ($1,50 billion), Food Grant ($2,40 billion). This is a commendable proactive approach to lessen the impact of the COVID-19 pandemic on livelihoods. Other different programmes and measures implemented by the GoZ and its development partners include:

i. Access to water sanitation and hygiene (wash) and health facilities

- Distribution of bulk water to the high density residential areas to help avert challenges of access to clean water and to decongest the community boreholes.

ii. Social protection/Social distancing measures

- Stimulus package announced to cushion the vulnerable in both urban and rural areas.
- Small and Medium Enterprises to be cushioned also
- Distribution of food items by NGOs and civil societies such as churches, rotary clubs etc.
- Cash transfer by government to the vulnerable.
- Remittance agents were given the essential service status and allowed to operate during the whole duration of the lockdown.

iii. Food insecurity

- Fruit and vegetables markets were allowed to operate as from the second week of the lockdown, allowing households to access diversified and healthy diet.
- More so, opening the markets also reduced losses for the farmers, a ready market.
- Farm operations were also classified as essential services, minimising disturbances in the food supply system.
- Formal food supermarkets were also allowed to operate and movement by the general population to go and purchase food items are allowed within 5 km radius from their residence.

Recommendations

1. There is need to minimize restricted access to markets, as movement restrictions due to the lockdown can have implications, for instance: i) seeking assistance from social networks, (ii) food supply (iii) constrain transport of fresh produce from the farms to the market. Such disruptions of the food supply chain can have significant adverse repercussions, particularly for the most vulnerable population groups, including informal traders, the urban poor, displaced populations and others, relying on markets to meet their food needs.
2. There is need to increase availability of reliable clean water in health facilities and households, as clean water is a pre-requisite to maintain and practise hygiene, e.g., hand hygiene, laundry, cleaning, and disinfection·
3. Whilst the lockdown and social distancing are a necessary evil to curtail the spread of COVID-19, there is need for increased social protection in the urban areas to curtail the negative impact of the lockdown and social distancing measures.
4. Considering that the 2019 ZimVAC Rural Livelihoods Assessment report projected that about 5.5 million of the rural population would be cereal insecure during the peak hunger period (January to March 2020), the

impact of COVID-19 is likely to see the figure of the food insecure population increasing. Therefore, there is need for an urgent assessment to ascertain how many more households are likely to be food and nutrition insecure in both urban and rural areas.

5. The lockdown and travel restrictions due to Covid 19 have a bearing on livelihoods options and income levels for both rural and urban households. This further affects household access to the markets for diversified foods. The call for an urgent Rural and Urban livelihood assessment needs to consider collecting new data from households as most indicators used to project household food security status are not static.
6. Given the unprecedented nature of the crisis, creating a better understanding of the potential impacts of the COVID-19 pandemic on food security and related vulnerabilities is of paramount importance and urgency. As such, data collection and data sharing modalities should be adapted to ensure continuous monitoring of changes in food security levels, food and agricultural supply chains, food production and availability, and food and agricultural input prices and identify possible risks that may threaten food systems. Particular attention needs to be given to monitoring and assessment modalities, with on-the-ground data collection avoided as much as possible and remote options prioritized (e.g. key informants, cell phone-based surveys, use of secondary data).
7. Cash remittances normally attract some transaction fees to the sender and in crises times such as the COVID-19 pandemic, there is need to reduce the transaction charges by operators of the platforms used for such transactions, e.g. Mukuru, Worldremit, Ecocash, One Wallet etc. Given the scale and importance of remittances in emerging economies, actions to reduce the cost of transactions and make it easier to send and receive them can immediately improve livelihoods.
8. There is need for both the government and NGOs to extend their social support programmes to urban households as the containment strategy of lockdown has negatively affected household income levels for those

households reliant of the informal sector making them food insecure and in need of social protection.

9. More so, there is need to extend the social protection programmes to urban households that usually did not qualify for social protection programmes implemented by both government and its development partners.

The above recommendations do not take away anything from the great and commendable efforts being made by the Government of Zimbabwe and its development partners.

CHAPTER 1

Background

The outbreak of corona virus disease 2019 (COVID-19) has rapidly spread across the world, affecting thousands of lives and livelihoods. As of 26 April 2020 Zimbabwe had 31 confirmed cases, five (5) recoveries and four (4) deaths[1]. Whilst the fatalities (deaths and infections) due to the pandemic are still very low in Zimbabwe as compared to the USA and Europe where hundred thousands of lives has been lost and millions infected, the impact on food and nutrition security is likely to be huge in Zimbabwe. The full impact of the virus on food security is not yet known, nor will likely be known, for months to come as the spread of the virus continues to evolve differently by continent and by country. What is clear is that it will have significant negative effects on food and nutrition security[2]. Of concern is the potential impact of COVID-19 and related containment efforts on food security and livelihoods in contexts of high vulnerability and where populations are already experiencing food and nutrition insecurities.

Zimbabwe context situation

The 2019 Zimbabwe Vulnerability Assessment Committee (ZimVAC) Rural Livelihoods Assessment (RLA) report projected that 59% of the rural population would be cereal insecure during the peak hunger period (January to March 2020). This food insecurity prevalence translated to a population of about 5.5 million rural people. There was need for urgent food distribution or cash based transfers to food insecure households in order to avoid a worsening situation. The current food and nutrition insecurity in Zimbabwe resulted in the Government of Zimbabwe and its development partners launching a Humanitarian Appeal covering the period from February 2019 - April 2020 and aimed at addressing the food insecurity and

[1] Ministry of Health and Child Care Zimbabwe
[2] FAO (2020). Coronavirus disease 2019 (COVID-19): Addressing the impacts of COVID-19 in food crises http://www.fao.org/emergencies/appeals/detail/en/c/1270012/

the impact of inflationary pressures. The COVID-19 pandemic risks further escalating the 5.5 million estimated figures as a considerable urban population is envisaged to be also food and nutrition insecure as a consequence of the pandemic itself and of some of the containment efforts.

In addition, poverty continues to be one of the major underlying causes of vulnerability to food and nutrition insecurity. The ZIMSTAT Poverty, Income, Consumption and Expenditure Survey 2017 Report revealed that 70.5% of the population was poor whilst 29.3% were deemed extremely poor. Evidence of the potential impact on number of food insecure people can be inferred by observing what occurred in previous crises, e.g, Cyclone Eline (2000), 2002, 2008, 2016 droughts, and Cyclone Idai disaster (2018). The COVID-19 pandemic is already directly affecting food systems through impacts on food supply and demand, and indirectly through decreases in purchasing power, the capacity to produce and distribute food, and the intensification of care tasks, all of which will have differentiated impacts and will more strongly affect the most vulnerable populations.

Lessons from previous pandemics or global crises indicate that food and nutrition security could be rapidly and dramatically affected in both rural and urban areas. For instance, the 2014 West Africa Ebola virus disease (EVD) outbreak and related containment measures showed a huge disruption of agricultural market supply chains, hindered crop and livestock activities and caused acute agricultural labour shortages. The economic impact of the EVD outbreak had a strong negative effect on the purchasing power of the most vulnerable households, and consequently on their access to food. These experiences highlight the need to act quickly and anticipate the collateral effects of the COVID-19 pandemic by devising appropriate policy measures, maintaining food security interventions, and protecting the livelihoods and food access of the most vulnerable people, particularly those in the vulnerable category.

Impact of Covid-19 on Food and Nutrition Security

COVID-19, declared a pandemic on 11 March[3], has literally turned the world 'upside down' since it started in Wuhan, China with global reported cases of more than 118,000 and more than 4,291 deaths[4]. The Government of Zimbabwe, responded to the pandemic by gazetting a Statutory Instrument 83 of 2020 Public Health (COVID-19 Prevention, Containment and Treatment) Order 2020, on March 27, 2020 declaring the COVID-19 crisis a "national disaster" and introduced a nationwide 21 days lockdown from Monday, March 30, 2020 with the aim of slowing down the spread of COVID-19. The lockdown indicated that essential industries and services needed to remain open to support the health sector and ensure minimal disruption in critical goods and services. During the 21-day lockdown the public was strongly encouraged to stay in their homes and to practice social distancing, among other critical preventative measures outlined.

Prior to the COVID-19 pandemic, food insecurity in the Southern African region was already alarmingly high, with a record 45 million food insecure people across the SADC countries. Key drivers of this food insecurity include climatic shocks (drought, flooding) and structural macro-economic and social factors.

The risks which threaten to exacerbate the precarious food security situation through the following impacts on exports, imports (supply chain of essential goods such as food, medicine and other essential supplies such as seeds and fertilizers), livelihoods (employment and income reduction) and fiscal pressure on the health sector. Furthermore, none of the countries will be spared from the downstream impact of policy interventions and regulations being

[3] Declared a Public Health Emergency of International Concern on 30 January 2020. Declared a pandemic on March 11. https://www.who.int/emergencies/diseases/novel-coronavirus-2019/events-as-they-happen

[4] WHO Director-General's opening remarks at the media briefing on COVID-19 - 11 March 2020 https://www.who.int/dg/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020

implemented to control the spread of COVID19 which will be felt at individual, household, community and national levels.

The COVID-19 outbreak and its debilitating impacts on livelihoods will only further exacerbate the situation, eroding community coping capacities and deepening food and nutrition insecurity of vulnerable households and individuals. Furthermore, we are likely to see an increase in the number of vulnerable people as those who typically are able to cope may find themselves struggling to meet needs given the unprecedented challenging environment.

Impact on Trade

The immediate impact of COVID-19 is already being realized through its impact on trade. Zimbabwe is already being hit by drop in export revenues due to slow-down in demand and weakening of its currency. On the import side, Zimbabwe with high food import burden will be affected. The decision for lockdown is needed for reducing infection and "flattening the curve" but it will also have far reaching effects on people and their livelihoods, especially of daily wage earners, small businesses, the informal sector and the large population already at risk because of pre-existing vulnerability conditions.

Impact on programme and supply chain

Requirements to maintain social/physical distancing and travel restrictions are negatively impacting programme delivery and humanitarian and developmental activities, which threatens food and nutrition security. Travel restrictions and border closures are likely to delay the movement of the essential supplies such as seed and fertilizers (for the winter season) which are crucial for the preparation of the 2020/2021 planting season. This could have longer-term implications on food security of households.

Programmes will inherently have to depend on reduced information and evidence and it is also crucial for Government and partners to ensure that

the delivery of assistance is provided in a manner that enforces the "Do No Harm" principle. Due to the anticipated disruptions in supply chain of essential goods and services, SADC has prepared transport guideline[5] to ensure that there is free flow of goods and services despite the movement restrictions and border closures effected by member states.

Affected populations

There is a high likelihood that urban areas are at the highest risk because of high density settlements as they are also the main entry points for international travel. The population group most affected would include the urban poor and the daily wage employees whose livelihoods are curtailed by the social distancing measures. The disruption of supplies of agricultural inputs is likely to affect the preparations for the next agricultural season which is very much needed to start the recovery from the back to back droughts that have been experienced so far and affect farmers' livelihoods.

The pandemic has affected most urban households' livelihoods and is likely to worsen the food and nutrition security status. Markets play a major role in enhancing food and nutrition security in urban areas. However, market dynamics, failures and shortcomings often weaken the desired impacts and long term effects. The lockdown has affected access to food to most urban households. Furthermore, households with livelihood options such as petty trade, vending, casual labour, skilled trade and own businesses were likely to experience the most impact of no trade during the lockdown period.

It's is against this background that on the basis of the 2019 ZimVAC livelihoods assessment data, the broad objective of this position paper is to provide an overview of the food security implications for rural and urban households in the face of face of COVID-19.

[5] https://www.sadc.int/index.php/download_file/view/7499/3137/

CHAPTER 2

Methodology of Treatment Evaluation

2.1 Data generation process

The 2019 ZimVAC rural and urban assessments were informed by the multi-sectorial objectives generated by a multi-stakeholder consultation process. Appropriate survey designs and protocols informed by the survey objectives were developed. The assessments employed both a structured household questionnaire and a community focus group discussion questionnaire as the two primary data collection instruments. ZimVAC national supervisors and enumerators were recruited from Government Ministries/departments, United Nations and Non-Governmental Organizations and underwent training in all aspects of the assessments. The Ministry of Local Government, Public Works and National Housing coordinated the recruitment of provincial level enumerators and mobilisation of vehicles in each of the country's 10 provinces.

2.2 Sample size determination and description

As already stated above, the 2019 assessment comprised the rural and the urban livelihoods assessment and the criteria for the selection of the sample observations for the two assessments are outlined below. The use of secondary data and relevant literature review were an integral part of the methodology for both the rural and urban livelihoods assessments including this consolidated report. In addition, both livelihoods assessments used a structured household questionnaire and a community focus group discussion questionnaire as the two primary data collection instruments. ZimVAC national supervisors and enumerators were recruited from Government Ministries/departments, United Nations and Non- Governmental Organizations and underwent training in all aspects of the assessment. The Ministry of Local Government, Public Works and National Housing coordinated the recruitment

of provincial level enumerators and mobilization of vehicles in each of the 10 provinces.

2.2.1. Rural assessment

The assessment used structured household and community key informant Focus Group Discussion (FGD) tools as the primary data collection tools, both of which were android based. ZimVAC national supervisors (including Provincial Agritex Extension Officers and Provincial Nutritionists) and enumerators were recruited from Government, United Nations, Technical partners and Non-Governmental Organizations. These underwent training in all aspects of the assessment. The Ministry of Local Government, Public Works and National Housing through the Provincial Administrators' offices coordinated the recruitment of district level enumerators and mobilization of provincial and district enumeration vehicles. Primary data collection took place from 10th to the 24th of May 2019.

2.2.2. Urban assessment

The assessment used an android based structured household questionnaire as the primary data collection tool. ZimVAC national supervisors (including Provincial Agritex Extension Officers and Provincial Nutritionists) and enumerators were recruited from Government, United Nations, Technical partners and Non-Governmental Organizations. These underwent training in all aspects of the assessment. The Ministry of Local Government, Public Works and National Housing through the Provincial Administrators' offices coordinated the recruitment of district level enumerators and mobilization of provincial and district enumeration vehicles. Primary data collection took place from 12th to the 23rdof August 2019.

2.2.3. Consolidated data

The consolidated rural and urban data comprises a total of 25,790 households, composed of data from 15,154 households during the rural

survey and from 10,636 households collected during the urban survey in 2019. The consolidated data includes all common variables in the rural and urban questionnaires.

2.3. Treatment Evaluation

Assessing the treatment effect of endogenous variables (such as household access to health services or propensity to experience health related shocks) on household food and security using observational data as that arising from the ZimVAC livelihood assessments is confounded by incomplete information arising from the self-selection of observations into treatment.[6,7,8,9] Propensity Score Matching (PSM) is used to reduce the confounding effects of observational survey data as observational or non-randomized studies always suffer from selection bias unlike randomized control trials (RCTs). Using PSM, one can reduce or eliminate the problem of systemic differences in baseline characteristics between treated and untreated groups.[10,11].

We define an indicator variable, T_i, which takes the value of 1 for household i, if the household was treated and 0, otherwise. We also define the food security of household as Y_i. The counterfactual problem is that for each household we can only observe either Y_{i0}, or Y_{i1} which is the food security when $T_i = 1$ and $T_i = 0$, respectively.

Propensity score matching techniques circumvent the counterfactual problem by matching $T_i = 1$ and $T_i = 0$ households using Pr ($T_i = 1 \mid \mathbf{X_i}$) which is the probability of household i having $T_i = 1$ on the basis of observed covariates, $\mathbf{X_i}$. This study uses the nearest neighbour matching technique which chooses an individual from the comparison group for treated individual

[6] Rosenbaum & Rubin (1984). Reducing bias in observational studies using subclassification on the propensity score. Journal of the American Statistical Association; 79: 516– 524.

[7] Austin PC. An introduction to propensity-score methods for reducing the effects of confounding in observational studies. *Multivariate Behavioral Research* 2011; **46**: 399– 424.

[8] Austin PC, Mamdani MM, Stukel TA, Anderson GM, Tu JV. The use of the propensity score for estimating treatment effects: administrative versus clinical data. *Statistics in Medicine* 2005; **24**(10): 1563– 1578.

[9] Imbens GW. Nonparametric estimation of average treatment effects under exogeneity: a review. *Review of Economics and Statistics* 2004; **86**: 4– 29.

[10] Heckman, J., H. Ichimura, J. Smith, and P. Todd (1998): "Characterizing Selection Bias Using Experimental Data," Econometrica, 66, 1017–1098.

[11] Heckman, J., H. Ichimura, and P. Todd (1997): "Matching as an Econometric Evaluation Estimator: Evidence from Evaluating a Job Training Programme," Review of Economic Studies, 64, 605–654.

that is closest in terms of propensity score. We estimate the average treatment effect on the treated (ATT) that provides the impact of treatment on food security food security as follows:

$$ATT = E(Y_{i1} \mid T_i = 1) - E\{E(Y_{i0} \mid T_i = 0, \Pr(T_i = 1 \mid \mathbf{X}) \mid T_i = 1)\} \quad [1]$$

To examine heterogeneity in treatment effects on the basis of the location of the household, we define the variable R_i which takes the value of 1 if the household is located in rural areas and 0 otherwise. We separately estimate Average Treatment Effects on the Treated (ATT) from Equation 1.

CHAPTER 3

Demographic Characteristics

3.1. Introduction

Although the impact of the COVID-19 pandemic on short- and long-term food and nutrition security is difficult to predict, particularly the low infection rate in Zimbabwe, some risk factors and the most likely vulnerable population can be identified through inference on the association between disease prevalence and population level characteristics from incidences in China, Europe and USA, and also from the EBOLA epidemic. At the individual level, available knowledge and studies on the determinants of COVID-19 morbidity and mortality is limited to selected background characteristics such as age and pre-existing conditions[12]. Studies in Europe, USA and China have shown that compared to younger patients, middle-aged and older ones are far more likely to suffer symptoms, to be hospitalized and to die[13],[14].

A recent analysis[14] of Chinese data estimated the chance of death in confirmed COVID-19 cases at more than 13% for patients 80 years and older, compared to about 0.15% for patients in their 30s. A study of early U.S. cases by the Center for Disease Control and Prevention (CDC) had similar findings[15]. Gender is another factor as studies have shown that in Italy and Ireland, for example, males account for about 70% of COVID-19 deaths[12]. More so, studies have revealed that patients who develop serious or fatal COVID-19 are disproportionately likely to have at least one major underlying health

[12] Preliminary Estimates of the Prevalence of Selected Underlying Health Conditions Among Patients with Coronavirus Disease 2019. DOI: http://dx.doi.org/10.15585/mmwr.mm6913e2external icon.

[13] Richardson et al. (2020). Presenting Characteristics, Comorbidities, and Outcomes Among 5700 Patients Hospitalized With COVID-19 in the New York City Area. *JAMA*. Published online April 22, 2020. doi:10.1001/jama.2020.6775

[14] ECDC (2020). Coronavirus disease 2019 (COVID-19) pandemic: increased transmission in the EU/EEA and the UK – seventh update, 25 March 2020. Stockholm.

[15] CDC (2020). Severe Outcomes Among Patients with Coronavirus Disease 2019 (COVID-19) — United States, February 12–March 16, 2020. *Weekly* / March 27, 2020 / 69(12);343-346

condition, such as diabetes, hypertension, obesity, cardiovascular disease, asthma, kidney disease or chronic obstructive pulmonary disorder[16].

These findings suggest that older adults have elevated rates of COVID-19–associated hospitalization and the majority of persons hospitalized with COVID-19 have underlying medical conditions[17][18]. However it is important to note that epidemiology of COVID-19 remains speculative in Africa as the first confirmed COVID-19 case in the region was reported on February 14, but what lies ahead in terms of the course and magnitude of infection remains speculative. To the best of our knowledge, only one study[19], using a robust methodology, provides the immediate and long-term trajectory of COVID-19 for the entire region or accounts for its local context.

The rest of this chapter provides the descriptive analysis of the demographic characteristics of the sampled households and tries to infer vulnerability of the sampled population to the impact of COVID-19 in Zimbabwe.

3.2. Urban versus rural differences in demographic characteristics

Table 1 Urban versus rural differences in demographics shows that there are pronounced urban versus rural differences in the background characteristics of the sampled households. Specifically, there is a large number of female headed households in urban areas than in rural areas as 63.6% of urban households reported to be female headed versus the 33.1% of the rural households.[20] Furthermore, urban household heads tend to be 11.3 years younger than rural household heads. Urban household heads tend to be

[16] Verity, Robert et al. (2020). Estimates of the severity of coronavirus disease 2019: a model-based analysis. The Lancet Infectious Diseases, Volume 0, Issue 0

[17] Garg S, Kim L, Whitaker M, et al. Hospitalization Rates and Characteristics of Patients Hospitalized with Laboratory-Confirmed Coronavirus Disease 2019 — COVID-NET, 14 States, March 1–30, 2020. MMWR Morb Mortal Wkly Rep 2020;69:458–464.

[18] Bedford (2020). COVID-19: towards controlling of a pandemic. The Lancet, ISSN: 0140-6736, Vol: 395, Issue: 10229, Page: 1015-1018

[19] Achoki, et al. (2020)- COVID-19 pandemic in the African continent: forecasts of cumulative cases, new infections, and mortality. DO - 10.1101/2020.04.09.20059154

[20]The large difference in the proportion of households that are female headed in urban is potentially a result of the change in the framing of the question on the household head during the urban survey.

more educated than rural household heads. The findings in **Error! Reference source not found.** also indicated that rural households tend to be larger than urban households.

More so, the results indicate that there are urban versus rural differences in the religious affiliations of the household heads. Specifically, Apostolic sect, Zion, traditional and non-religious affiliations are largely located in the rural areas. Whilst it is difficult to conclude or postulate on the association of the results in Table 1 Urban versus rural differences in demographics on the incidence of COVID-19 in Zimbabwe (due to love infection rate), some inferences from recent studies can be made regarding the result on religious groups. Religion is a potent, long-standing, and pervasive social force[21]. The social power it generates can be used in helpful ways to slow the spread of COVID-19 or in harmful ways that hasten the spread of the virus. The role of religious in pandemics can be both productive and counterproductive at the same time[22]. For example, infections tied to services held by a Christian group in South Korea in early February formed the epicenter of the outbreak there and infections that occurred during a four-day pilgrimage to Malaysia in late-February by 16,000 Muslim faithful are believed to have spread the virus to six other countries, a case described as "the largest known viral vector in southeast Asia"[23].

Table 1 Urban versus rural differences in demographics

	National	Urban [U]	Rural [R]	Difference [U – R]
Household head is female	0.456	0.636	0.331	0.305***
Household head age [Years]	44.441	37.792	49.099	-11.307***
Married living together	0.678	0.712	0.655	0.057***
Married living apart	0.073	0.070	0.075	-0.005
Divorced/separated	0.062	0.076	0.053	0.023***

[21] Djalante et al. (2020). Review and analysis of current responses to COVID-19 in Indonesia: Period of January to March 2020.

[23] Blevins (2020). https://blogs.lse.ac.uk/religionglobalsociety/2020/04/covid-19-religion-and-the-importance-of-effective-leadership/

Widow/widower	0.155	0.100	0.193	-0.093***
Never married	0.032	0.043	0.025	0.018***
None	0.109	0.026	0.167	-0.141***
Primary level	0.283	0.124	0.392	-0.268***
ZJC level	0.120	0.097	0.137	-0.040***
O' level	0.393	0.558	0.279	0.280***
A' level	0.032	0.064	0.010	0.054***
Diploma/Certificate after primary	0.006	0.010	0.003	0.006***
Diploma/Certificate after secondary	0.033	0.069	0.008	0.061***
Graduate/Post-Graduate	0.023	0.051	0.004	0.047***
Roman Catholic	0.092	0.096	0.089	0.007*
Protestant	0.091	0.116	0.072	0.044***
Pentecostal	0.184	0.278	0.115	0.163***
Apostolic Sect	0.289	0.227	0.334	-0.107***
Zion	0.083	0.048	0.109	-0.061***
Other Christian	0.076	0.075	0.077	-0.002
Islam	0.008	0.010	0.006	0.004***
Traditional	0.023	0.007	0.034	-0.027***
Other religion	0.018	0.015	0.019	-0.004**
No religion	0.137	0.127	0.143	-0.016***
Household size	4.200	4.236	4.178	0.057**
Members with mother alive	1.956	1.950	1.961	-0.011
Members with father alive	1.769	1.832	1.730	0.103***

Notes: The fifth column shows the results of two-tailed t-test for the difference in the means. ***, **, and * indicate the 1, 5, and 10 percent levels of significance.

In Zimbabwe, there is still some vaccination and immunization hesitancy by some religious group, such as the Apostolic sects [24,25,26]. If the on-going studies[27,28] that postulated that the frequency of cases and mortalities of COVID-19 are lower in developing countries based partly due to trained immunity in some developing countries which have in place universal vaccination policies such as Bacille Calmette–Guerin (BCG) vaccination

[24] WHO (2017). Factors Influencing Vaccine Hesitancy and Immunization Coverage in Zimbabwe: A Rapid Assessment

[25] Gerede, Regina et al. (2017). How to Increase Vaccination Acceptance Among Apostolic Communities: Quantitative Results from an Assessment in Three Provinces in Zimbabwe. *Journal of religion and health* vol. 56,5: 1692-1700. doi:10.1007/s10943-017-0435-8

[26] Machekanyanga et al (2017). Qualitative Assessment of Vaccination Hesitancy Among Members of the Apostolic Church of Zimbabwe: A Case Study. *Journal of religion and health* vol. 56,5: 1683-1691. doi:10.1007/s10943-017-0428-7

[27] Redelman-Sidi (2020). Could BCG be used to protect against COVID-19?. *Nature Reviews Urology*. https://doi.org/10.1038/s41585-020-0325-9

[28] Miller (2020). et al. Correlation between universal BCG vaccination policy and reduced morbidity and mortality for COVID-19: an epidemiological study. https://doi.org/10.1101/2020.03.24.20042937

prove this hypothesis to be true, then the Apostolic communities could be a vulnerable group.

On the positive side, religious leaders can play an important role in these communities as they are often perceived as more trustworthy than health officials[29]. The Ebola crisis offers a vivid example of how failures of public health initiatives to engage religious actors collaboratively can hinder crucial public health objectives.

[29] Marshall, Wilkinson and Robson (2020). Religion and COVID-19: Four Lessons from the Ebola experience.https://oxfamblogs.org/fp2p/religion-and-covid-19-four-lessons-from-the-ebola-experience/

CHAPTER 4

Access to Water Sanitation and Hygiene (Wash) and Health Facilities

4.1. Introduction

Frequent and proper hand hygiene is one of the most important measures that can be used to prevent infection with the COVID-19 virus[30]. The provision of safe WASH conditions is essential to protecting human health during all infectious disease outbreaks[31], including the COVID-19 outbreak is several ways. Frequent and proper handwashing with soap is one of the most important measures that can be used to prevent infection with the COVID-19 virus. WASH activities aiming to respond to COVID-19 should work to enable handwashing by improving services and facilities and using proven behaviour change techniques. In addition, reliable availability of clean water in health facilities and households is key to ensuring both sufficient quantities of safe drinking water and the ability to maintain and practise hygiene, e.g., hand hygiene, laundry, cleaning, and disinfection[19].

4.2. Water Sanitation and Hygiene

4.2.1 Descriptive analysis of WASH

Table 2 shows the urban versus rural differences in Water Sanitation and Hygiene (WASH). The table shows that 94.8% of the urban households had access to improved water sources versus the 71.6% recorded for the rural households. The difference in proportion of 23.2% is statistically valid at the 1% level of significance.

Table 2. Water Sanitation and Hygiene in Zimbabwe

	Survey:		Difference
	Urban [U]	Rural [R]	[U – R]

[30] WHO (2020) https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance

[31] Hopewell & Graham, J.P. Trends in access to water supply and sanitation in 31 major sub-Saharan African cities: an analysis of DHS data from 2000 to 2012. *BMC Public Health* **14**, 208 (2014). https://doi.org/10.1186/1471-2458-14-208

Improved water source	0.948	0.716	0.232***
Open defecation	0.002	0.312	-0.310***
Hand washing station	0.501	0.100	0.400***

Notes: The fourth column shows the results of two-tailed t-test for the difference in the means. ***, **, and * indicate the 1, 5, and 10 percent levels of significance.

4.2.2. Inferential analysis of access to Water Sanitation and Hygiene

Table 3 shows the OLS estimates of the determinants of access to WASH. The table shows that rural households are less likely to have access to improved water sources (Column (I)) by 19.1%, or hand washing station (Column (III)) than their urban counterparts. Furthermore ceteris paribus, rural households have more likelihood of practising open defecation than their urban counterparts. Results indicate that whilst female headed households are 2.31% more likely to have access to improved water sources than their male counterparts, they are also 12.5% less likely to practise open defecation. The results indicate that age of the household head increases the probability of the household having improved water sources, hand washing stations as well as decrease the probability of practising open defecation. Other results in Table 5 indicate that education decreases the potential of the household to access improved water sources and reduces the probability of the household practising open defecation after controlling for observed confounders.

Table 3. Determinants of access to WASH

VARIABLES	Improved water source	Open defecation	Hand washing station
	(I)	(II)	(III)
Household is located in rural area	-0.190***	2.309***	-1.531***
	(0.00591)	(0.0919)	(0.0539)
Household head is female	0.0234***	-0.125***	0.293***
	(0.00824)	(0.0467)	(0.0645)
Household head age [Years]	0.00186***	-0.0135***	0.0170***
	(0.000213)	(0.000914)	(0.00163)
Married living together	-0.00461	0.0868	-0.218*
	(0.0148)	(0.0951)	(0.114)
Married living apart	-0.00471	0.0438	-0.374***
	(0.0161)	(0.102)	(0.127)
Divorced/separated	0.00350	0.173*	-0.445***
	(0.0162)	(0.105)	(0.128)
Widow/widower	0.00252	0.177*	-0.432***
	(0.0159)	(0.0999)	(0.124)
Primary level	0.0472***	-0.276***	0.176**
	(0.0104)	(0.0353)	(0.0896)
ZJC level	0.0710***	-0.387***	0.418***

	(0.0119)	(0.0452)	(0.0993)
O' level	0.111***	-0.593***	0.658***
	(0.0111)	(0.0416)	(0.0932)
A' level	0.136***	-0.797***	0.972***
	(0.0141)	(0.140)	(0.123)
Diploma/Certificate after primary	0.108***	-1.753***	1.035***
	(0.0237)	(0.449)	(0.192)
Diploma/Certificate after secondary	0.126***	-1.212***	1.120***
	(0.0128)	(0.194)	(0.118)
Graduate/Post-Graduate	0.103***	-1.076***	1.200***
	(0.0144)	(0.249)	(0.129)
Household size	0.00209	-0.0791***	0.0778***
	(0.00225)	(0.0110)	(0.0168)
ln (income)	0.00840***	-0.0488***	0.0572***
	(0.00123)	(0.00583)	(0.0102)
Members with mother alive	-0.0148***	0.0978***	-0.0813**
	(0.00421)	(0.0180)	(0.0329)
Constant	0.762***	-4.405***	-1.449***
	(0.0214)	(0.126)	(0.194)
Observations	24,130	23,955	19,297
R-squared	0.112		

Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1. The results control for 9 province dummies and 9 religion dummies.

The table also shows that at the 1% level of significance, rural households are more likely to practice open defecation or not have access to a hand washing station. These results indicated inadequate WASH conditions in the rural areas as compared to urban areas. However, whilst the results in Table 2 and 3 indicate access to improved water sources, such as tap water, the high incidences of water borne diseases (cholera, dysentery and typhoid) e.g. the unprecedented outbreaks in 2008/2009-2011 and 2018/2019 seasons, especially in the urban areas is an indication that the tap water is of poor quality[32]. Considering the pre-requisite condition of clean and running water for frequent hand-washing and let alone 20 seconds worth, most urban and rural households are vulnerable to incidences of COVID-19 infection. The shortage of clean water and other factors may inhibit the efficacy of hand-washing solutions to COVID-19[33]. Combating the spread of COVID-19 requires that households have adequate water, sanitation and hygiene, and effective measures that match the constraints of the local context, e.g. drilling more boreholes may help to avert the potential crisis.

[32] WHO (2019). https://www.who.int/csr/don/05-october-2018-cholera-zimbabwe/en/

[33] WHO (2020). https://www.who.int/docs/default-source/inaugural-who-partners-forum/who-interim-recommendation-on-obligatory-hand-hygiene-against-transmission-of-covid-19.pdf

4.3. Access to health facilities

Pregnant women and mothers with young children are a vulnerable group to COVID-19, and especially so if they have other underlying health conditions. But the indirect effects on access to healthcare systems will likely have far greater consequences for maternal and child health. More so, the consequences of the national lockdown include physical distancing travel restrictions and economic slowdowns[34]. Health pandemics can make it more difficult for women and girls to receive treatment and health services[35].

Table 4 shows access to health facilities (measured as distance to the nearest health facility) for rural and urban households. The results show that for the majority (87%) of urban households, health facilities are within a 5 km radius whilst only 40.8% of the rural households have health facilities located within such a radius. In addition, the results presented in Table 4 indicate that 36.5% of the rural dwellers travel between 5 to 10 km to reach the nearest health facility, whilst only 12.2% of the urban dwellers travel such a long distance to access the nearest health facility. Furthermore, the results show that for 22.7% of the rural sampled households, nearest health facilities are located more than 10 km away. The results indicated a dire situation for the rural households with regards to access to health facilities. In the case of high incidence of COVID-19 infections, the rural dwellers are at high risk and more vulnerable. Women and the girl child are most likely to be greatly affected[36]. Although in principle, the lockdown in Zimbabwe does not prohibit health-related travel, but women might be less willing to travel long distances for non-emergency check-ups or preventive care or in this case of emergency situation, the distances to the nearest health facility are a barrier to quick access to the health facility.

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[34] Riley et al (2020). Estimates of the Potential Impact of the COVID-19 Pandemic on Sexual and Reproductive Health in Low- and Middle-Income Countries

[35] WHO (2020). https://www.who.int/publications-detail/covid-19-operational-guidance-for-maintaining-essential-health-services-during-an-outbreak.

[36] UN (2020). Policy Brief: The Impact of COVID-19 on Women. https://reliefweb.int/sites/reliefweb.int/files/resources/policy-brief-the-impact-of-covid-19-on-women-en.pdf

Table 4. Access to medical facilities

	Rural [R]		Urban [U]		Difference
	Mean	S.D	Mean	S.D	[R – U]
Less than 5km	0.408	0.492	0.870	0.336	-0.462***
5 to 10 km	0.365	0.481	0.122	0.327	0.243***
More than 10km	0.227	0.419	0.008	0.091	0.219***

Notes: The fourth column shows the results of two-tailed t-test for the difference in the means. ***, **, and * indicate the 1, 5, and 10 percent levels of significance.

CHAPTER 5

Social Distancing Measures

5.1. Introduction

The term 'social distancing' refers to efforts that aim, through a variety of means, to decrease or interrupt transmission of COVID-19 in a population (sub-)group by minimising physical contact between potentially infected individuals and healthy individuals, or between population groups with high rates of transmission and population groups with no or a low level of transmission[37]. The structures of social contact critically determine the spread of the infection and, in the absence of vaccines, the control of these structures through large-scale social distancing measures appears to be the most effective means of mitigation[38]. To facilitate adherence to, and implementation of, social isolation measures, a support system should be prepared and communicated to ensure the continued provision of essential services and supplies (e.g. food, medication and access to healthcare) to people and communities subjected to social distancing measures[39],[40].

5.2. Descriptive statistics of social distancing

Table 5 shows that rural households are less likely to cite that they can lean on their social relations in times of need than their urban counterparts before controlling for observed confounding variables. Due to limited data on social distancing, in this study social distancing is analysed based on social interconnectedness of households. These results indicate that social distancing is easy to implement in the rural areas where households rely less on their neighbours or relatives as compared to urban households who seem

[37] ECDC (2020). Guidance for social distancing measures aimed at minimising the spread of SARS-CoV-2

[38] Singh & Ronojoy (2020). Age-structured impact of social distancing on the COVID-19 epidemic in India (Updates at https://github.com/rajeshrinet/pyross)

[39] European Centre for Disease Prevention and Control. Outbreak of novel coronavirus disease 2019 (COVID19): increased transmission globally – fifth update, 2 March 2020. Stockholm: ECDC; 2020.

[40] Brooks et al (2020). The psychological impact of quarantine and how to reduce it: rapid review of the evidence. Lancet.

to lean more on rural (48.3%) and urban relatives (46.2%). In such a scenario, social distancing might be difficult to the urban households and might end up having negative impact, e.g. food and nutrition insecurities.

5.3. Inferential analysis

Table 6 reaffirms the descriptive results presented before that households located in rural areas are less likely to be able to lean on their social relations after controlling for observed confounding variables at the 1% level of significance.

Table 5. Social interconnectedness

	Rural [R]		Urban [U]		Difference
	Mean	S.D	Mean	S.D	[R – U]
Rural non-relatives	0.271	0.445	0.391	0.488	-0.120***
Rural relatives	0.362	0.481	0.483	0.500	-0.120***
Urban non-relatives	0.118	0.323	0.263	0.441	-0.145***
Urban relatives	0.305	0.461	0.462	0.499	-0.156***

Notes: The fourth column shows the results of two-tailed t-test for the difference in the means. ***, **, and * indicate the 1, 5, and 10 percent levels of significance.

Table 6. OLS estimates of social interconnectedness

VARIABLES	Rural non-relatives (I)	Rural relatives (II)	Urban non-relatives (III)	Urban relatives (IV)
Household is located in rural area	-0.0465***	-0.0570***	-0.0959***	-0.0668***
	(0.0110)	(0.0116)	(0.00904)	(0.0113)
Household head is female	0.00555	-0.00272	-0.000622	-0.00806
	(0.0138)	(0.0144)	(0.0118)	(0.0144)
Household head age [Years]	-6.64e-05	1.47e-05	0.000555**	0.00219***
	(0.000290)	(0.000311)	(0.000228)	(0.000299)
Widow/widower	0.0477*	0.0379	0.0266	0.0617**
	(0.0274)	(0.0287)	(0.0235)	(0.0278)
Primary level	0.0227*	-0.000941	0.0366***	0.0395***
	(0.0122)	(0.0133)	(0.00851)	(0.0127)
ZJC level	0.0213	-0.00104	0.0596***	0.0469***
	(0.0152)	(0.0164)	(0.0114)	(0.0157)
O' level	0.0430***	0.00705	0.0616***	0.0697***
	(0.0139)	(0.0150)	(0.0100)	(0.0142)
A' level	0.0492*	0.0123	0.0866***	0.0681**
	(0.0264)	(0.0271)	(0.0223)	(0.0266)
Diploma/Certificate after primary	0.0207	-0.0746	0.0901**	0.0670
	(0.0502)	(0.0513)	(0.0441)	(0.0518)
Diploma/Certificate after secondary	0.0572**	0.0183	0.0759***	0.0639**
	(0.0255)	(0.0263)	(0.0211)	(0.0256)
Graduate/Post-Graduate	0.0399	0.0142	0.105***	0.0857***
	(0.0305)	(0.0315)	(0.0270)	(0.0308)
Household size	-0.00619*	-0.0135***	-0.00634**	-0.0122***
	(0.00324)	(0.00344)	(0.00252)	(0.00334)
ln (income)	0.0110***	0.0127***	0.00175	0.0200***
	(0.00201)	(0.00217)	(0.00158)	(0.00207)
Constant	0.183***	0.248***	0.205***	0.0676
	(0.0412)	(0.0432)	(0.0361)	(0.0422)

Observations	16,240	16,288	16,174	16,344
R-squared	0.040	0.042	0.062	0.061

Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1. The results control for 9 province dummies and 9 religion dummies.

Although not analysed in this study, recent studies have shown that in crises, such as the COVID-19 pandemic, people turn for help first to their social network[41]. In other words, social connectedness is the main source of help that people have when caught in a crisis. Assistance from these networks includes food, money or emotional support. Based on these studies, the lockdown is likely to limit the support households able to mobilise through their networks, leading to food and nutrition security. Therefore, whilst the lockdown is a necessary evil to curtail the spread of COVID-19, the impact on social networks can threaten the effectiveness of the lockdown. For instance, in most high density areas in Harare, households rely on community boreholes for clean and safe drinking water[42] and the concern is around the need for social distancing. Consequently, the people most affected by this are women and the youths are they are the ones usually responsible for the fetching water. It is currently reported that women on average visit the boreholes three times a day to fetch water in urban suburbs where hordes of people are gathering trying to access the clean water from community boreholes[43],[44]. Effective social distancing therefore requires that households have adequate water, sanitation and hygiene.

[41] Kim et al. (2020). COVID-19 and Social Networks in Humanitarian Crises. Tufts University https://nutrition.tufts.edu/news/covid-19-and-social-networks-humanitarian-crises

[42] Chaminuka and Nyatsanza An assessment of water shortages and coping mechanisms of Harare residents: A case of Msasa Park and Dzivaresekwa Extension.

[43] UNICEF (2020). https://www.unicef.org/zimbabwe/stories/safe-water-now-available-harare-community

[44] Bvirindi (2019). Effectiveness of Community Based Management of Borehole Facilities in Urban Areas : A case of Budiriro High Density Suburb in Harare Zimbabwe; View from Human Rights Perspective. Journal of Community Based Management of boreholes in Urban Areas, 10.13140/RG.2.2.19111.39849

CHAPTER 6

Coping and Recovering From Health Related Shocks

6.1. Introduction

Health shocks, defined as unpredictable illnesses that diminish health status, are among the most important factors associated with poverty and households facing health shocks are often affected by both the payments for medical treatment and the income loss from an inability to work[45]. Health shocks usually stand out from other shocks in the number of coping strategies they trigger. Households adopt a range of coping strategies during the treatment or care-seeking process, which are often insufficient to allow households to maintain a stable economic status[46], for instance, they are more likely than non-health shocks to trigger assistance from a non-governmental organization and other households, borrow money from friends and family, and asset sales[47],[48]. Households facing health shocks are often affected by both the payments for medical treatment and the income loss from an inability to work. In addition to these coping strategies to deal with the economic consequences of health shocks, some households have to revert to forego necessary healthcare. The effects of foregoing necessary care on health status and future health-care costs can be considerable[49]. Understanding these risks and the associated coping strategies is of critical importance to policy makers[50].

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[45] Leive & Ke (2008). Coping with out-of-pocket health payments: empirical evidence from 15 African countries. Bulletin of the World Health Organization, Volume 8

[46] Kabir *et al*. Health shocks, care-seeking behaviour and coping strategies of extreme poor households in Bangladesh's Chittagong Hill tracts. *BMC Public Health* 19, 1008 (2019). https://doi.org/10.1186/s12889-019-7335-7

[47] Morudu & Umakrishnan (2000). Health shocks, medical insurance and household vulnerability: Evidence from South Africa https://doi.org/10.1371/journal.pone.0228034

[48] Sauerborn R, Adams A, Hien M. Household strategies to cope with the economic costs of illness. *Soc Sci Med* 1996; 43: 291-301 doi: 10.1016/0277-9536(95)00375-4 pmid: 8844932.

[49] Bonfrer and Gustafsson-Wright (2017). Health shocks, coping strategies and foregone healthcare among agricultural households in Kenya. GLOBAL PUBLIC HEALTH, 2017 http://dx.doi.org/10.1080/17441692.2015.1130847 VOL. 12, NO. 11, 1369–1390

[50] De Weerdt J, Dercon S. Risk-sharing networks and insurance against illness. *Journal of development Economics*. 2006; 81(2): 337–356.

6.2. Descriptive analysis of household ability to cope and recover from health related shocks

Table 7 shows the household experience, ability to cope and recover from health related shocks. According to the table, rural households are more prone to experience health related shocks than their urban counterparts by a margin of 5% at the 1% level of significance before controlling for observed confounders. The table however shows that the probability that rural households cite the shock to their livelihoods as severe is lower than that of their urban counterparts. Furthermore, rural households are less likely to cite that they were unable to cope presently or in the future than their urban counterparts before controlling for household characteristics.

Table 7. Household ability to cope and recover from health related shocks

	Rural [R]		Urban [U]		Difference
	Mean	S.D	Mean	S.D	[R – U]
Experienced health related shock	0.074	0.262	0.024	0.153	0.050***
Shock was severe	0.496	0.500	0.730	0.445	-0.234***
Unable to cope	0.261	0.439	0.429	0.496	-0.168***
Unable to recover from	0.262	0.440	0.219	0.416	0.044
Unable to cope in future	0.446	0.497	0.542	0.500	-0.095**

Notes: The fourth column shows the results of two-tailed t-test for the difference in the means. ***, **, and * indicate the 1, 5, and 10 percent levels of significance.

6.3. Inferential analysis of household ability to cope and recover from health related shocks

Column (I) of Table 8 shows that even after controlling for observed confounding variables, at the 1% level of statistical significance, rural households have 3.33% more likelihood to experience health related shocks than their urban counterparts. Furthermore, consistent with the descriptive results, rural households are however less likely to cite the shock more severe than their urban counterparts after controlling for the observed household variables [Column (II)]. Moreover, Columns (III) and (V) display that rural households are more able to cope presently or in the future than their urban counterparts. These results corroborate findings from previous studies[47,49,50],

which reported a similar trend of rural households being more vulnerable but more able to cope with health shocks than their urban counterparts.

In relation to COVID-19, the results presented in Tables 7 and 8 indicate that rural households are likely to be more vulnerable to the impact of COVID-19 to their food and nutrition situation as compared to urban households. However, the rural households are more likely to be able to cope with the impact of COVID-19 than their urban counterparts. The most probable explanation of rural households being likely to better able to cope with COVID-19 impact on food and nutrition security include increased social protection from the NGOs and government in rural areas than urban areas, for instance the expansion of the unconditional cash transfer program for the poor and social beneficiary groups in rural areas[51] and also limited food expenditure shocks in the presence of health shocks in rural areas as compared to urban areas[52]. This scenario calls for more social protection to be extended to the poor urban households to enhance their recovery and resilience to the impact of COVID-19. For example, the working-age population in urban areas is not a target group for social protection purposes and yet it is the group whose health status is intuitively most likely to affect the economic welfare of the household if they are affected by COVID-19.

Table 8. OLS estimates of household ability to cope and recover from health related shocks

	Experienced health related shock	Shock was severe	Unable to cope	Unable to recover	Unable to cope in future
VARIABLES	(I)	(II)	(III)	(IV)	(V)
Household is located in rural area	0.0333***	-0.240***	-0.177***	-0.0561	-0.148***
	(0.00498)	(0.0547)	(0.0523)	(0.0602)	(0.0559)
Household head is female	0.0203***	0.131**	0.144**	0.0992	0.138**
	(0.00636)	(0.0603)	(0.0588)	(0.0660)	(0.0614)
Household head age [Years]	0.00257***	-0.000425	0.00174	0.00126	0.00102
	(0.000170)	(0.00127)	(0.00115)	(0.00130)	(0.00123)
Married living together	0.0106	0.0228	0.249***	-0.0213	0.479***
	(0.00785)	(0.192)	(0.0803)	(0.155)	(0.0821)

[51] ZimVAC (2020). 2020 Lean Assessment Summary Report

[52] Morudu & Umakrishnan (2000). Health shocks, medical insurance and household vulnerability: Evidence from South Africa https://doi.org/10.1371/journal.pone.0228034

Married living apart	-0.00617	-0.0304	0.300***	0.0659	0.497***
	(0.00823)	(0.206)	(0.105)	(0.174)	(0.107)
Divorced/separated	-0.00429	-0.108	0.202*	-0.100	0.370***
	(0.00903)	(0.209)	(0.105)	(0.169)	(0.107)
Widow/widower	-0.0142	-0.114	0.159*	-0.104	0.416***
	(0.00973)	(0.199)	(0.0843)	(0.160)	(0.0889)
Primary level	0.0255***	-0.105**	0.000479	-0.00409	-0.0450
	(0.00742)	(0.0480)	(0.0422)	(0.0505)	(0.0472)
ZJC level	0.0299***	-0.0958	-0.00242	-0.0655	-0.0592
	(0.00868)	(0.0608)	(0.0527)	(0.0600)	(0.0594)
O' level	0.0270***	-0.0282	0.0991*	-0.0312	-0.0533
	(0.00763)	(0.0604)	(0.0554)	(0.0622)	(0.0600)
A' level	0.0249***	-0.143	0.0139	0.266	0.250**
	(0.00956)	(0.166)	(0.139)	(0.223)	(0.118)
Diploma/Certificate after primary	0.00752	-0.187	-0.0875	-0.296***	-0.240
	(0.0224)	(0.211)	(0.155)	(0.0719)	(0.147)
Diploma/Certificate after secondary	0.0257**	-0.201	-0.0151	0.0209	-0.185
	(0.0109)	(0.125)	(0.112)	(0.121)	(0.113)
Graduate/Post-Graduate	0.0156	-0.189	-0.0492	-0.236*	-0.198
	(0.0117)	(0.169)	(0.150)	(0.134)	(0.154)
Household size	0.00506***	-0.00211	0.0176*	-0.00350	0.0225*
	(0.00195)	(0.0115)	(0.0106)	(0.0121)	(0.0117)
ln (income)	-0.000378	-0.0100	-0.0115*	-0.00944	-0.0101
	(0.00115)	(0.00825)	(0.00690)	(0.00775)	(0.00782)
Members with mother alive	0.000317	0.0144	0.0104	0.00136	-0.00882
	(0.00335)	(0.0209)	(0.0189)	(0.0224)	(0.0212)
Members with father alive	-0.0101***	-0.0256	-0.0485***	0.00317	-0.0153
	(0.00293)	(0.0191)	(0.0176)	(0.0208)	(0.0190)
Constant	-0.143***	0.843***	0.387	-0.0416	0.612***
	(0.0151)	(0.315)	(0.261)	(0.155)	(0.137)
Observations	17,244	992	989	731	1,009
R-squared	0.052	0.060	0.098	0.106	0.079

Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1. The results control for 9 province dummies and 9 religion dummies.

CHAPTER 7

Prevalence of Food Insecurity

7.1. Introduction

The four dimensions of food security include:

- Availability of food
- Access to food
- The safe and healthy utilization of food
- The stability of food availability, access and utilization

As a result of the rapid increase in COVID-19 infection rates globally, food availability is affected in both the short and long term; access is compromised; nutrition is likely to be affected as people shift diets as fresh fruits and vegetables become less available especially in urban areas[53]. When considering rural households, the household is considered food insecure when the household does not have potential access to enough food to give each member a minimum of 2100 kilocalories per day in the consumption period. For the urban household, a household was deemed food insecure when its monthly income was below the Food Poverty Line, its Food Consumption Score was poor or its Household Hunger Scale was severe or moderate.

7.2. Prevalence of food insecurity

Table 9 shows that there are marked urban versus rural differences in the prevalence of food insecurity in Zimbabwe. At the 1% level of significance the difference in the proportion of food insecure households in urban and rural areas is 20.6% before controlling for observed covariates.

Table 9. Prevalence of food insecurity

variable	Mean
National	0.419

[53] HLPE (2020). Impact of COVID-19 on Food Security and Nutrition (FSN). https://ec.europa.eu/knowledge4policy/publication/impact-covid-19-food-security-nutrition-fsn_en

Urban [U]	0.299
Rural [R]	0.505
Difference [U – R]	-0.206***

7.3. Inferential analysis of the household propensity to be food insecure

Table 10 shows the determinants of the household propensity to be food insecure. The findings in the table concur with the descriptive findings in the previous table that a household that is located in rural areas is ceteris paribus more likely to be food insecure than a household that is located in urban areas. Table 10, however reveals no statistically significant gender heterogeneity in the household propensity to be food insecure all things being equal. The table further shows that as the age of the household head increases, the less likely is the household to be food insecure. Furthermore, the more educated the household head is the less likely the chances of the household being food insecure.

Table 10. Determinants of household food insecurity

VARIABLES	OLS	Probit	Logit
	(I)	(II)	(III)
Household is located in rural area	0.114***	0.306***	0.497***
	(0.00787)	(0.0217)	(0.0355)
Household head is female	0.0145	0.0397	0.0694
	(0.0109)	(0.0315)	(0.0517)
Household head age [Years]	-0.000628**	-0.00168**	-0.00276**
	(0.000256)	(0.000704)	(0.00115)
Married living together	-0.0332*	-0.0830	-0.142
	(0.0198)	(0.0597)	(0.0982)
Married living apart	-0.0807***	-0.221***	-0.374***
	(0.0216)	(0.0652)	(0.108)
Primary level	-0.0355***	-0.0949***	-0.156***
	(0.0114)	(0.0306)	(0.0498)
ZJC level	-0.0680***	-0.180***	-0.294***
	(0.0137)	(0.0366)	(0.0595)
O' level	-0.118***	-0.316***	-0.515***
	(0.0125)	(0.0338)	(0.0550)
A' level	-0.189***	-0.537***	-0.893***
	(0.0198)	(0.0609)	(0.103)
Diploma/Certificate after primary	-0.254***	-0.766***	-1.250***
	(0.0333)	(0.122)	(0.211)
Diploma/Certificate after secondary	-0.240***	-0.710***	-1.194***
	(0.0184)	(0.0611)	(0.105)
Graduate/Post-Graduate	-0.246***	-0.744***	-1.265***
	(0.0205)	(0.0719)	(0.126)
Household size	0.0246***	0.0676***	0.112***
	(0.00284)	(0.00793)	(0.0130)

Members with mother alive	0.0377***	0.102***	0.171***
	(0.00515)	(0.0145)	(0.0239)
Members with father alive	-0.0125***	-0.0337***	-0.0577***
	(0.00453)	(0.0128)	(0.0212)
Constant	0.300***	-0.555***	-0.912***
	(0.0310)	(0.0919)	(0.152)
Observations	24,176	24,176	24,176
R-squared	0.105		

Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1. The results control for 9 province dummies and 9 religion dummies.

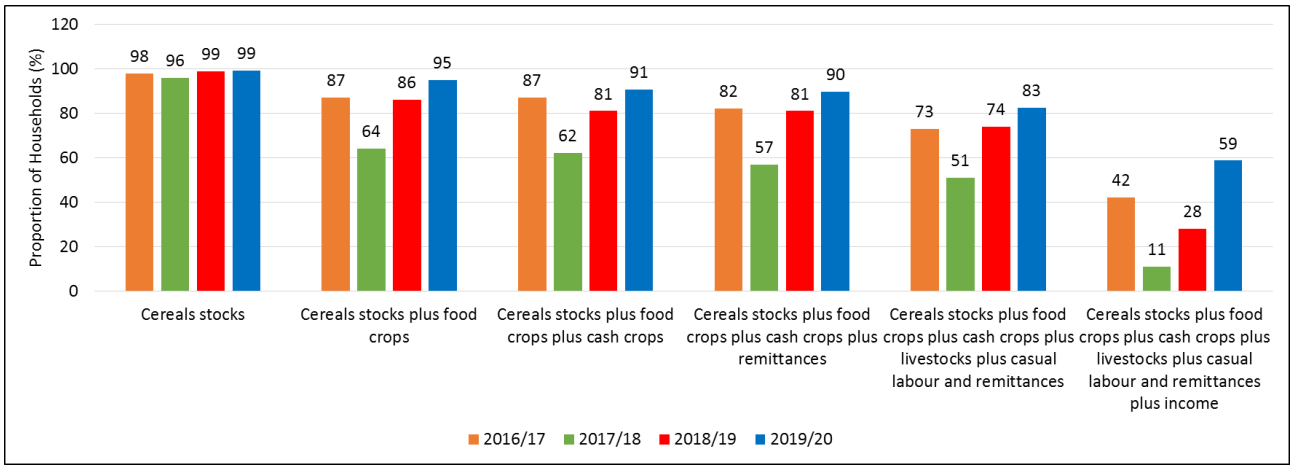
The implications of results presented in Table 9 and 10 are that rural households are already food insecure and chances are high that the impact of COVID-19 will worsen the food insecurity in the rural areas as compared to the urban areas. Considering that the 2019 ZimVAC report projected that about 5.5 million of the rural population would be cereal insecure during the peak hunger period (January to March 2020), the impact of COVID-19 is likely to see the figure of the food insecure population increasing. Therefore, there is need for an urgent assessment to ascertain how many more households are likely to be food and nutrition insecure in both urban and rural areas.

In the Rural Livelihoods Assessments to compute household food security, each of the surveyed households' potential to acquire minimum expenditure food basket is computed by estimating the household's likely disposable income (both cash and non-cash) in the consumption year from the following possible income sources;

- Cereal stocks from the previous season;
- Own food crop production from the 2019/20 agricultural season;
- Potential income from own cash crop production;
- Potential income from livestock ;
- Potential income from casual labour and remittances; and
- Income from other sources such as gifts, pensions, gardening, formal and informal employment

In the 2019 Rural Livelihoods Assessment the possible income sources combined were then used to determine if a household was food secure. On analysing all the above mentioned possible income sources, they are not

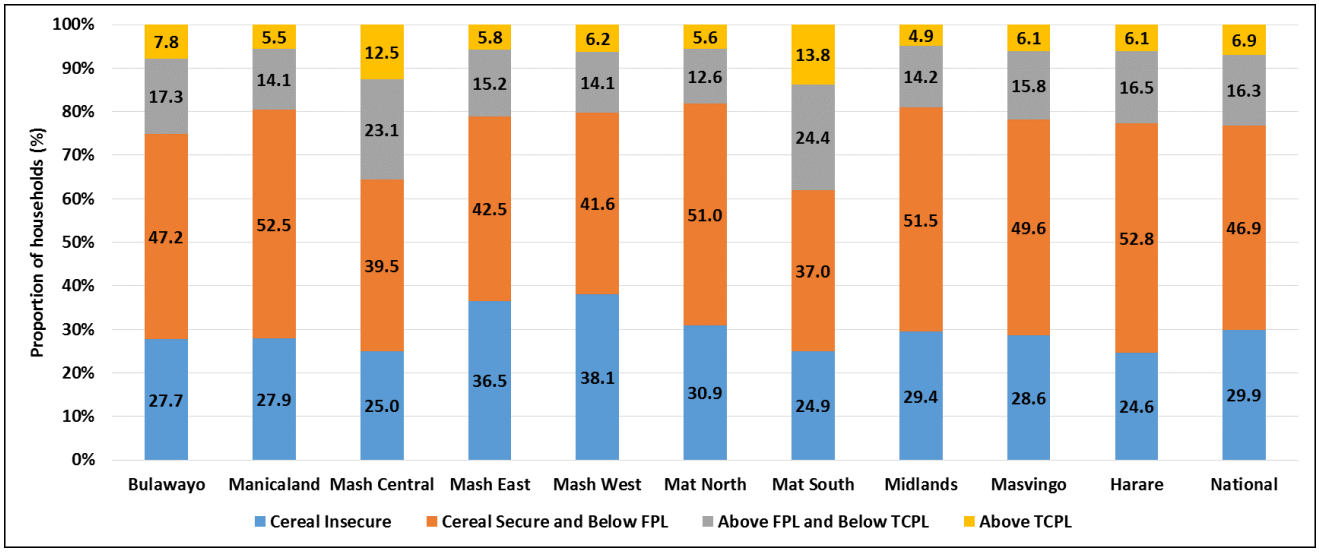
static, meaning they are moving variables. From the graph below a comparison of the past four years on how the different income sources influence a household food security status varied. The graph also shows how the contribution of gifts, remittances, pensions, gardening, formal and informal employment have on household food security status.



Source: ZimVAC 2019 Rural Livelihoods Assessment Report

The effects of Covid 19 and the poor performance of the 2091/20 agricultural season to the food insecurity picture will need fresh new data to be collected to reach a projection of the current food security situation.

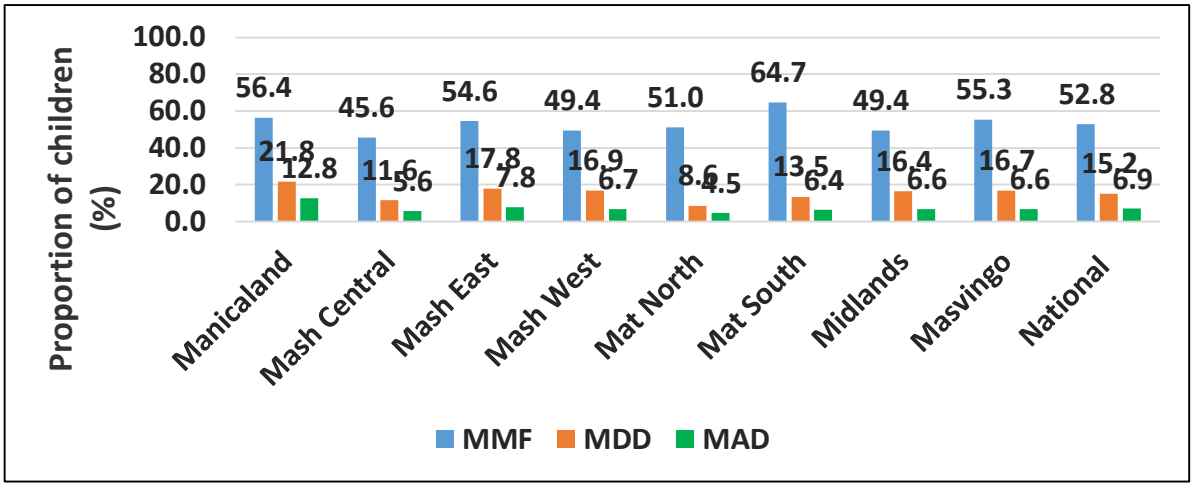
Food insecurity measurement in the urban areas looks mostly at household income, of which urban livelihoods and income source options per household are limited compared to rural households. This further suggests that due to the limited income options urban households may be less likely to be resilient to shocks and hazards. The current lockdown due the Covid 19 pandemic further limits income levels from sources such as casual labour, petty trade, informal trading and remittances from both urban and rural due to travel restrictions.



Source: ZimVAC 2019 Rural Livelihoods Assessment Report

From the graph above, 29.9% of the urban households could not meet their cereal needs, and 76.8% were below the food poverty line. This means a significant proportion could not afford adequate food for their families. There is need to analyse and understand how the Covid 19 has affected income levels for urban households, as these have a large bearing in projecting their food security status.

There is also need to assess the nutrition status of households. Data from the 2019 Rural Livelihoods assessment indicates that less than 10% of the children under 5 in rural areas have a minimum acceptable diet. This due to low meal dietary diversity and low minimum meal frequency. The Covid 19 Pandemic comes with its challenges of restricted movement of households due to the lockdown and this further affects households' access to diversified foods from markets.



Source: ZimVAC 2019 Rural Livelihoods Assessment Report

CHAPTER 8

Social Protection/Social Nets

8.1 Introduction

The COVID-19 pandemic and the containment measures have abruptly halted the movement of people that characterizes the interconnected world. Social safety nets provide direct support either in the form of cash or in-kind goods and services to smooth consumption, compensate for loss of incomes, and prevent falls into poverty. Social protection measures can play a decisive role in protecting lives and livelihoods by securing incomes, ensuring access to safe, sufficient and nutritious food, providing support with childcare, cash or other allowances, and facilitating access to health care.

For further reference, FNC will provide a detailed analysis on the impact of COVID-19 and the related containment measures on social protection.

8.2 Forms of social support

The results show that traditionally, more social protection programmes are directed towards rural households as compared to urban households. More so, the results show that government is the largest source of support for rural households in Zimbabwe. Only 6.2% of the surveyed households indicated that they receive support from government as compared to 56.4% of rural households that indicated they receive support from the government. Furthermore, the results reveal that a household in rural areas has 42.1% more likelihood of receiving any form of government support than its urban counterpart holding all things equal. Urban relatives and rural relatives constitute the second and third largest source of support for the rural households with UN/NGOs constitute the fourth most important source of support for the rural households. The results also show that government support is not statistically gender specific and that age of the household head increases the probability of the household receiving support from the government.

As for the sources of social support for the urban households, urban and rural relatives form the first and second largest forms of support. In addition the results show that the probability of a household receiving support from UN/NGOs is gender heterogenic targeting with female headed households more likely to receive social support from UN/NGOs than their male headed counterparts. The targeting of rural households by both the government and UN/NGOs is highly commendable given the high prevalence of food insecurity in rural areas in Zimbabwe.

There is however need for both the government and NGOs to extend their social support programmes to urban households as the containment strategy of the lockdown has negatively affected household income levels for those households reliant on the informal sector making them food insecure and in need of social protection. More so, urban households are more vulnerable to the effects of COVID-19 as their safety nets were greatly affected by the lockdown. For example, the results revealed that urban and rural relatives form the first and second largest forms of social support for urban households and due to mobility restrictions and social distancing measures due to the lockdown, this immediate safety net for the urban household is greatly affected. Such a situation makes urban households vulnerable. Hence the need to extend the social protection programmes to urban households that usually did not qualify for social protection programmes implemented by both government and its development partners.

8.3 Remittances

The results show that rural households are less likely to receive remittances than their urban counterparts before controlling for observed confounders. Furthermore, the amount of remittances received by rural households as remittances is ceteris paribus lower than that of urban households. More so, female headed households are more likely to receive remittances or receive

more remittances than their counterparts after controlling for observed confounding variables. In addition, an increase in the age of the household head increases the probability that the household receives remittances or the amount of remittances received all else being equal.

The implications of the results are that urban households, which are the main recipients of remittances, are likely to suffer more during crisis periods such at the COVID-19 pandemic. Containment measures such as lockdowns usually present challenges for those trying to access funds sent to them[10]. Receiving cash remittances can become mission impossible as some agents may be closed without any specific provisions recognizing them as essential services. In some cases clients often face long queues, due to the lower number of agents and the shorter operating hours. Concerning non-cash remittances, the lockdown and mobility restrictions, both in-country and between countries are likely to affect non-cash remittances such as groceries. For examples, thousands of Zimbabweans across the borders usually send non-cash groceries to their parents or relatives in the urban and rural areas monthly and due to the closure of the borders by neighbouring countries, non-cash remittances have been greatly affected, exposing the usual recipients to food and nutrition insecurities.

Cash remittances normally attract some transaction fees to the sender and in crises times such as the COVID-19 pandemic, there is need to reduce the transaction charges by operators of the platforms used for such transactions, e.g. Mukuru, Worldremit, Ecocash, One Wallet etc. According to the WorldBank[54], even small changes in remittance policy can have a big effect on both the sender and receiver. Given the scale and importance of remittances in emerging economies, actions to reduce the cost of transactions and make it easier to send and receive them can immediately improve livelihoods[55].

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[54] https//data.worldbank.org
[55]Mora&Rutkowski (2020). https://blogs.worldbank.org/psd/remittances-times-coronavirus-keep-them-flowing

CHAPTER 9

Treatment Evaluation

9.1 Introduction

This chapter establishes the treatment effects of health shocks and social distancing on food security. Propensity Score Matching (PSM) is used to reduce or eliminate the confounding effects of observational survey data as observational or non-randomized studies suffer from selection bias unlike randomized control trials (RCTs) which use random treatment allocation.[56] Using PSM and IPW, this chapter reduces or eliminate the problem of systemic differences in baseline characteristics between treated and untreated groups.[57]

9.2 Heterogeneity in the impact of health related shocks on household food security

Table 11 shows that rural households that experienced a health related shock increase the probability of being food insecure by 3.74% all things being equal. Column (II) however shows that the treatment effect of health related shock is not statistically valid when one considers urban households only. The implications of this results are that rural households are likely to be the worst affected due to the impact of COVID-19. As discussed already in Chapter 4, access to health facilities is limited in rural areas as the nearest health facilities for most of the rural households are located 5 to 10 km or more from the households. The limited access and increased vulnerability to health shocks as indicated in Table 11 point to rural households being worst affected by COVID-19 with regards to food insecurity.

[56] Ibid
[57] Ibid

Table 11. PSM estimates of treatment effect of health related shock on food insecurity

VARIABLES	Rural (I)	Urban (II)
Treatment effect of health related shock on food insecurity	0.0374***	-0.00814
	(0.0110)	(0.321)

Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1.

9.3 Social leaning and food security

9.3.1 Leaning on rural non relatives and food insecurity

Table 12 shows that leaning on rural non-relatives reduces household propensity to be food insecure for rural households by 18% holding all things constant.

Table 12. PSM estimates of treatment effect of rural non-relatives on food insecurity

VARIABLES	Rural (I)	Urban (II)
Treatment effect of rural non-relatives on food insecurity	-0.0180**	0.0162
	(0.00748)	(0.0119)

Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1.

9.3.2 Leaning on rural relatives and food insecurity

Table 13 shows that leaning on rural relatives reduces household propensity to be food insecure for rural households by 2.59% ceteris paribus. On the other hand Column (II) of the table associates self-sufficiency with regards to rural relatives to be associated with increased food security for urban households. Ceteris paribus, being self-sufficient *vis-à-vis* help from rural relatives is associated with increased propensity to be food secure for urban households of 2.68%.

Table 13. PSM estimates of treatment effect of rural relatives on food insecurity

VARIABLES	Rural (I)	Urban (II)
Treatment effect of rural relatives on food insecurity	-0.0259***	0.0268**
	(0.00678)	(0.0112)

Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1.

9.3.3 Leaning on urban non-relatives and food insecurity

The results in Table 14 mirror those in Table 13 and show that leaning on urban non-relatives is beneficial for rural households' propensity to be food secure but not for urban households.

Table 14. PSM estimates of treatment effect of urban non-relatives on food insecurity

VARIABLES	Rural (I)	Urban (II)
Treatment effect of urban non-relatives on food insecurity	-0.0258**	0.0239*
	(0.0108)	(0.0142)

Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1.

9.3.4 Leaning on urban relatives and food insecurity

Table 15 shows that leaning on urban relatives is beneficial at the 1% level of significance for rural households. Column (I) of the table shows that a rural household that leans on urban relatives reduces the probability of being food insecure by 3.49% all things being held constant. The impact of leaning on urban relatives is not statistically valid for urban relatives.

Table 15.PSM estimates of treatment effect of urban relatives on food insecurity

VARIABLES	Rural (I)	Urban (II)
Treatment effect of urban relatives on food insecurity	-0.0349***	0.0168
	(0.00738)	(0.0115)

Robust standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1.

The results presented in Tables 12 to 15 corroborate the results on social distancing presented in Chapter 4. The results points to social nets/social relatedness being likely to reduce the impact of COVID-19 on food security more in rural areas than urban areas as a result of rural households being more able to lean on each other than urban households. In addition, the

containment measure of the lockdown and social distancing is likely to contribute to urban households being more food insecure due to the impacts of COVID-19 than in rural areas. Therefore, whilst the lockdown and social distancing are a necessary evil to curtail the spread of COVID-19, there is need for increased social protection in the urban areas to curtail the negative impact of the lockdown and social distancing measures.

CHAPTER 10

Current efforts by the Government of Zimbabwe and its development partners to circumvent the impact of COVID-19 on Food and Nutrition Security

10.1 Introduction

The results presented in this paper indicate the likely negative impact of COVID-19 and the related containment measures on food and nutrition security of both rural and urban populations. Whilst there is high likelihood of increased food and nutrition insecure households in both rural and urban areas it is crucial to acknowledge the great efforts and measures being put in place by the Government of Zimbabwe (GoZ) and its development partners to circumvent a potential disaster due to hunger. On the 2nd of May 2020 the GoZ announced an $18 billion economic recovery, stimulus and social package aimed at reviving Zimbabwe's economic sectors affected by the global COVID-19 pandemic. The $18 billion stimulus package is broken down as follows: Agriculture support ($6,08 billion), Working Capital Fund ($3,02 billion), Mining Sector Fund ($1 billion), SME Support Fund ($500 million), Arts Sector Fund ($20 million), Liquidity Release from Statutory Reserves ($2 billion), Health Sector Support Fund ($1 billion), Broad Relief Measures ($1,50 billion), Food Grant ($2,40 billion). This is a commendable proactive approach to lessen the impact of the COVID-19 pandemic on livelihoods. Other different programmes and measures implemented by the GoZ and its development partners are discussed in section 10.2.

10.2 Programmes, measures and policies put in place to lessen the burden of COVID on food and nutrition security

10.2.1 Access to water sanitation and hygiene (wash) and health facilities

- Distribution of bulk water to the high density residential areas to improve access to clean water and to decongest the community boreholes.

10.2.2 Social protection/Social distancing measures

- Stimulus package announced to cushion the vulnerable in both urban and rural areas.
- Small and Medium Enterprises to be cushioned also through the stimulus package as indicated in section 10.1.
- Distribution of food items to the vulnerable both in rural and urban areas by NGOs and civil societies such as churches, rotary clubs etc.
- Cash transfer by government and development partners to the vulnerable groups.
- Remittance agents were given the essential service status and allowed to operate during the whole duration of the lockdown.

10.2.3 Food insecurity

- Fruit and vegetables markets were allowed to operate as from the second week of the lockdown, allowing households to access diversified and healthy diets.
- More so, opening the markets also reduced losses for the farmers, especially for farmers of fruits and vegetables, which are highly perishable.
- Farm operations were also classified as essential services, minimising disturbances in the food supply system.
- Formal food supermarkets were also allowed to operate and movement by the general population to go and purchase food items are being allowed.

CHAPTER 11

Conclusion and Policy Recommendations

11.1 Introduction

This report consolidates and analyses data generated from the 2019 Rural Livelihoods Assessment (RLA) and Urban Livelihoods Assessment (ULA) to provide a picture of the implications of Covid-19 and Related Containment Efforts on Food Security for Rural and Urban Households in Zimbabwe. The consolidated rural and urban data comprises a total of 25,790 households, composed of data from 15,154 households during the rural survey and from 10,636 households collected during the urban survey in 2019. This section provides recommendations based on this consolidated analysis. The recommendations are presented below:

11.2 Recommendations

1. Minimize restricted access to lands or markets, as movement restrictions due to the lockdown can have implications, for instance: i) derail agricultural input supply chains at critical times in the season; ii) constrain transportation of goods to processing facilities and/or markets. Such disruptions of the food supply chain are likely to have significant adverse repercussions, particularly for the most vulnerable population groups, including informal traders, the urban poor, displaced populations and others, relying on markets to meet their food needs.
2. There is need to increase availability of reliable clean water in health facilities and households, as clean water is a pre-requisite to maintain and practise hygiene, e.g., hand hygiene, laundry, cleaning, and disinfection·
3. Whilst the lockdown and social distancing are a necessary evil to curtail the spread of COVID-19, there is need for increased social protection in the urban areas to curtail the negative impact of the lockdown and social distancing measures.

4. Considering that the 2019 ZimVAC report projected that about 5.5 million of the rural population would be cereal insecure during the peak hunger period (January to March 2020), the impact of COVID-19 is likely to see the figure of the food insecure population increasing. Therefore, there is need for an urgent assessment to ascertain how many more households are likely to be in secure in both urban and rural areas.
5. The lockdown and travel restrictions due to Covid 19 have a bearing on livelihoods options and income levels for both rural and urban households. This further affects household access to the markets for diversified foods. The call for an urgent Rural and Urban livelihood assessment needs to consider collecting new data from households as most indicators used to project household food security status are not static.
6. Given the unprecedented nature of the crisis, creating a better understanding of the potential impacts of the COVID-19 pandemic on food security and related vulnerabilities is of paramount importance and urgency. As such, data collection and data sharing modalities should be adapted to ensure continuous monitoring of changes in food security levels, food and agricultural supply chains, food production and availability, and food and agricultural input prices and identify possible risks that may threaten food systems. Particular attention needs to be given to monitoring and assessment modalities, with on-the-ground data collection avoided as much as possible and remote options prioritized (e.g. key informants, cell phone-based surveys, use of secondary data).
7. Cash remittances normally attract some transaction fees to the sender and in crises times such as the COVID-19 pandemic, there is need to reduce the transaction charges by operators of the platforms used for such transactions, e.g. Mukuru, Worldremit, Ecocash, One Wallet etc. Given the scale and importance of remittances in emerging economies, actions to reduce the cost of transactions and make it easier to send and receive them can immediately improve livelihoods.
8. There is need for both the government and NGOs to extend their social

support programmes to urban households as the containment strategy of the lockdown has negatively affected household income levels for those households reliant of the informal sector making them food insecure and in need of social protection.

9. More so, there is need to extend the social protection programmes to urban households that usually did not qualify for social protection programmes implemented by both government and its development partners.

The above recommendations do not take away anything from the great and commendable efforts being made by the Government of Zimbabwe and its development partners.

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