Challenges and Opportunities of COVID-19 Lockdowns on Livelihoods of Residents in the Highdensity Suburbs of Bulawayo, Zimbabwe

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Abstract: - The term 'lockdown' has become a commonly used phrase globally. COVID-19 related lockdowns sought to curtail human movements to stop the spread of the virus. Consequently, these measures have had varying ramifications on people's livelihoods. Interrogating these measures provides a fertile ground from which new lessons, best practices can be deducted, to inform and model future containment measures. This paper examines the lockdown-induced challenges and opportunities on livelihoods, based on experiences from Zimbabwe's six wards of Bulawayo, in the first half of the year 2020. This study adopted a mixed method approach. Desktop review, and in-depth personal interviews were used to collect data from a randomly selected sample of sixty (60) key informants (KIs) comprising of the selfemployed, formally employed, and unemployed residents were drawn from six (6) wards. Data were analysed using SPSS 21.0 version and reported through descriptive statistics, the percentage, and frequency distribution. Main findings show that: lockdowns implemented in various countries were modelled on the stringent Chinese mass quarantines. These quarantines were characterized by bans, restrictions, shutdowns, enforcement, working remotely. Other important findings were that lockdowns disrupted and collapsed small and emerging businesses, led to job losses and other livelihoods, and disrupted social life. Despite these drawbacks, the lockdown period provided new opportunities, the motivation to adopt and adapt to new survival skills, such as livelihood diversification, financial preparedness, and frequent utilization of modern technologies to construct livelihoods. The paper unravels the need to offer various assistance packages to businesses and vulnerable communities to sustain, and keep them afloat; plan, and implement public awareness activities to inform communities on anticipated hazards. These will help prepare businesses, and communities for disasters of varying magnitudes, and embrace, consultation and all-stakeholder participation in designing, planning, implementing new initiatives, to ensure unit of purpose, commitment, and buy-in.

Keywords: COVID-19, livelihoods, lockdowns, challenges and opportunities, high density residents.

I. INTRODUCTION

The increased frequency, intensity, and spread of the COVID-19 pandemic has created uncertainty and panic the world over. Hence, the declaration of the pandemic as a "Public Health Emergency of International Concern" (PHEIC) [34], [15]. Reference [5] indicates that COVID-19 has created unprecedented shock and an atmosphere of uncertainty. Therefore, the need to contain the pandemic's transmission

and onslaught need not be overemphasized. Governments have taken stringent precautionary measures, as a containment strategy to mitigate the spread of the COVID virus [14]. One such strategy is a lockdown. The lockdown strategies were modelled on China's lockdown. Reference [3] indicate that the Chinese lockdown was the largest attempted cordon sanitaire in human history or the largest quarantine in human history". Thus, the Chinese approach set a precedence, for all countries to emulate in combating the pandemic [6]. Zimbabwe introduced a 21-day lockdown effective 30 March 2020 to prevent, contain and treat COVID-19 [25]. This lockdown was further extended by three (3) weeks up to 3 May 2020 (CAFOD, 2020). Health experts opined that lockdown is the right move, that slows down the spread of COVID-19 [17], [15]. However, [36] explain that Chinese lockdown measures were a partial success because they delayed and slowed down the spreading of the\ virus. Though, lockdowns are critical containment measures they are a threat to the population [6]. Reference [37] explained that lockdowns distress socioeconomic and political order, which could lead to deep scars if not contained in time. Therefore, this study explores the impact of COVID-19 and lockdown measures on the livelihoods of high-density residents in six (6) wards of Bulawayo in Zimbabwe. Analysing these measures will give insights into the opportunities and challenges presented by lockdowns, from which lessons can be learned and best practices maintained. An overview of livelihoods and lockdowns nexus, findings, discussions, conclusions, and recommendations enjoy more attention, in the sections that follow.

Conceptualizing Covid-19, Livelihoods And Lockdowns

The interaction between COVID-19 lockdowns and livelihood undertakings is key to this study. Therefore, understanding how these interactions translate to challenges and opportunities in the area under study is critical. Hence, the need to unpack the thinking behind the three (3) concepts and their nexus.

COVID-19 is a contagious disease, emanating from severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) [34]. The first COVID-19 case was recorded in December 2019 in Wuhan, China [19]. This disease spreads easily by touching and inhaling contaminated surfaces and air.

Reference [34] declared the pandemic a, "Public Health Emergency of International Concern," because of its transmission rate and contagiousness. Globally, the lockdown strategy has been used to contain and mitigate the rampant spread of the pandemic.

A lockdown is a set of measures to reduce community transmission of COVID-19 that are compulsory, and which are applied indiscriminately to the general population [18]. Meanwhile, [13] describes a lockdown as an emergency protocol implemented by the authorities to prevent people from entering and leaving a given area. [6], adds that it is a critical containment measure. Reference [14] concur, explaining that it is a mitigation strategy to stop the spread of the COVID virus. Therefore, a lockdown is an emergency measure to contain the spread of viruses and ensure the safety of people. Lockdowns restrict non-essential business activities, close educational institutions, and minimize operations of essential services [21]. Lockdowns usually take one of the two formats either total/full or partial lockdown restrictions [13], with varied components (See Table 1). Therefore, the nature of a lockdown protocol is determined by the type and magnitude of the threat that an area faces and the resources it has to combat the threat. Conversely, the nature and magnitude of the COVID-19 pandemic justified the global adoption of mass quarantines measures [27]. A total of 3.9 billion people worldwide were subjected to lockdown by April 2020 [29], [13]. Meanwhile, around 300 million people in Europe, 200 million in Latin America [31], and nearly 300 million people in the United States experienced lockdown [13]. Reference [8] posits that 1.3 billion people in India were locked down. With the lockdown proving to be the mainstay for containing and preventing the spread of the COVID-19 pandemic, it becomes imperative to examine how it has impacted the communities' livelihoods.

Livelihood thinking has been used by academics and development practitioners to understand how poor people and rural dwellers create a living [4], [26], [20]. Reference [2] define livelihoods as assets, access to institutions and processes, strategies used to achieve livelihood outcomes, and activities required for a means of living. Assets the tangible or intangible stores, resources, claims, or access [4]. These are human, social, physical, natural, and financial assets [7], [9]. Assets are classified as material and social resources [30], [10]. For example, possession of human abilities (such as education, skills, health, psychological orientation); access to tangible (roads, barns, houses) and intangible assets (village committees, leadership; indigenous, literacy) and the existence of economic activities (buying and selling, manufacturing, remittances, vending). Therefore, livelihoods are a set of activities, abilities, and entitlements that humans use to transform the environment and eradicate poverty. Livelihoods are vital means of making a living [5]. Human lives depend on livelihoods for survival, hence the need to scrutinize any phenomenon that disturbs the construction of livelihoods. In the context of this study, lockdown is a phenomenon that has directly interacted with livelihood activities in one way or the

other. Thus, it becomes imperative to examine the lockdown's impact on livelihoods.

Research purpose and questions

This study is based on the researchers' involvement and experiences livelihood initiatives in the high-density suburbs of Bulawayo in Zimbabwe. Interactions with residents of the six (6) wards revealed that community livelihoods have been affected by COVID 19 lockdowns, and increased poverty levels by destabilizing their livelihoods permanently.

The research set out to interrogate the COVID-19 induced lockdowns challenges and opportunities on livelihoods. The questions below guided this study.

Research Questions:

- What do lockdowns and livelihoods mean in Zimbabwe?
- How have the lockdown measures been implemented in other countries?
- What has been the effect of lockdown measures on the livelihoods of communities in Zimbabwe?
- What opportunities has the lockdown period availed to the communities in Zimbabwe?

II. METHODOLOGY

A mixed method approach guided this research. This design blended the qualitative and quantitative techniques to assure depth, scope and dependability of findings[23]. A desktop study was conducted to collect data from secondary sources. It consisted of reading and extracting information from government reports, scientific journal articles, Statutory Instruments, WHO reports, and policy briefs. Secondary data review was meant to determine and ascertain the most current COVID-19 containment measures and provide insight into their challenges and opportunities for community livelihoods. The desktop review data was used to triangulate empirical data collected using KIs to have robust data. Empirical data were collected through fieldwork, observation, and questionnaires. The survey's fieldwork was limited to non-probability purposive, and convenience selected people from wards, 10, 11,18, 20. 23 & 24 of Bulawayo in Zimbabwe. Participants included the employed, formally employed, and unemployed residents. The wards are similar with respect to social and cultural aspects, vulnerability level, thus providing rich opportunities to observe the positive and negative aspects of lockdowns on livelihoods closely. Considering the amount of time needed to carry out interviews, code data, transcribe it, and come up with emerging issues, it was determined that 60 participants are an appropriate sample, sufficient for the Central Limit Theorem (CLT) to hold [12]. Questionnaires were administered to get diverse opinions from people who were directly or indirectly affected by the lockdown, as well as to bring about their views on how their livelihoods have been affected. With these people, researchers sought to understand the mind-sets of the 'common' person on lockdown policy. Primary data were analysed using SPSS 21.0 version and reported through descriptive statistics like percentage and frequency distribution, to give it a visual graphical footprint. Ethics standards were followed by explaining the purpose of the research and by giving participants the assurance that confidentiality would be maintained. Participants were assured that the information they provided would be used solely for academic purposes.

III. SUMMARY OF THE FINDINGS

As analysed from secondary and primary data sources on lockdowns, this section provides the findings and discussions. A total of 60 respondents with three distinct age range categories participated in the study. About 14 respondents were aged between 18 and 30 years, 24 were in the 31-49-year-old range, and 22 were over 50 years old. Gender representation in the study was 37% females and 63% males. Desktop study findings, as well as that of participants especially from the employed, informally employed, and unemployed residents provided the primary data.

COVID-19 containment strategies

Desktop study findings indicate that various countries employed a wide range of approaches to curb the dispersal of the COVID-19 pandemic from its source. Lockdown strategies were modelled on the stringent Chinese mass quarantines or stay-at-homes measures. The lockdown strategy has been one of the most effective response measures in many countries [22], [33]. Hence, its validity in COVID-19 containment measure. Table.1, presents a comparative analysis of lockdown approaches in four countries.

Table 1: A comparative analysis of COVID-19 lockdown approaches by country

Lockdown component	China	India	South Africa	Zimbabwe
Barns	*	*	*	*
	-	-	*	-
			*	*
	*	*	*	*
	*	*	*	*
	*	*	*	*
	*	*	*	*
	*	*	*	*
Restrictions • Quarantines • Masking • Curfew • Permission cards • number of people at gatherings • Clearances • Social distancing	*	*	*	*
	*	*	*	*
	*	*	*	*
	*	*	*	*
	*	-	-	-
	.	*	*	*
	-	-	-	*
	*	*	*	*

Shutdowns Industrial activities manufacturing activities Education institutions Borders	*	*	*	*
	*	*	*	*
	*	*	*	*
	*	*	*	*
			*	*
Relief packages • Wage earners and temporary workers • stimulus packages			*	
			*	
			*	
Enforcement Check points Toll-free numbers Use informers	*	*	*	*
				*
			*	
	*			
Remote working Online learning working from home	*	*	*	*
	*	*	*	*
	*	*	*	*

Source: [22], [33], [24]

Lockdown strategies used in China, India, South Africa, and Zimbabwe bear similarities in terms of components, but with varying subcomponents [24], [17]. Similar components relate to bans, restrictions, shutdowns, enforcement, working remotely [38], [1]. There is consonance among the four (4) countries that, social gatherings, international travel, intercity or provincial travel, and outdoor exercises were banned. The opening of bottle stores and shebeens was banned in South Africa and Zimbabwe, while the sale of cigarettes was banned in South Africa. Cigarettes and alcohol bans in South Africa were deemed to be one of the strictest lockdown measures ever surpassing most restrictions elsewhere [11]. Restrictions were widely used in the four countries as COVID-19 control measures [15]. Restrictions bear reference to, home quarantines, compulsory wearing of masks, curfews, controlled number of people at gatherings. However, lockdown subcomponents differed country by country. The inference is that components that sometimes work in one country cannot be generically used in another country. The component variations could be influenced by varying ideological economic approaches and ethos of a country. For example, China is the only country that gave its citizens' permission cards that allowed them to leave their homes every second day for a maximum of 30 minutes [38]. However, Zimbabwe permitted movement was solely for the procurement of food supplies, medication, and medical attention. More so, those moving were supposed to be in possession of a clearance letters. Reference [1] affirm that borders, industrial activities, manufacturing activities, restaurants, and educational institutions were shut down in the four countries. Reference [16] adds that in Zimbabwe the informal sector, outside of agriculture and farmers' markets and some manufacturing, remained closed. South Africa and Zimbabwe's borders were closed to all human traffic except

for returning Zimbabwean nationals and permit holders. However, Zimbabwean borders remained open for cargo [24].

Remote working was adopted and utilized by all countries. These efforts helped reduce the fears and economic repercussions for those who were able to work from home and had access to high-speed internet [28]. Online learning was adopted as the newfound learning medium, whereby learners interacted with teachers online at the comfort of their homes. Therefore, working remotely and online learning was a preserve of persons with access to high-speed internet. Hence, its exclusion of most individuals with no access to the internet and unconducive homes for learning purposes. Enforcement of the lockdown regulations was done by the security services of the four countries through the establishment of checkpoints to ensure compliance with COVID-19 regulations. In South Africa, the government advertised the toll-free numbers that the public could use to report COVID lawbreakers. Meanwhile, China hired informers to key an eye on COVID lawbreakers [32]. Having compared the lockdown approaches it becomes imperative to interrogate the field research findings,

General understanding on lockdowns and livelihoods

Another finding in the variable nature of how people define or view lockdown and even believe that lockdown have a purpose. See Figure 1.

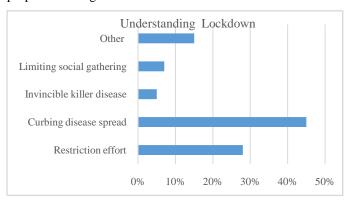


Figure 1: Understanding Lockdown

About 45 percent of the respondents viewed lockdowns as, a way of curbing the spread of the disease, while 28% viewed it as a restriction effort. Meanwhile, 5% defined lockdown as an invincible disease, with the other 7% describing it as limiting social gatherings. However, the other 15 % of the respondents were of the perceived lockdowns as a security measure; closure of services; shutdown; flattening the curve; a way bringing all things to a standstill. Bulawayo residents expressed a mixed understanding of the lockdowns and livelihoods. The respondents' general understanding of lockdown is consonant with the views of [14], that lockdown was a mitigation strategy to stop the spread of the COVID virus.

The study also found that respondents understood livelihoods as making a living (30%); actions done to make a living

(25%), survival activities (20%), accessing resources (12%), means of maintaining a living (3%), while 10% could not define the concept. Livelihoods are vital means of making a living [5]. The participants' understanding of livelihoods resonates with [4], [26], [20] view of creating a living. Livelihoods are vital means of making a living [5]. The study further found 28% of the respondents' major source of livelihoods to be salaries, and 72% to be informally employed. Of these 40% were into buying and selling, and the other 32% doing varied activities such as tailoring, farming, driving, among others. The inference is that livelihoods are critical for humanity's survival, hence the need to scrutinize any phenomenon that disturbs the construction of livelihoods.

The study found that lockdown measures presented more challenges for households than benefits, and interrupted livelihood activities, grinding them to a standstill. Participants expressed that they could not distribute their products to earn a living. As a result, about 93% did have enough resources to sustain their businesses and families during the lockdown. The inadequacy of resources compromised the food security of communities, hence the adoption of varied coping strategies. These bear reference to meal reduction (quantity and frequency). A total of fifty one percent (51%) of respondents indicated they had to borrow from varied sources such as loan sharks, neighbours, friends, and banks to supplement their resources. The borrowing especially from loan sharks also endangered their assets which they use as collateral in case of failure to pay back the loan.

Another finding was that lockdown led to the cancellation of events that communities and individuals had planned. About eighty two percent (82%) affirmed while 18% indicated that they did not cancel any event. Chief amongst these were family functions (38%), especially weddings; funerals (15%); employment opportunities (8%). Meanwhile, 23% of the respondents professed that lockdown measures did not affect them in any way. The inference is that lockdowns exacerbated psychosocial challenges due to closure issues, poverty, and food insecurity. Therefore, the lockdown measure and its aftermath have not only negatively affected the livelihoods, but other facets of the economy needing to be addressed as a matter of urgency.

Challenges presented by the COVID-19 lockdown

The study also found that, of those affected by the lockdowns, 52% highlighted that this period presented new opportunities, while 48% saw none. Participants expressed that lockdown gave them the stamina to be able to stand by themselves, never to depend on one income source, plan, work in other terms, adopt and adapt new strategies, saving for the future, online marketing to reach a wider market. Therefore, lockdown helped build the resilience levels of respondents taking them to new insights of business diversification, market products using the latest technologies, financial preparedness, and planning.

The respondents highlighted that despite criticism against lockdown measures there were positives implementation. The positives bear reference to effecting and enforcing bans on gatherings, closure of schools, curfews, closure of hotspots, opening shops and medical facilities, limiting movement, protecting citizens from infections, decongestion of workplaces, masking, and dissemination of information to the public. However, the measures were criticised for denying communities to prepare for it. More so, it was criticised for giving discordant announcements. This period was criticised for disrupting public transport industry, thus condemning thousands of households into abject poverty. Participants expressed dismay on the failure of the newly introduced public transport system. This new transport system gave Zimbabwe United Passenger Company (ZUPCO) the mandate for transporting the public in major cities and town of Zimbabwe. The new strategy was criticised for its disregard of COVID-19 lockdown protocols in terms of compliance. According to participants, the institution of the lockdown was done hurriedly and in a haphazard manner, thus lacking preparedness thrust. More so, failure by the Government of Zimbabwe to bailout business with stimulus packages, and subsequent failure to provide food aid to the vulnerable did not go down well with participants. Furthermore, the communities did not like the sight of law enforcement agents carrying weapons as it reminded them of the Gukurahundi violence of the 1982-4 unrest. The participants lamented their exclusion from all the lockdown-related decisions. This affirms [6] assertion that. COVID 19 has placed democracy under one of its biggest threats.

Participants advanced that the Government of Zimbabwe should have considered various before effecting the lockdown measures to protect business and the most vulnerable members of the communities, while still safeguarding fiscal sustainability. Table 2 below, summarised action that should be taken before effecting any lockdown measure.

Table 2: Proposed Actions before the implementation of Lockdown measures.

Actions before lockdown implementation	Frequency	Percent %	Cumulative %
Extensive awareness	3	5	5
Resources preparedness	17	28	33
Clear communication protocol	2	3	36
Stimulus packages and grants	12	20	56
Supervised taxi operations	1	2	58
Extend business operating hours	3	5	63
Designate vending stalls	1	2	65
Allow learning and worshiping	3	5	70
Allowed free movement	3	5	75
Planned food aid for citizens	6	10	85
Learn from other countries	1	2	87
Decentralisation of services	1	2	89
Public consultation	2	3	92
None	5	8	100
Total	60	100	

Source: Field Data (2021)

IV.CONCLUSION

The implemented COVID-19 lockdown strategies world over trace their origins to the Chinese mass quarantine measures. However, adopting a straitjacket lockdown implementation approach was an oversight and out of context. Generally, the lockdown measure adopted by Zimbabwe indicated an element of prudence but should have been used to prepare the health care system and devise other means to contain the spread of the pandemic. However, the extension and reintroduction of lockdowns proved a costly exercise bent on eroding and crippling the livelihood of the vulnerable, as well as a driver of the existing socio-economic-political inequalities. Therefore, lockdowns, have the capacity to affect different countries differently due to the inherent differential economic and vulnerability levels. The lockdown period helped build the resilience levels of communities, taking them to new insights of business diversification, market products using the latest technologies, and financial preparedness planning, among others. Furthermore, this is also credited for curtailing the spread of the pandemic by enforcing lockdown measures. While the lockdown measures have received some credits for controlling infections, they have worsened the susceptibility levels of the informal traders, by confining them to their homes and eroding their livelihoods. Therefore, lockdown measures can be impractical or harmful and have raised more serious challenges creating economic crisis, joblessness, lack of access to resources, and socio-political uncertainties that are more crippling and devastating than the pandemic itself. Lockdowns have disrupted and collapsed community social life. Based on the findings above, the paper recommends that: social events and livelihoods remain engrained in humanity's life. Thus, anything that destabilizes it infringes on the community's rights and freedoms. Lockdowns led to the cancellation and postponement of extraordinary events; the planning and implementation of the lockdown suffered a copy and paste syndrome, as it was not adapted to the Zimbabwean context. The participants further highlighted that, the lockdown measures were illogical and void of public opinion, hence its disastrous results from the onset, exposing community livelihoods a plethora of risks. Hence, the need to safeguard livelihoods to avert dire consequences that come with food insecurity. The following recommendations would help the government plan and prepare future sustainable lockdown interventions that work towards preserving and protecting livelihoods. Owing to the importance of safeguarding livelihoods to avert dire consequences that come with economic disruption and food insecurity, the research suggests the adoption of the following mitigation, preparedness, and coping strategies:

New projects should be adapted to the context of the place and settings of where it will to be rolled out, if it is to benefit intended communities. Livelihood protection should be the crux and central to all planned and implemented projects. Thus, all new projects should endeavour to mainstream and protect livelihoods. The consultative and participatory approach should guide the planning and implementation of

containment measures to avert oversights of the lockdown period. An all-stakeholder consultation approach should be adopted by all stakeholders to widen support, buy-in, ensure proper planning and preparedness as well as commitment to similar endeavours. Government should offer various assistance packages to businesses and vulnerable communities. For example, social and food safety, cash transfers, and support local businesses to achieve self-sustenance, and keep them afloat. More so, the government and its partners should plan and implement public awareness activities to inform communities on anticipated hazards, so that they become prepared for disasters of varying magnitudes.

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REFERENCES

- Anderson, R. M., Heesterbeek, H., Klinkenberg, D., & Hollingsworth, T. D. (2020). How will country-based mitigation measures influence the course of the COVID-19 epidemic? The lancet, 395(10228), 931-934.
- [2] Ashley, C., & Carney, D. (1999). Sustainable livelihoods: Lessons from early experience (Vol. 7, No. 1). London: Department for International Development.
- [3] Bao, R., & Zhang, A. (2020). Does lockdown reduce air pollution? Evidence from 44 cities in northern China. Science of the Total Environment, 731, 139052.
- [4] Chambers, R., & Conway, G. (1992). Sustainable rural livelihoods: practical concepts for the 21st century. Institute of Development Studies (UK).
- [5] Chattopadhyay, S. (2020). COVID-19 and the Way Forward: A Story of Livelihoods from Coastal Rural Sundarbans, West Bengal.
- [6] Chirimambowa, T, C. (2020). COCID-19 and the future of democracy in Zimbabwe. Harare: The Elephant
- [7] DFID (Department for International Development). (2001).Sustainable livelihoods guidance sheet. London: DFID.
- [8] Dubey, A. D., & Tripathi, S. (2020). Analysing the sentiments towards work-from-home experience during covid-19 pandemic. *Journal of Innovation Management*, 8(1), 13-19.
- [9] Dutta, S., & Guchhait-Barddhaman, S. K. (2018). Measurement of livelihood assets in sustainable forest governance: A study in Burdwan forest division, West Bengal. Transactions, 40(2), 203.
- [10] FAO (Food and Agriculture Organization of the United Nations). (2008). Introduction to the basic concepts of food security. Rome: FAO.
- [11] Flanagan, J. (2020). Coronavirus in South Africa: tobacco smugglers benefit from world's strictest lockdown". <u>ISSN</u> 0140-0460. Retrieved 2020-06-24.
- [12] Ganti, A. (2021) Central Limit Theorem (CLT). [web log post] Retrieved from: https://www.investopedia.com/terms/c/central_limit_.
- [13] Insider, B. (2020). A third of the global population is on coronavirus lockdown—here's our constantly updated list of countries and restrictions.
- [14] Ku, C. C., Ng, T. C., & Lin, H. H. (2020). Epidemiological benchmarks of the COVID-19 outbreak control in China after

- Wuhan's lockdown: a modelling study with an empirical approach. Available at SSRN 3544127.
- [15] Lau, H., Khosrawipour, V., Kocbach, P., Mikolajczyk, A., Schubert, J., Bania, J., & Khosrawipour, T. (2020). The positive impact of lockdown in Wuhan on containing the COVID-19 outbreak in China. Journal of travel medicine.
- [16] Machivenyika, F. (2020). President extends lockdown, but firms to reopen,' The Herald. 2 May. https://www.herald.co.zw/president-extends-lockdown-but-firms-toreopen/ Date of access: 14 Jan.2021.
- [17] Mavhunga, C. (2020). Zimbabwe leader extends COVID-19 Lockdown. Voice of America 16 May. (https://www.voanews.com/covid-19-pandemic/zimbabwe-leaderextends-covid-19-lockdown. Date of access: 6 Jan. 2021.
- [18] Mboera, L. E., Akipede, G. O., Banerjee, A., Cuevas, L. E., Czypionka, T., Khan, M., ... & Urassa, M. (2020). Mitigating lockdown challenges in response to COVID-19 in Sub-Saharan Africa. *International Journal of Infectious Diseases*, 96, 308-310.
- [19] Morawska, L., Allen, J., Bahnfleth, W., Bluyssen, P. M., Boerstra, A., Buonanno, G., ... & Yao, M. (2021). A paradigm shift to combat indoor respiratory infection. *Science*, 372(6543), 689-691.
- [20] Odusote, A. 2016. Nigeria: The matrix between fragility of livelihoods and conflict, Journal of Global Initiatives: Policy, Pedagogy, Perspective: 10 (2), 9-30
- [21] Ozili, P. K. & Arun, T. (2020). Spill over of COVID-19: Impact on the Global Economy. SSRN Electronic Journal, November. https://doi.org/10.2139/sir.3562570.
- [22] Paolo, B., Chiara, P., Ramasco, J.J., Michele, T., Vittoria, C., Alessandro, V., & Matjaz, P., 2011). Human mobility networks, travel restrictions, and the global spread of 2009 H1N1 pandemic. PLoS One 6, e16591. https://doi.org/10.1371/journal. pone.0016591.
- [23] Patel, M., & Datel, N. (2019). Exploring Research Methodology: Review Article. International Journal of Research and Review, 6(3), 48-55.
- [24] Price, R. (2020). Impacts of COVID-19 regulatory measures on small-scale and informal trade in Zimbabwe. K4D Helpdesk Report 815-816. Brighton, UK: Institute of Development Studies.
- [25] Public Health (COVID-19 Prevention, Containment and Treatment) (National Lockdown) Order, 2020. Statutory Instrument 83 of 2020
- [26] Rakodi, C. (2014). Urban livelihoods: a people-centred approach to reducing poverty. London: Earthscan Publications Limited
- [27] Resnick, B. 2020. Italy and China used lockdowns to slow the coronavirus. Could we? VOX. Retrieved 25 March 2021.
- [28] Rozelle, S., Rahimi, H., Wang, H and Dill, E. (2020). Lockdowns are protecting China's rural families from COVID-19, but the economic burden is heavy. March 30, 2020 (Blog) https://www.ifpri.org/blog/lockdowns-are-protecting-chinas-rural-families-covid-19-economic-burden-heavy
- [29] Sanford, A. (2020). Coronavirus: Half of humanity now on lockdown as 90 countries call for confinement https://www.euronews.com/2020/04/02/coronavirus-ineuropespain-s-death-toll-hits-10-000-after-record-950-new-deathsin-24-hou (Date accessed: 3April 9, 2021).
- [30] Scoones, I. (1998). Sustainable rural Livelihoods: A framework for analysis. IDS Working Paper 72. Brighton: Institute of Development Studies.
- [31] Statista, (2020). "What Share of the World Population Is Already on COVID-19 Lockdown?". Statista. 23 April 2020.
- [32] Wang, H., Zhang, M., Li, R., Zhong, O., Johnstone, H., Zhou, H., ... & Rozelle, S. (2021). Tracking the effects of COVID-19 in rural China over time. *International journal for equity in health*, 20(1), 1-13.
- [33] Wang, Q., & Taylor, J. E. (2016). Patterns and limitations of urban human mobility resilience under the influence of multiple types of natural disaster. *PLoS one*, 11(1), e0147299.
- [34] WHO (World Health Organization.) 2019. Coronavirus disease 2019 (COVID-19) situation report. https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports. Date of access: 14Jan 2021.

- [35] WHO, (World Health Organization) 2020. Transmission of SARS-CoV-2: implications for infection prevention precautions. www.who.int. World Health Organization. 9 July 2020. Archived from the original on 9 July 2020. Retrieved 18 September 2021.
- [36] Wilder-Smith, A., & Freedman, D. O. (2020). Isolation, quarantine, social distancing and community containment: pivotal role for old-style public health measures in the novel coronavirus (2019-nCoV) outbreak. *Journal of travel medicine*.
- [37] Workie, E., Mackolil, J., Nyika., J and Ramadas, S. (2020), Deciphering the impact of COVID-19 pandemic on food security, agriculture, and livelihoods: A review of the evidence from developing countries. Current Research in Environmental Sustainability 2 (2020) 100014. http://dx.doi.org/10.1016/j.crsust.2020.100014
- [38] Yuan, Z., Xiao, Y., Dai, Z., Huang, J., Zhang, Z & Chen, Y. (2020). Modelling the effects of Wuhan's lockdown during COVID-19, China. Bulletin of the World Health Organization, 2020 (8):484-494. doi: http://dx.doi.org/10.2471/BLT.20.254045.