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**Global Pandemics and Vulnerable Populations,
Lessons for Managing Future Pandemics: A Review**

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Global Pandemics and Vulnerable Populations, Lessons for Managing Future Pandemics: A Review

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Abstract

While global pandemics have devastating consequences, they do not affect all populations equally. Vulnerable populations are particularly exposed to the adverse economic, social, and sanitary effects of pandemics. Despite this, little attention has been paid to the strategic management of pandemics so that their impact on vulnerable populations can be minimised. This paper examined the impact of global pandemics on vulnerable populations and attempted to offer some initial means of improving the social and economic wellbeing of vulnerable populations during and after global pandemics. The paper aims to contribute to the global pandemic preparedness and mitigation strategies designed to protect highly vulnerable populations in developing countries from the extreme adverse effects of global pandemics such as Covid-19. The paper highlights the importance of collaborative efforts of governments, NGOs and local communities in dealing with global pandemics. Local solutions, innovative digital financial systems and the use of labour-intensive public works are important in supporting vulnerable populations manage the impact of pandemics.

Key words: Global pandemics, vulnerable populations, strategic management

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1. Introduction

Pandemics represent one of the greatest threats to the world as they tend to affect every fabric of society, with vulnerable populations often the hardest-hit. There have been many significant disease outbreaks and pandemics recorded in history including the Spanish flu (1919-1920), the Asian flu (1957-1958), the Hong Kong flu (1968-1969), the influenza H1N1 in 2009 and the major outbreak of Ebola in Africa in 2014¹. All these pandemics posed great threats to global health security and the livelihoods of people, beyond their impact on human health (WHO, 2020). From its origin in China in December 2019, the impact of the COVID-19 pandemic has been deeply felt across the length and breadth of nations and continents around the globe (Asante and Mills, 2020).

The impact of pandemics including the COVID-19 pandemic cannot be overemphasised. Extant literature shows that pandemics affect healthcare systems, social security, education, transportation, tourism, agriculture, financial sector, with economic consequences to national and global communities at large (Verikios et al., 2015; Davies, 2013). The COVID-19 pandemic has disrupted economies and social order, causing illness and substantial loss of lives across the globe. The COVID-19 pandemic has reduced the quality of life of households and communities, and have disrupted the provision of essential services such as education, transport, and tourism (WHO 2020)

While all populations are affected by pandemics, not all populations are affected equally. Vulnerable populations are particularly at higher risk of being adversely affected economically and socially (Hutchins et al., 2009; Debruin et al., 2012). Vulnerable populations, according to Hutchinson et al. (2009) are susceptible to a higher risk of pandemics because they generally have less capacity to implement preparedness and response strategies or withstand its impact due to disparities in economic status and other social factors, such as settlement, cultural, educational and linguistic barriers, and lack of access to and use of health care facilities. Whereas several studies have been conducted on the impact of pandemics (Bistaraki et al., 2017; Dubb, 2020; Fallah, 2015), as well as vulnerability indexes (Acharya and Porwal, 2020; Flanagan et al, 2011), there appears to be a paucity of research on the impact of pandemic on vulnerable populations especially in relation to the COVID-19 pandemic.

The purpose of this theoretical paper is to obtain information about the consequences of pandemics on vulnerable populations, as well as to identify the most effective means to improve

¹ Even though Ebola virus was first discovered in 1976

the social and economic wellbeing of vulnerable populations during and after periods of pandemics. Protecting vulnerable populations from pandemics is a strategic imperative. First, the most vulnerable people are likely those whose needs are not sufficiently considered in the planning of local response and relief organizations (Flanagan et al, 2011). Second, majority of vulnerable people will find it difficult to recover without conscious effort to support them. This paper advances the frontiers of knowledge and contributes significantly to theory, empirical models, policy and practice on preparedness for global pandemics and mitigation strategies that can insulate highly vulnerable populations from extreme adverse effects.

The rest of the paper is organised as follows: section (2) provides an overview of global pandemics, Section (3) presents the impacts of pandemics on vulnerable populations. Section (4) discusses and presents innovative strategies for addressing the adverse effects of pandemics. Finally, Section (5) concludes.

2. Brief Overview of Global Pandemics

Diseases and illness have been part of society throughout human history. However, it was not until the emergence and widespread trade that created the opportunity for people and animals to interact in a larger scale leading to the spread of diseases like malaria, tuberculosis, leprosy, influenza, smallpox, among others. Indeed, the more larger cities becomes, more exotic trade routes, and increased contact with different populations of people, animals, and ecosystems – the more likely pandemics would occur.

Pandemics refer to uncertain occurrences especially new diseases that can affect lives globally. Pandemic is a sudden outbreak of disease that becomes very widespread and affects a whole region, a continent, or the world due to a susceptible population. As indicated, there have been many significant disease outbreaks and pandemics recorded in history, including Spanish Flu, Hong Kong Flu, SARS, H7N9, Ebola, Zika, and COVID 19 (Maurice, 2016; Rewar, Mirdha, & Rewar 2015; WHO, 2011; WHO, 2020). Pandemics claim many lives especially, in developing economies with death tolls ranging from 5 to 10 percent of their populations (Kern, 2016).

The 20th century recorded the birth of three major pandemics; the Spanish flu in 1919-1920, which caused about 20-40 million deaths (Taubenberger & Morens, 2009); the Asian flu in 1957-1958 which caused about 2 million deaths, and the Hong Kong flu in 1968-1969 which caused close to 1 million deaths (MacKellar, 2007; Wildoner, 2016). The 21st century has also recorded several

pandemics with the influenza H1N1 2009 virus leading to over 18,000 deaths (Rewan et al., 2015). The Ebola pandemic in Africa killed more than 11 000 people and costed the world more than USD 2 billion (Maurice, 2016). The novel Corona Virus has killed over 980,000 people across the globe (WHO, 2020).

The negative impacts of pandemics cannot be over emphasised. Pandemics pose health, financial, social, security, and economic consequences to national and global communities at large (Verikios et al., 2015; Davies, 2013). For instance, the influenza H1N1 in 2009 did not just affect mortality, but also health-care systems, animal health, agriculture, education, transport, tourism, and the financial sector. Similarly, the SARS in 2002-2004, the Ebola pandemic in 2014-2016, as well as the novel Coronavirus, disrupted economies and social order, causing illness and death in the world. The reduction in the quality of life of households and communities, the disruption of the essential services such as education, transport, and tourism are some of the consequences of global pandemics (Nabarro & Wannous, 2016).

Pandemics cause fiscal shocks and damage to economic growth. A large amount of the cost incurred is often aimed at limiting the spread of infections during their early stages (Achon, Laporte & Gardam 2005). Negative economic growth shocks are directly influenced by a reduction in the labour force as a result of sickness and mortality and indirectly by fear-induced behavioural changes. Jorda et al. (2020) note that pandemics reduce the real rates of interest overtime. Fornaro & Wolf (2020) identify a pandemic as a negative shock to the growth rate in productivity. Economic simulations by the World Bank indicate that a severe pandemic could reduce world gross domestic product (GDP) by roughly 5 percent (Burns, Van der Mensbrugge, & Timmer 2006).

Low and middle-income countries (LMICs) are highly vulnerable and most affected during the outbreaks of pandemics (Wilkinson, 2020; Madhav, 2017) as they are characterized with weak health systems, lower medical capacity, low financial resources, less access to modern medical interventions, and higher interconnectivity between population centres (Madhav, 2017). Diwaka (2020) documents that countries with high poverty rates and weak governance systems and institutions are highly vulnerable to the adverse socio-economic effects of the ongoing Covid-19 pandemic. The social impacts of pandemics are severe: including travel restrictions, closure of schools, religious activities, markets, social and sporting centres. Pandemics also threaten global security through economic instability and deaths.

Given that globally, informal employment accounts for over half of non-agricultural employment in half of 47 countries for which data are available, and over two-thirds of non-agricultural employment in a third of the countries. In 2020, over 2 billion workers are earning their livelihoods in the informal economy. This is 62 per cent of all those working worldwide. Informal employment represents 90 per cent of total employment in low-income countries, 67 per cent in middle-income countries and 18 per cent in high-income countries (ILO, 2018). Women are more exposed to informality in low- and lower-middle income countries and are often in more vulnerable situations than their male counterparts. Figure 1 below shows the geographical and share of informal employment in some selected regions across the world.

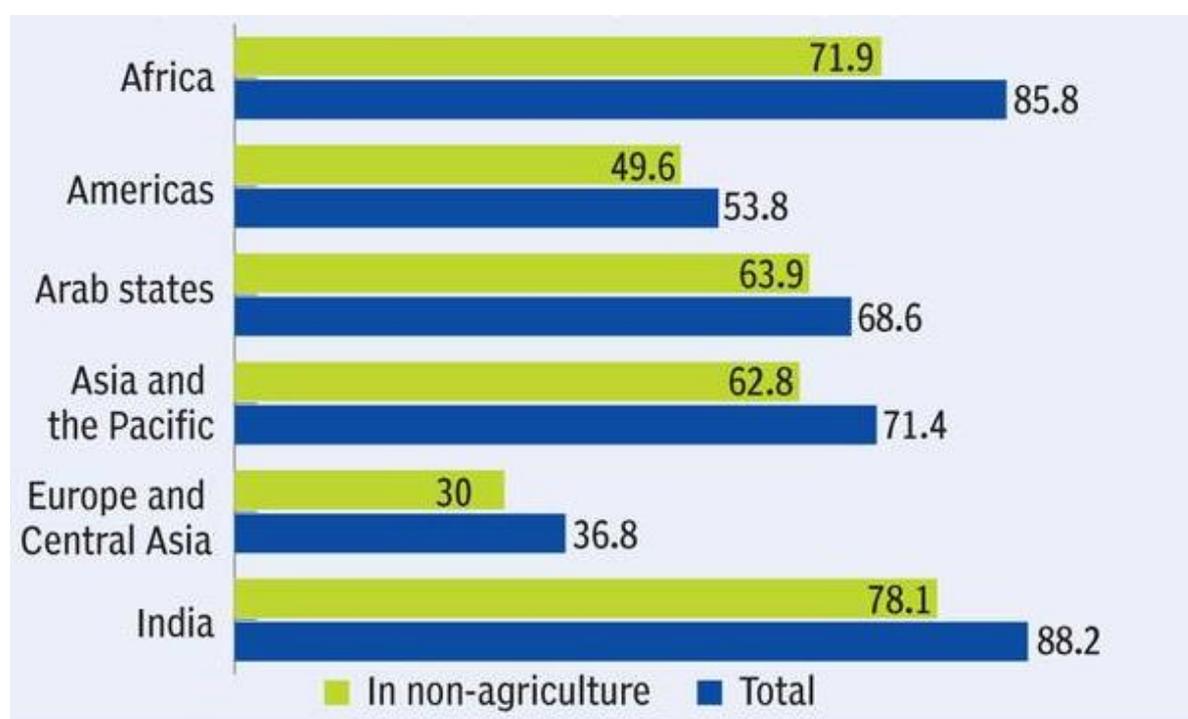


Figure 1: Women and men in the informal economy

Source: A statistical picture, Geneva ILO, 2018

In Africa, the ILO (2018) estimated that informal employment is the main source of employment, accounting for 85.8 per cent of all employment. Remarkably, within Africa, there are significant differences depending on socio-economic development and different levels of informal employment. For instance, informal economy constitutes 67.3 per cent and 89.2 percent of employment in Northern Africa and sub-Saharan Africa respectively. The informal economy also contributes to between 25 and 65 percent of sub-Saharan Africa’s GDP (ILO, 2018).

Moreover, the informal economy has particular relevance for the creation of livelihood opportunities and alleviating poverty as part of individual survival strategies of the poor. Informal employment is a key source of jobs for women. Although the earnings of informal workers are on average low, their activities contribute substantially to GDP. Traders (persons selling goods along streets or in public places, including markets) provide a major source of urban informal employment, ranging from 12 to 24 per cent in Sub-Saharan Africa, though somewhat less in other regions (ILO and WIEGO, 2013).

3. Impact of pandemics on vulnerable populations

Socially disadvantaged groups have historically fared worse during pandemics. According to Shi and Stevens (2005) vulnerability can be seen as increased exposure to infection; increased susceptibility to severe diseases, including complications, hospitalizations, and death; and lack of access to health care. Similarly, vulnerability could be understood as the ability to resist, cope with, and recover from external stresses (McLafferty, 2010). Taking it from this perspective, Wingate et al. (2007:422) defined vulnerable populations broadly to include those who are not able to access and use the standard resources offered in disaster preparedness and planning, response, and recovery. Therefore, location, culture, age, class, race, poverty, language, and a host of other social, and psychological factors may be relevant in vulnerability depending on the nature of the emergency.

COVID-19 vulnerability essentially refers to a measure of risk associated with the pandemic – that is a combination of the possibility that an individual will be infected with the virus, and the likelihood that, once infected, they will develop serious illness. Vulnerable groups include migrants, workers in the informal economy, isolated people, people with disabilities, the elderly, ethnic minorities, prisoners as well as people living in marginalised geographic areas (Rambaree and Nassen, 2020). People with disability may be at greater risk of contracting COVID-19 because of the need to touch things to obtain information from the environment or for physical support as well as barriers to accessing public health information.

The strategies most recommended to control the spread of COVID-19—social distancing and frequent handwashing—are not easy for the millions of people who live in highly dense communities with precarious or insecure housing, and poor sanitation and access to clean water. Whereas all age groups are susceptible to the risk of contracting COVID-19, older people are significantly more vulnerable in terms of mortality following infection, with those over 80 years

old dying at five times the average rate (United Nations, 2020). For instance, Rambaree and Nassen (2020) found that about 90 per cent of COVID-19-related deaths in Sweden were amongst people 70 years or older.

It has been argued that refugees and migrants are potentially at increased risk of contracting diseases, including COVID-19, because they typically live in overcrowded conditions without access to basic sanitation facilities (WHO, 2018). Indeed, in refugee camps, there is absence of basic amenities, such as clean running water and soap, sufficient medical personnel presence, and access to adequate health information are major problems in these settings. The ability of refugees and migrants to access health-care services in humanitarian settings is usually compromised and exacerbated by shortages of medicines and lack of health-care facilities (Kluge et al., 2020). Moreover, refugees typically face administrative, financial, legal, and language barriers to access health system systems (WHO, 2018).

More so, individuals living in informal settlements and slums are highly prone to infectious diseases (Nyashanu et al 2020; Diwaka 2020; Corburn & Karanja 2015). Nyashanu et al. (2020) report that informal settlers in South Africa encountered difficulty in adhering to social distance as a result of increased strain on public infrastructure due to overcrowding, chronic poverty due to loss of wages from business, and food insecurity during the COVID 19 lockdown. Chen et al. (2016) documents that influenza transmission in urban areas is likely to affect the populations living in slums. Most informal dwellers in Africa suffer from exacerbating health outcomes influenced by lack of proper sanitation, overcrowding, abject poverty, unemployment, malnutrition among other factors.

Literature suggests that slum settlement is significantly associated with poor health status (Kyobutungi, Egondi & Ezech, 2010). For instance, unemployment and poverty has been found as the main factors influencing the spread of HIV and AIDS among informal dwellers in Zimbabwe (Tsodzo, 2007). Similarly, the high rates of transmission and spread of Ebola among regions in Liberia is linked with extreme poverty (Fallah, 2015). Not only are these settlements prone to diseases but they are also vulnerable to pollutions and disasters such as floods and fire outbreaks (Cicione, Walls, & Kahanji, 2019). In short, pandemics have ravaged the global economy and at the same time exacerbated pre-existing health, social and income disparities, hurting vulnerable groups even more.

4.1 Support to the Vulnerable during COVID-19

The COVID-19 pandemic is greatly impacting societies around the world in an unprecedented manner. Due to their nature, vulnerable populations are much affected with the negative consequences of COVID-19. First, it is important to note that vulnerable populations have low capacities to cope with the COVID-19 pandemic. Most vulnerable people do not have savings, they do not have safety nets and have less access to support mechanisms. As a result, they need more attention to be able to cope with the negative consequences of the COVID-19 pandemic.

Broadly, there have been two main coping strategies: those from government, and civil society organisations. Realising that COVID-19 pandemic has economic, social and political impact, governments all over the world have adopted various measures not only to protect people's livelihoods but also to facilitate business continuity and sustain their economies. In most countries across the globe, central governments have extended social protection support to vulnerable populations. For instance, in Ghana the central government extend food supply (both cooked and uncooked), free water and free electricity to vulnerable populations. Most governments around the world have provided financial support to their citizens especially the vulnerable to ensure their survival as well as minimising their suffering.

Non-Governmental Organisations (NGOs) and civil society organisations have played and continue to play a significant role in society. In this pandemic era, NGOs that were already working closely with communities have found new ways of continuing to provide humanitarian aid. Indeed, around the globe, NGOs have been responding to the COVID-19 pandemic through supporting health centres, raising awareness about how to prevent the spread of the pandemic, and providing essential supplies ranging from medicine and hygiene kits to Personal Protective Equipment (PPE) to especially vulnerable and disadvantaged people.

4.2 Proposals for supporting the vulnerable during pandemics

The negative impact of COVID-19 pandemic is turning lives upside down across the globe. Governments have therefore stepped in to provide the needed support to society in order to minimise the impact of the pandemic. Despite this support, it is easy to forget the most vulnerable and the least resilient in society who will be hit hard by the pandemic. Most vulnerable people live below the poverty line and have limited access to social safety nets and healthcare as well as regular and guaranteed income (Collacott, 2020). Therefore, during pandemics vulnerable populations need special attention to minimise their vulnerability.

Most governments across the world have provided relief supports to their citizens during the lockdowns. Relief measures are aimed at providing immediate support to citizens especially vulnerable populations. Relief supports include food support, health education and supply of hand sanitizers, cash transfers and wage and employment support. Whereas these supports and reliefs were important and timely, their distribution was a challenge. For instance, with respect to the sharing of the cooked food, in several places across the world, these was characterised by a lot of overcrowding which in itself could cause the spread of the virus. Similarly, the sharing of the uncooked food did not only cause overcrowding but also some vulnerable groups such as migrants and homeless people could not cook the food by themselves because they do not have a place to cook.

It is suggested that community leaders be used to support this process of distributing relief supports with stringent rules in place to avoid elite capture. In vulnerable communities such as informal settlements, there exist some form of informal structure for organising themselves. In this case people will be assured that they will have access to pandemic support and there will be less overcrowding. Therefore, our suggestion is that in future, there is the need to explore the use of local and community leadership in the distribution of relief and support assistance to vulnerable populations.

Stimulus packages are equally important in this regard which includes credit schemes, business support, tax exemptions and liquidity measures for the vulnerable and people in the informal sector. However, in some jurisdictions applicants were asked to submit additional documents such as national identification, and tax identification number as requirements to access financial and credit support. We suggest that in the meantime, financial and credit support should be giving without any requirements. However, the opportunity should be ceased to take as much information on these vulnerable populations so that things become easy in future unfortunate pandemic.

Globally collaboration and coordination remain fundamental to effective pandemic preparedness and response (Schwartz & Yen, 2017). The appropriateness of complex crisis response operations hinges on the ability of countries to mobilize a coordinated effort. According to Ansell and Gash (2008), collaborative governance describes an arrangement between one or more public agencies that collaborate with nonstate actors in a collective decision-making process aimed at implementing public policy or managing public programmes.

According to WHO (2009), the economic and social consequences of pandemics are greater if governments, development partners, businesses, and civil society failed to develop plans as to how they can continue to deliver key services during periods of crises. That is why all sectors of society should be involved in pandemic preparedness and response. It will require a concerted and collaborative effort by different various government ministries, businesses, and civil society to sustain essential infrastructure and mitigate impacts on the economy and the functioning of society.

A whole-of-society approach to pandemic management is evidence-based and has been used successfully in countries with a history of pandemic infections (Dubb, 2020). This collaborative approach assumes that no single entity has the capacity to successfully manage the dynamic, complex problems that arise in a pandemic environment. Application of the whole-of-society model globally would provide a more harmonious and concerted response with mutual and synergistic benefits to all affected nations. WHO puts a whole-of-society approach, which means government engaging all stakeholders including the civil society, communities, academia, media, private sector, NGOs, other voluntary associations, families, and individuals to strengthen the resilience of communities and society as a whole during pandemics.

This differences in pandemic response is perhaps explained by the differential structures and arrangement of public agencies as well as non-state actors between wealthy and poor countries. Again, the extant data shows that over the years there has been an increase in the number of initiatives targeted at human security and health, albeit their concertedness remains ambiguous (WHO, 2019). This ambiguity perhaps results in a non-systematization of pandemic preparedness, collaboration, and coordination mechanisms in many parts of the world. This sets up an imperative for inter-organizational collaborative capacity building model through actor-networks theory, integrating various organizational capacities in interdependence, membership, resources, information, and learning (Fox, 2000). This typology of collaborative arrangement provides an opportunity for multi-sectoral deepening in technical, political, and institutional dimensions necessary in both pandemic response and preparedness (Lai, 2012).

Collaboration and coordination mechanisms during pandemics are more critical and require participation of development partners, multiple levels of government, nonprofit, businesses, philanthropic organizations, communities and private sector institutions and the public. This collaborative approach assumes that no single entity has the capacity to successfully manage the

dynamic, complex problems that arise in a pandemic environment. Figure 2 illustrates the nature of pandemic collaborative networks during Covid-19 pandemic in Ghana. The inter-agency collaboration multiple actors served as an important mechanism for mobilising financial, technical and social support for managing the pandemic.

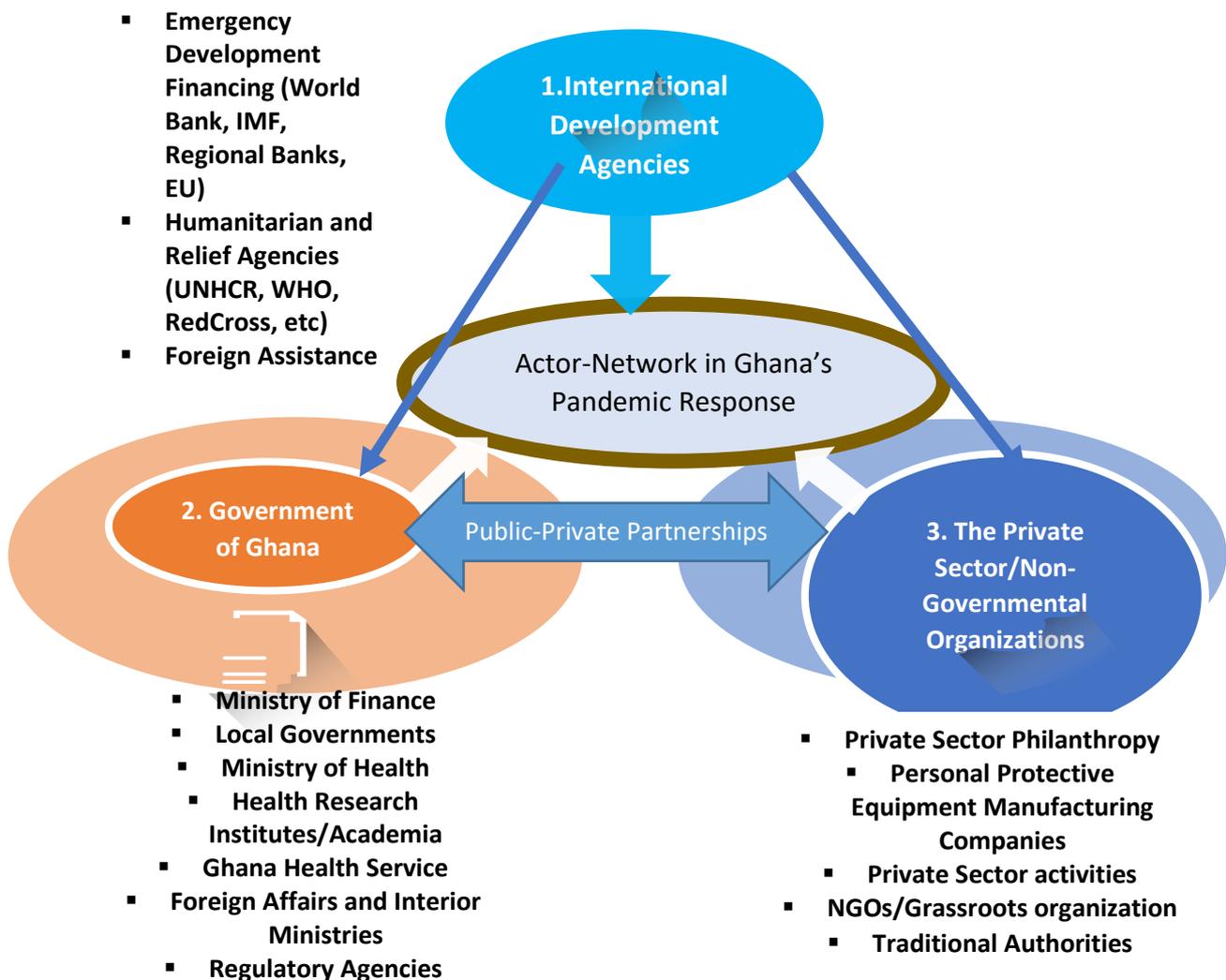


Figure 2: Actor-Network of Pandemic Inter-Agency Collaboration in Ghana

Thus, the growing integration of the world has made it important for a consideration of different levels of collaborative and coordinative efforts in tackling seemingly intractable challenges such as disease pandemics. Inter-agency collaboration as a mechanism for fighting global pandemic remains critical as the task requires more participation of eclectic actors including the international community, governments, non-governmental and other private players which provide effective support for financing, resource and knowledge dissemination (Webby and Webster, 2003; WHO, 2005).

Within international and national contexts, the concept of inter-agency collaboration has also been applied to various sectors of society, including policing and law enforcement, counter insurgency campaigns on terrorism, and public health education programs (Bistaraki et al., 2019). The growing emergence of pandemics and their concomitant global fast pace of spread with devastating local impacts on human health and economies (Black *et al.*, 2017), especially in least developed countries perpetually underscores the importance of trans-national and international collaboration and coordination as well as local response networks.

Furthermore, access to financial services is considered crucial in scaling up and leapfrogging global development processes to increase access to health, education, small business ventures and other services pertinent to lives, well-being and livelihoods. As most governments and health professionals have encouraged the use of cashless and contactless modes of payment to reduce the risk of virus spread through handling of cash, it is crucial to adopt innovative measures of mobile telephone to ensure financial inclusion. In this way, digital technologies have become a critical enabler of connectivity facilitating the continuity of our regular lives and connecting people more than ever before (Katz, 2020). According to Machasio (2020) the COVID-19 crisis has underscored the urgent need for more robust financial inclusion strategies. Given the risk of transmission of COVID-19 through handling of cash calls for the digitization of payments.

Mobile money accounts could help families manage economic emergencies during the pandemic while reducing the risk of sliding into poverty (Machasio, 2020). Similarly, there is the potential for small firms and those in the informal sector to directly benefit from digital solutions such as mobile money services, online banking and other financial technology innovations during pandemics. As a matter of urgency, all mobile users should be automatically enrolled in all mobile financial systems. It is also important to ensure that charges on digital financial services especially those on mobile money services should be totally waived to avoid discourage their usage.

Corollary to the access to financial services is the need for accurate data on the vulnerable in society. In most developing countries, data is a challenge making it difficult to make sound and good decisions. In fact, for the vulnerable they are least likely to be counted and details about are often lacking in the unlikely situations that they are counted. It is estimated that about one billion people in the world cannot prove their identity because of their lack of birth and death registration (Collacott, 2020). This has gone a long way to hamper the management of the COVID-19

pandemic especially with respect to the poor and vulnerable. Therefore, accurate and timely data on the vulnerable in society is essential in dealing with future pandemic.

It is important to expand social protection systems to support the underprivileged and vulnerable in society. Thus, across the world some countries have broad-based social protection systems, there is the need to re-purpose and scale up this system as emergency relief support for the poor and vulnerable. The value of such social protection systems should be increased as there are food shortages and price hikes which makes life expensive during pandemics. Similarly, in countries where social protection systems are limited, there is the need to make them broad based and expand them cover to cover the poor, vulnerable and people who will lose their livelihood because of the pandemic. Where this expansion is not feasible, we recommend expanding them to urban areas especially hotspots of the pandemic.

5. Summary and concluding remarks

Developing countries continue to face an uphill battle against COVID-19, given their limited resources, fragile health systems, existing disease burden, urban density, conflict, and record levels of population displacement. Nonetheless, governments and societies have demonstrated a noteworthy level of responsiveness, cooperation, and adaptability to the pandemic. Despite this effort, vulnerable populations are much affected and will continue to be impacted during and after the pandemic. In spite of the negative consequences of the COVID-19 pandemic on vulnerable populations, not much research has been conducted on this.

This paper shows that vulnerable populations are so much affected during global pandemics. This is because they have low capacity to deal with the situation as they have low access to support, finance, and safety nets. It is of imperative to note that during the outbreak of the pandemic, governments around the world have provided some support to the vulnerable people which came either in the form of food assistance, healthcare, and social assistance.

First, it is imperative to continue to implement relief measures during pandemic situations. This is important as it will help to provide immediate and temporary support to those who will be much affected by pandemic. After the pandemic, governments and NGOs are entreated to device recovery measures to help make vulnerable people quicken the pace of recovering from the negative consequences of pandemics. This can come in the form of financial assistance, soft loans and supporting of businesses in many ways.

Second, it will be great to integrate labour intensive approaches in public works projects, which boost much-needed employment creation for vulnerable groups and support local infrastructure development. Vulnerable people can be employed by government in public works especially in labour intensive and less sophisticated works. This will help both the government and the vulnerable populations as they will be readily available jobs and also cheap labour for government.

Third, there is the need to support the design and piloting of strategies for an extension of social insurance to vulnerable workers in the informal economy based on a series of feasibility assessments.

Finally, local solutions are of strategic importance in global pandemics where there is no laid down procedure for dealing with the situation. Therefore, it is of great significance to empower affected communities to design responses tailored to address the complexities of their unique local contexts. Indeed, Kibera and other informal settlements across the global have made a great deal of effort to devise local approaches to dealing with the pandemic because of their unique situation. Given the importance of timeliness and building on existing institutions, such locally adaptive efforts are vital.

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