

Article

Territorial Impact and Responses to COVID-19 in South Africa: Case Studies of eThekweni Metropolitan Municipality and KwaDukuza Local Municipality

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Abstract: Governments played an essential role in mitigating the social, political, health and economic impact and outcomes of COVID-19. Most literature limits the role of the state at the national level by focusing on the pandemic's impact on economic growth, unemployment, poverty and state responses. This approach neglects the role played by subnational governments in managing the pandemic. In response to this predicament, this article explores the territorial socio-economic impact of COVID-19 and the responses adopted by subnational governments through the case studies of eThekweni Metropolitan Municipality and KwaDukuza Local Municipality in South Africa. A territorial understanding of the pandemic and responses is important because of the spatial dimensions of the pandemic. Methodologically, the article utilises data from a survey conducted with informal workers in the two municipalities. The article shows the diverging impact and responses from the two municipalities, and how pre-existing socio-economic structures reinforced prevailing challenges. The article argues that a territorial understanding of the pandemic allows governments to adopt targeted interventions to enhance the effectiveness of responses to the different spatial dimensions of the pandemic.

Keywords: COVID-19; developing nations; local state; pandemics; decentralisation; density; informal economy



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1. Introduction

The social, political and economic impact of the coronavirus (COVID-19) pandemic, caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), will be felt for decades to come because of the adverse developmental challenges that underpin the pandemic. The pandemic amplified existing socio-political dissent amongst political parties, citizens and civil society and state repression in some quarters of the world. Economically, the pandemic caused the most extensive global economic contraction recorded in decades because of the lockdown of social and economic activities [1]. The economic impact of the pandemic is globalised because it reached developed, developing and underdeveloped countries, threatening the achievement of the Sustainable Development Goals [2]. Developing countries in Africa recorded the lowest number of cases and mortality, and yet they face a disproportional socio-economic burden of the pandemic because of the economic structure of high informality [3]. This observation is worrisome, especially considering that Africa has the highest poverty rates globally.

A series of literature focuses on the macro-economic impact of the pandemic based on national data linked to the gross domestic product (GDP) and poverty levels [1]. Other studies focus on how governments responded to the pandemic and the effectiveness of the counter-cyclical policies on poverty, income and unemployment [4]. While most of the literature on COVID-19 focuses on the macro level, there is an acute need for studies

focusing on the territorial impact and responses to the pandemic as informed by each locality's social, political and economic dynamics. This study explored the territorial socio-economic impact of COVID in South Africa and the responses adopted by subnational governments through the case studies of the eThekweni Metropolitan Municipality and KwaDukuza Local Municipality. The metropolitan municipality is significant to South Africa's social and economic development landscape as the province of KwaZulu-Natal contributes 16% of the national GDP, following Gauteng's 34% [5].

Methodologically, a territorial approach is important because it delineates the impact of the pandemic from a micro perspective as opposed to the dominant macro universalistic approach. Based on the micro focus, a place-based development approach was adopted as the study's theoretical framework because of its emphasis on the uniqueness of each locality. Within a place-based development approach, "space matters and shapes the potential for development not only of territories but, through externalities, of the individuals who live in them . . . geographical context matters, whereby context here is understood in terms of its social, cultural, and institutional characteristics" [6]. Such an approach is vital because pandemics and contractionary periods surge the demand for local government services. Essentially, this paper contributes to a territorial understanding of the socio-economic impact of COVID-19 and the role that local state structures played at the forefront of responding to the pandemic. The socio-economic impact is derived from data on the effects of the pandemic on the informal economy. This economic sector is mainly comprised of low-income households who live and work in poverty.

1.1. COVID-19 as a Global Crisis

The impact of COVID-19 has been felt globally because of the unprecedented spread of the deadly virus and its impact in term of health and the economy. More than 519 million cases and 6.26 million mortalities have been recorded globally as of 11 May 2022, denoting the health impact of the pandemic on the global population [7]. Countries such as the United States, India, Brazil, France and Russia have been disproportionately affected based on cases and mortality reported. A global outlook of the pandemic shows that both developed and developing nations have been severely affected by COVID-19 from a health and mortality perspective. Despite poor health infrastructure, the African continent is less affected than other regions by health outcomes [8]. The rapid spread of COVID-19 within many countries was due to many factors, such as the political leadership downplaying the disastrous impact of the pandemic and a lack of reactivity [9]. In Brazil, the Bolsonaro government downplayed the pandemic's strain on the healthcare system, leading to Brazil having the second-highest mortality rate after the US. This is opposed to other countries, such as Australia and New Zealand, who were able to deploy the most effective strategies to contain the spread of the virus.

The IMF and the World Bank reported that the global economic impact of the pandemic would surpass the 2009 global financial crisis. Table 1 shows the strain put by the pandemic on the global economy.

As evident from Table 1, the global contraction for 2020 was estimated to be 3.3% because of the slowdown of the global economy induced by the lockdown measures implemented by countries. As the global economy is beginning to recover, the global growth rate is expected to be 6% because of the increasing pace of vaccination in developed and emerging countries, prompting the resumption of complete economic activities. The global growth rate for 2022 is expected to be 4.4%. These figures are largely attributed to the economic recovery of advanced and developed economies because of the easing and removal restrictions of lockdown restrictions. Advanced economies are expected to grow by 6.4% and 3.5% in 2021 and 2020 [1]. The economic improvement can also be attributed to the counter-cyclical policies introduced on the demand-side to offset the reduced economic activities to stimulate economic activities, such as high-income countries adopting larger stimulus packages.

Table 1. Overview of the World Economic Outlook projections.

(Percent Change)	Year over Year Projections		
	2020	2021	2022
World Output	−3.3	6.0	4.4
Advanced Economies	−4.7	5.1	3.6
United States	−3.5	6.4	3.5
Euro Area	−6.6	4.4	3.8
Germany	−4.9	3.6	3.4
France	−8.2	5.8	4.2
Italy	−8.9	4.2	3.6
Spain	−11.0	6.4	4.7
Japan	−4.8	3.3	2.5
United Kingdom	−9.9	5.3	5.1
Canada	−5.4	5.0	4.7
Other Advanced Economies	−2.1	4.4	3.4
Emerging Market and Developing Economies	−2.2	6.7	5.0
Emerging and Developing Asia	−1.0	8.6	6.0
China	2.3	8.4	5.6
India	−8.0	12.5	6.9
ASEAN-5	−3.4	4.9	6.1
Emerging and Developing Europe	−2.0	4.4	3.9
Russia	−3.1	3.8	3.8
Latin America and the Caribbean	−7.0	4.6	3.1
Brazil	−4.1	3.7	2.6
Mexico	−8.2	5.0	3.0
Middle East and Central Asia	−2.9	3.7	3.8
Saudi Arabia	−4.1	2.9	4.0
Sub-Saharan Africa	−1.9	3.4	4.0
Nigeria	−1.8	2.5	2.3
South Africa	−7.0	3.1	2.0
<i>Memorandum</i>			
Emerging Market and Middle-Income Economies	−2.4	6.9	5.0
Low-Income Developing Countries	0.0	4.3	5.2

Source: IMF (2021).

The uneven pace of economic recovery between the various economic groupings is observable in the distinction of the expected growth rates between the advanced economies and the disaggregation of emerging markets and developing economies (EMDEs). While EMDEs faced a −2.2% contraction in 2020, and are expected to grow by 6.7% and 5% in 2021 and 2022, the growth projections can be attributed to the expected growth rate in China and India [1]. An international geographical breakdown shows that sub-Saharan Africa, Latin America, and the Caribbean are expected to experience slower growth rates. This can be attributed to the slow pace of vaccination in these regions, thereby making it impossible to remove all social and economic restrictions in these developing countries. The lack of proactive strategies to address some of these challenges led the ILO and the IMF to conclude that uncertainties will affect the global recovery process [10]. These setbacks will inevitably amplify the economic disparity between developed and developing countries, particularly in relation to sub-Saharan Africa. This reflects a territorial understanding of the pandemic at an international level influenced by the economic grouping of countries.

The decline in income and consumption shortfalls significantly impact global poverty and human well-being. Varying estimates have been provided on pandemic-included poverty across the globe in ascertaining the overall impact of the pandemic. The United Nations Women project that more than half a billion (546 billion) people could be pushed into poverty [11]. The IMF estimated that over 95 million people stagnated in poverty because of COVID-19 lockdown restrictions. Decerf et al. estimated an additional 68 million poverty years and the loss of 4.3 million years of life in 150 countries, with higher welfare costs of increased poverty in poor countries [12]. A significant focus has also been paid

to low-income, vulnerable and marginalised groups disproportionately affected by the pandemic [8]. The informal economy was disproportionately affected by the loss of income and a lack of social security in the informal sector, with women carrying a disproportional burden [13]. Gerszon et al. identified Nigeria (5 million), India (12 million), and the Democratic Republic of Congo (2 million) as countries with the most significant increase in COVID-induced poverty, with South Africa, China and Indonesia experiencing a steep growth of roughly one million, respectively [14].

Most of the poverty crisis that is expected and ongoing throughout the world can be blamed on the impact of the pandemic on employment due to the slowdown of global economic activities. In other estimates of global poverty wrecked by the pandemic, Romero and Ahamed find that “2021 the world’s population living on less than \$5.50 dollars a day would increase by 231 million people, of which nearly 107.8 million people would be pushed into extreme poverty living on less than \$1.90 per day” [15]. Transportation and accommodation are some of the economic sectors worst hit by the pandemic, while online services and the sharing economy surged [16]. For some studies, financial inclusion is suggested as one of the tools to address such high levels of COVID-19-induced poverty [15]. Close cooperation between all stakeholders is also important in mitigating the social and economic impact of the pandemic. However, some of these measures may be unattainable without the inclusion of the marginalised and vulnerable groups from state responses.

1.2. Territorial Impact and Responses

Most of the literature on COVID-19 focuses on the general state and impact of the pandemic at the macro level because central governments have been at the forefront of designing responses to the pandemic. Central governments designed and implemented lockdown measures, with subnational governments instructed to follow and enforce these lockdown regulations [17]. Further to this, responses to the pandemic were also devised by national governments, some in consultation with subnational governments. Some responses, such as in Spain, did not involve subnational governments as the national government centralised all decision-making powers [18]. Reporting along national lines on the impact and responses to the pandemic blurred the role played by subnational governments in responding to the pandemic and understanding the social and economic implications of the pandemic at the macro level. However, the pandemic’s regional and local impact and responses are “highly heterogeneous, with significant implications for crisis management and policy responses” [19]. Understanding the territorial or regional impact of the pandemic allows subnational governments to respond effectively from a decentralised and place-based approach.

The decentralisation of power from national governments to subnational governments necessitates the decentralisation theory which holds that the proximity of local governments to communities has the potential to increase responses to the service delivery needs of citizens [20]. Within the decentralisation theory, subnational structures are uniquely placed to respond to the service needs of communities because local authorities are embedded in local structures. These assumptions are underpinned by the notion that central governments are out of touch with citizens’ daily needs and cannot respond appropriately because of a lack of localized information. In the context of COVID-19, the application of the decentralisation theory holds that central governments understand the impact of COVID-19 and inevitably adopt a blanket approach in responding to the pandemic, without understanding the territorial impact and the need for tailored responses. This is evident in that national governments announced universal COVID-19 responses that lacked the targeting of disproportionately affected regions and sectors of the economy. Gupta et al. criticized such measures for implicitly prioritising and benefiting the privileged and exacerbating vulnerabilities [21].

Understanding the territorial impact of the pandemic is significant because of the varying levels of difficulties presented by the pandemic in different regions. Factors such as population density and size determine the diffusion and effects of COVID-19 in morbidity

and mortality [22]. In demonstrating the territorial impact of COVID-19 in various European cities and regions, it is observed that regions such as Calabria in Italy and New Jersey in the United States recorded the highest mortality rates per 100,000 people. However, the responses were similar throughout these countries [23]. In Nepal, the return of daily wage migrant workers significantly contributed to increases in COVID cases [24]. Densely populated Asian cities, such as Singapore, Seoul, Tokyo, and Hong Kong experienced slower transmission rates due to proactive containment measures, including the tracing and testing of citizens [25]. This demonstrates the importance of allowing cities the autonomy to rapidly respond to situations as they evolve instead of relying on the central command of the national government.

COVID-19 cases are expected to follow density size and population because of morbidity. This explains the rapid spread and impact of the Beta variant in Indian cities such as Mumbai and Delhi. Basset asserts that density is a major contributor because it is associated with critical developmental issues such as poverty, housing conditions and limited healthcare facilities [26]. These issues underpin Mumbai and Delhi, as evident in the high rate of informality in the economic and housing sectors. The OECD observes that metropolitan municipalities are better equipped with healthcare infrastructure than adjacent and lagging regions struggling with healthcare infrastructure as metropolitan municipalities have twice as many hospital beds per 1000 people than most regions [23]. On the African continent, the lack of healthcare infrastructure was also cited as the leading concern in dealing with the disease in rural regions. There is also evolving evidence on the impact of the pandemic in Brazilian metropolitan areas such as Sao Paulo and Rio de Janeiro. Given the unprecedented negative social and economic impact of COVID-19 on the global development landscape, it has been important for governments across the world to adopt specific interventionist policies to shield citizens and businesses from the most harmful effects of the pandemic.

The health impact of the pandemic has had a severe knock-on effect on the economy because of the stringent lockdown measures required to combat the spread of the virus. From an economic viewpoint, the spatial dimension of COVID-19 shows that metropolitan regions recorded significantly higher job losses, particularly regions that are tourism-dependent [27]. This means that city-regions dominated by economic sectors such as manufacturing, retail, and tourism that were hardest hit by the pandemic and experienced greater economic decline than less affected sectors in which workers can work remotely. As the demand for local government services increases during contractionary periods, the challenge was that local government revenues also declined while the expenditure increased. This meant that central governments had to increase transfers to subnational governments to cope with the demand for services, particularly in areas most citizens are unemployed and depend on government subsidies. In the US, subnational governments recorded a 21.6% loss in revenue compared to 12% in Australia [28].

While much of the responses to the pandemic are framed as matters undertaken by central governments, many responses at the grassroots level were headed by subnational governments in the forefront. Local governments played an essential role in responding to the pandemic based on their proximity by enforcing lockdown regulations, supplying personal protective equipment (PPEs), tracking and reporting COVID cases, managing public spaces, designing and implementing recovery strategies and ensuring targeted interventions to the most vulnerable in communities [17]. The multi-level responses in coordination with central governments were also notable in Hangzhou City in China, where the metropolitan administration worked with private entities in harnessing big data to monitor and respond to cases in the region [29]. Local governments are essential in introducing participatory and community-led initiatives to develop context-specific responses covering local needs [17]. In Nepal, local governments implemented health policies to fight the pandemic based on the constitutionally bestowed responsibility for primary healthcare and sanitation [30]. Such responses are instrumental in increasing the

effectiveness of the government's responses based on targeted territorial interventions instead of universal interventions that fail to fit certain contexts.

While most responses to the pandemic relied on national governments issuing direction and fiscal responses, the level of fiscal consolidation and decentralisation by subnational governments is important in determining how municipalities respond to the pandemic [27]. Fiscally, supplementing the central fiscal responses, some subnational governments focused on strategic economic areas that received less attention from the universal counter-cyclical responses. Subnational governments in Italy, Greece and Turkey spent a considerable portion of their budget on supporting small businesses, including the self-employed who remained without any income because of lockdown restrictions [25]. In Finland, support for the self-employed was the focus of subnational governments through municipalities being compensated by the central government for the initiative. Similar approaches were also deployed in Spain to support and promote local economies, including the self-employed. For example, Madrid allocated EUR 220 million to support SMEs and the self-employed [31]. However, it is important to understand that these measures were taken by pro-urban municipalities with sufficient revenue to initiate such measures, whereas lagging regions lack the fiscal capacity to respond effectively. For developing countries, these situations are aggravated by the lack of resources for local governments.

2. Methodology

South Africa has the highest number of COVID-19 cases in Africa in terms of reported cases and mortality. Latest statistics show that the country has recorded over 3.85 million cases and more than 101,000 mortality cases as of 11 May 2022 [32]. All COVID-19 cases reported in this article from 11 May 2022. In responding to the early stages of the pandemic, the national government implemented a level five lockdown on 23 March 2020 to stop the spread of the virus. The stringent lockdown measures limited the movement of people, social gatherings and economic activity for more than five weeks. A series of easing lockdown restrictions followed until the country experienced a second wave in December 2020, leading to the country closing social gatherings and limiting other economic activities that required the mass gatherings of people in confined spaces. The second wave of restriction measures had a knock-on effect on tourism and other accommodation-related industries during the festive season.

The study utilised a mixed-methods approach by gathering quantitative data from the survey questionnaire and qualitative data through semi-structured interviews with informal workers and municipal representatives. In total, 225 participants were recruited in the study, with 150 of these participants emerging from the eThekweni Municipality and 75 recruited from the KwaDukuza Municipality. The data were collected between the periods of March–June 2021. The survey questionnaire focused on demographic information, socio-economic data, and the impact of COVID-19, government support for the informal economy and social security for the informal economy. This study was ethically approved by the University of KwaZulu-Natal's Humanities ethics Committee.

The data were collected and captured using Google Forms, an online survey data collection tool. The data collection was performed face-to-face using digital devices, as the researchers had to abide by the social distancing regulations. Data analysis was conducted using basic frequency statistics in excel, and was supplemented by data from the South African government. The presentation of the results is based on a comparative approach to draw distinctions on the territorial impact of the pandemic in KwaDukuza and eThekweni.

3. Results

The results are presented in the following sequence: analysis of COVID cases, socio-economic impact, livelihood impact, and government responses to the pandemic. Thereafter, a discussion follows.

3.1. COVID-19 Impact in eThekweni and KwaDukuza

From a territorial viewpoint, South Africa adopted an innovative approach to reporting COVID-19 cases through district municipalities playing an essential role in tracking cases. Using districts as reporting structures is in line with the country's DDM that aims to improve the country's intergovernmental framework and strengthen the service delivery in the realisation of the key failures and capacity constraints facing municipalities [33]. According to government documents, the DDM was to attenuate the culture subnational governments working in silos from other spheres of government, the absence of coherence in development planning and improve the implementation process in the delivery of social and economic services [34]. In the context of the COVID-19 pandemic, reporting from district structures ensures the strategic coordination of government efforts based on an all-government approach. If the input of subnational governments is considered, the process could result in national government adopting informed decisions based on utilising information from grassroots levels represented by local governments. Poor coordination structures undermine governments' rapid responses to challenges posed by the pandemic.

Fewer studies have focused on the spatial impact of the pandemic. At the micro-scale, the effects of COVID-19 can be used to map out the most affected areas. Table 2 shows the number of COVID cases in the province of KwaZulu-Natal.

Table 2. COVID-19 Cases per District in KwaZulu-Natal.

District	Cases	Deaths	Recoveries
Amajuba	27,316	1092	26,164
eThekweni	336,799	5631	309,838
Harry Gwala	15,747	582	14,884
iLembe	41,934	843	39,831
King Cetshwayo	53,097	1456	51,534
UGu	33,747	988	31,721
UMgungundlovu	80,172	2223	77,561
UMkhanyakude	22,023	763	21,183
UMzinyathi	17,469	861	16,536
UThukela	31,007	968	
Zululand	128,787	687	28,095
Unallocated	4341		

Source: KwaZulu-Natal Department of Health (2022).

KwaDukuza Local Municipality is part of the four municipalities that make up the iLembe District, which has the fourth-highest rate of COVID cases, as per Table 2. The eThekweni has the largest cases in KwaZulu-Natal, accounting for more than 49% of all cases and 35% of all deaths in KwaZulu-Natal as of 11 May 2022. This can be explained based on the larger population and density size because eThekweni is a metropolitan municipality that attracts migrants from other districts and provinces. Further to this, the city is a strategic corridor as it has the largest harbour in Africa and serves many landlocked provinces such as Gauteng and Free State, and landlocked countries such as Eswatini and Lesotho [35]. The OECD also observed that large cities are the epicentres of COVID-19 cases because of national and international links that promote the movement of people and the inevitable spread of the virus [25].

Those who make a living in the informal economy are often from low-income households and live in unsustainable conditions. These conditions are marked along socio-economic lines, with low-income earners living in precarious conditions compared to high-income earners. Figure 1 shows the dwelling type of the informal workers who participated in this study.

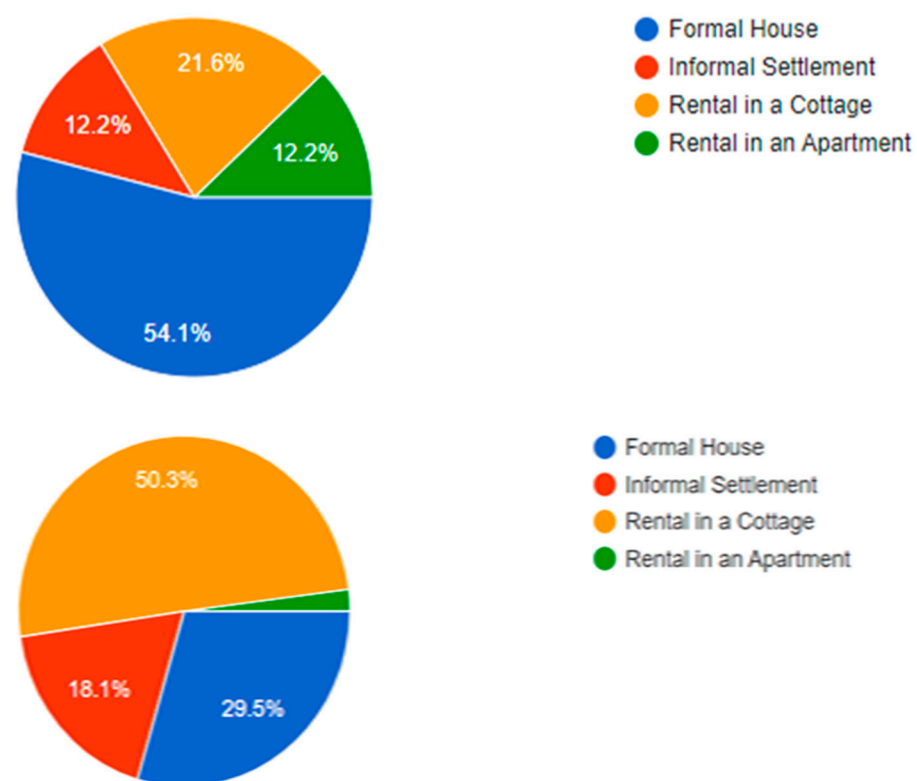


Figure 1. Dwelling Type in KwaDukuza and eThekweni. Source: Author's own.

The KwaDukuza Local Municipality had the highest share (54.1%) of people who live in formal houses than in the eThekweni Metropolitan area (29.5%). With a high rate of rural–urban migration to cities such as eThekweni, those in the informal economy often find themselves in the trenches of inhabitable human settlements. Figure 1 shows that most (50.3%) of the respondents in eThekweni lived in rented cottages and 18.1% lived in informal settlements. In KwaDukuza, 21.6% of informal workers lived in rented cottages, and 12.2% lived in informal settlements and a further 12.2% lived in rented apartments. The high number of those who live in cottages can be linked to the increase in backyard dwellings. At the same time, the precarious nature of the informal economy has a direct causality with people in informal settlements. This is because those who reside in such settlements tend to be lower-income households in the informal economy.

3.2. Socio-Economic Impact and Responses

The socio-economic impact of the pandemic in South Africa has been evident in the loss of employment and rise in poverty rates. As the theme of the study, the impact of the pandemic on the informal economy is explored in various dimensions. Figure 2 lists the effects of the pandemic on the livelihoods of informal workers.

With an option to select a variety of responses, all participants indicated the loss of income as being the main impact of the pandemic. The above figure shows that 96% of respondents in KwaDukuza mainly lost their business income, and this was at 100% for eThekweni. This was brought about by the implemented lockdown regulations that prevented informal workers from conducting business during the strictest lockdown in the country. In eThekweni, 72.7% of informal workers responses indicated that the pandemic affected their livelihoods through the loss of employment, whereas 37.3% of the participants indicated that they temporarily lost their employment during the hardest lockdown in KwaDukuza.

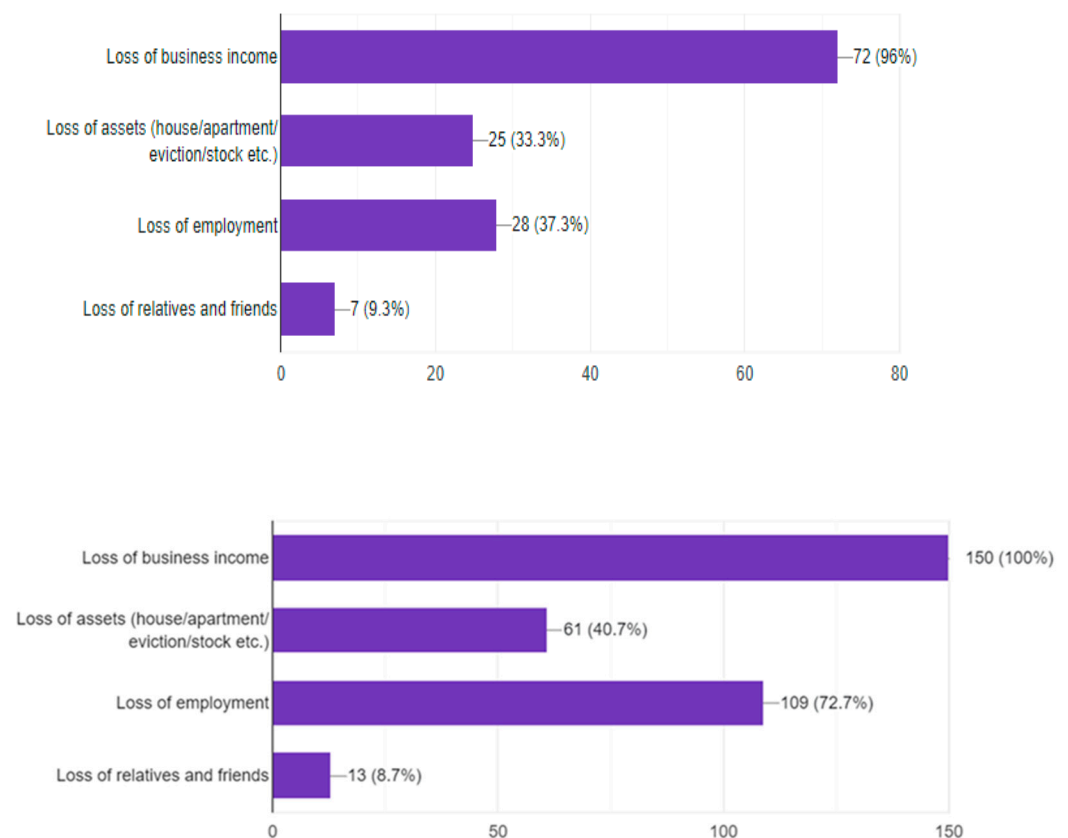


Figure 2. The socio-economic impact of COVID-19 on in KwaDukuza and eThekweni. Source: Author's own.

In eThekweni, 40.7% reportedly lost some of their belongings, such as selling their assets and moving out of their places of residence because of the loss of income and inability to sustain their livelihoods. In KwaDukuza, 33.3% of participants cited the loss of personal assets such as stock and home-based assets as one of the livelihood impacts. With South Africa recording the highest COVID-19 cases in Africa, 9.3% and 8.7% of the participants in KwaDukuza and eThekweni indicated that they had lost relatives or friends due to the pandemic, respectively.

The multidimensional impact of the pandemic on the lives of informal workers reveals a number of socio-economic impediments. On the question of the impact of the pandemic on the socio-economic status of informal workers, various impediments were observed, as evident in Figure 3.

The impact of COVID-19 placed a strain on the ability of informal economy workers to conduct and protect their businesses and exacerbated their economic loss. Given that participants could select various options representing the multidimensional impact of the pandemic, 78% of informal workers in KwaDukuza cited the inability to afford daily living expenses as the leading socio-economic deprivation. In eThekweni, 86.7% of the respondents reported that COVID-19 hindered their ability to afford daily living expenses because of the government restrictions, which affected their customer base. This deprivation was followed by the inability to afford food, where 74% of informal workers in KwaDukuza, and 80% in eThekweni struggled with money to buy food because they depended on regular daily income. These results are primarily based on the strictest lockdown period where minimal activities were permitted. Notably, most of those who took part in this study traded in designated markets and CBD stalls, where more stringent regulations were observed than in remote areas where there is a lack of police visibility to enforce regulations.

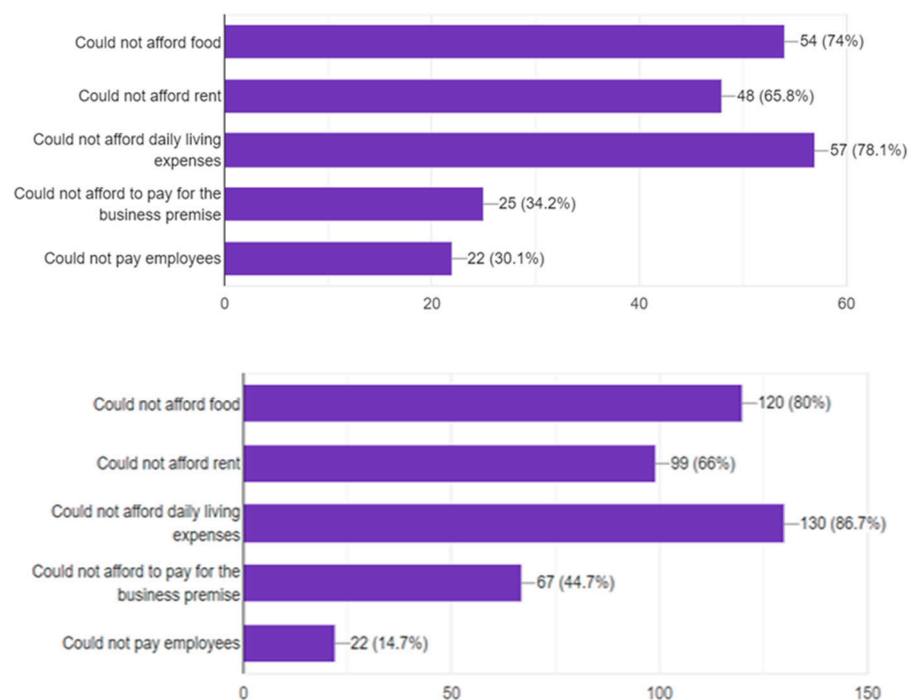


Figure 3. Impact of the Pandemic on the Livelihoods of Informal Workers. Source: Author's own.

The third socio-economic deprivation was the challenge of affording rent for those who lived in rented accommodation. Both municipalities recorded 66% respectively of participants that could not afford their rent for their accommodation. This mainly affected those in eThekweni, where 50.3% of the participants lived in cottages. The inability to pay rent has cascading effects on those renting and the owners of the properties because, while the government issued a notice against evictions, no waivers were provided to backyard dwellers and those in informal settlements. The remaining deprivations were the inability to pay for business premises, with 44.7% reporting this setback in eThekweni, compared to 34.2% in KwaDukuza. This means that they rented trading places from the city, whereas some rented from property owners (landlords). As per Figure 3, it was also established that 30.1% of informal workers in KwaDukuza struggled to pay employees, while this figure stood at 14.7% in eThekweni. The interpretation of data points to a hierarchy of needs for informal workers as the deprivations are mentioned based on the essential daily needs of other supporting livelihood structures. They also show that the pandemic's impact is not limited to livelihoods but also affects the general business practice, workers, and landlords.

South Africa went into its strictest lockdown from the end of March to the end of April 2020. The participants were asked about the hardest lockdown period for their businesses, as evident below in Figure 4 below.

In eThekweni (89.3%) and KwaDukuza (76.3%), most participants reported that the months (March–April) of the strictest level five regulations were the hardest because they could not conduct businesses that are essential for their livelihoods. Only essential services were permitted to work during this period, and the informal economy was not included under essential services. The easing of lockdown restrictions to levels four and three between May and June resulted in informal workers resuming their services, but with limited movement in the country. This essentially meant that lesser people had the opportunity to procure from informal workers, particularly those who were vendors. One participant explained that *“it has been very hard for our business, our sales have plummeted and we do not make half of what we used to make before the pandemic”* (Informal Worker 1).

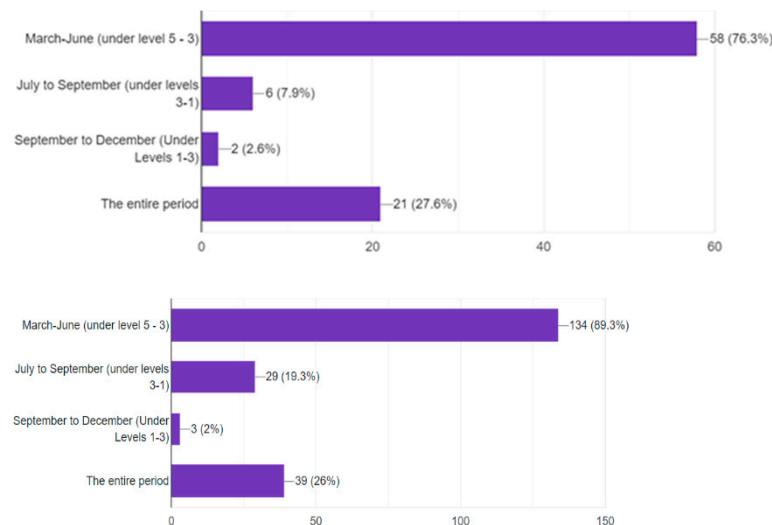


Figure 4. Hardest period for business in KwaDukuza and eThekweni. Source: Author's own computation.

While 19.3% of participants in eThekweni indicated that the period between July and September was hard, only 8% in KwaDukuza shared similar sentiments. A slight difference was noted in the perception of the entire COVID period, with 28% of the participants in KwaDukuza feeling that the entire COVID-19 period has been hard for their businesses. In contrast, only 26% shared similar sentiments in eThekweni. The difficulty perceived by the informal workers is the challenge for the economy to recover and the slight lockdown in December, which happens to be the busiest period for informal workers.

3.3. On Copying Mechanisms

The city of eThekweni and KwaDukuza municipality embarked on fulfilling its developmental local government role by ramping up the provision of basic water and sanitation duties to its residents, with a particular focus on densely populated settlements, the majority being informal settlements [35,36]. This response included the provision of portable water containers, installing more community standpipes, increasing sanitation services and the assistance of the homeless by erecting tents (accommodating over 1704 homeless people) and feeding the poorest of residents [37]. In line with the decentralisation theory's emphasis on the proximity of local authorities and communities, ward councillors played an essential role in identifying and distributing food parcels to indigent residents. Further interventions included "sanitising public spaces such as taxi ranks, trading stalls and markets, providing personal protective equipment (PPE) and distributing hand sanitisers to informal workers" (Head of Informal Sector, 18/062021).

In responding to the plight faced by residents, eThekweni introduced the COVID-19 debt relief programme to support customers and residents in financial difficulty by deferring their payments and making a payment plan over a 24-month period [35]. The debt relief programme has been in place since the first wave in the first quarter of 2020, covered the second wave and has recently been extended to cover the third wave [37]. The granting of tax holidays for citizens on levies and property rates significantly impacted the city's revenue collection capacity as the municipality had lost over ZAR 1.5 billion in revenues by 30 April 2020 [35]. Smaller municipalities such as KwaDukuza Municipality released a once-off ZAR 1500 for informal workers (mostly received by the self-employed). This figure should be understood in relation to the municipality's fiscal capacity compared to metropolitan municipalities with better fiscal capacity. However, the eThekweni Municipality only played an essential role in assisting informal workers in applying for funding.

Low-income households, particularly those in the informal economy are the main concern for policymakers because of the instabilities associated with the informal sector. In our

survey on the impact of the pandemic on the informal economy in the two municipalities, we went further to understand the coping strategies employed by informal workers as per Figure 5.

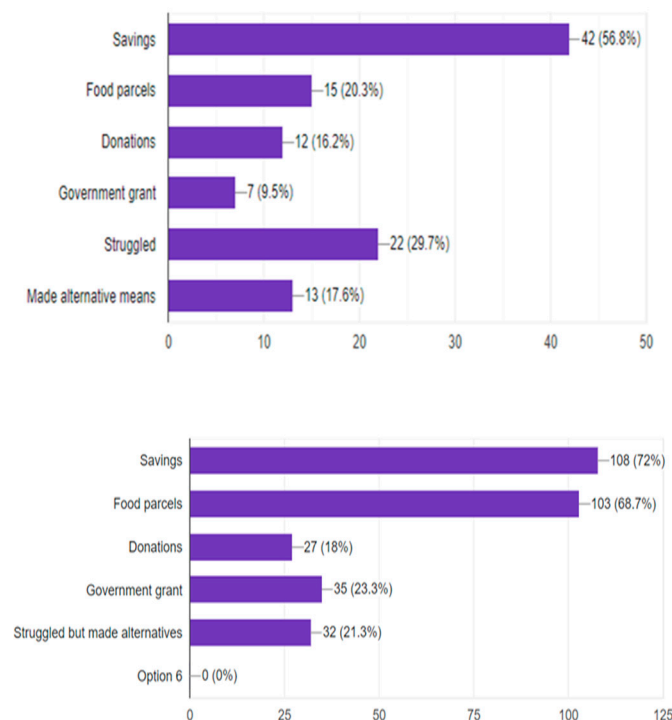


Figure 5. Coping during the COVID-19 Pandemic. Source: Author's own.

Many informal workers depended on savings, food parcels, donations and government grants. In eThekweni, a higher share (72%) of informal workers depended on savings to cushion their livelihoods during the strictest lockdown period, while 56.8% shared similar strategies in KwaDukuza. This was mainly in the absence of opportunities to make income. A further 68.7% of participants in eThekweni depended on food parcels to cope, while only 20.3% of participants in KwaDukuza depended on food parcels. A higher share of participants depended on some sort of government grant in eThekweni (23.3%) than in KwaDukuza (9.5%), and the same pattern was observed for those who depended on donations (18% and 16.2%), respectively.

4. Discussion

While it is significant to focus on the national and provincial levels, the data on COVID-19 cases can also be broken down per district municipality. This study found that eThekweni has the highest COVID cases in KwaZulu-Natal, whereas Harry Gwala has the lowest COVID-19 cases. Based on this observation, it can be deduced that COVID cases follow population, density and the size of the economy in KwaZulu-Natal. This observation demonstrates that the most economically prosperous districts (eThekweni, UMgungundlovu, King Cetshwayo and iLembe) have the highest COVID cases, while lagging regions (Amajuba, UGu, UMkhanyakude, UMzinyathi, UThukela and Zululand) have the least cases. The analysis revealed that 9.3% of participants in KwaDukuza and 8.7% in eThekweni lost relatives and friends due to COVID. In this study, we can also observe that prosperous regions are economically linked to eThekweni, thereby opening a wave of transmission lines. These spatial dimension trends differ from countries such as France, England and Wales, where economically lagging regions reported higher death cases than economically prosperous regions [38]. These differences can be explained by density size and population in rural areas where, despite poor housing infrastructure, there

is higher settlement density, which promotes social distancing and limits the transmission of the virus in the South African context.

Territorial COVID responses in South Africa focused on increasing the government's service delivery capacity in critical areas such as water and sanitation, sanitising dense human settlements and sheltering the poor. These responses were linked to the government's ZAR 20 billion package distributed to municipalities to respond to the increased demand for local government services [39]. In line with the national government's directive, both municipalities responded by ensuring the delivery of water and sanitation infrastructure to limit the spread of COVID through increased hygiene. The prohibitions made it impossible for informal workers to utilise their livelihood strategies and left them without income in relation to the informal economy. This is noted in Figure 2, where all participants in eThekweni (and 96% in KwaDukuza) cited the loss of income as the leading socio-economic impact of COVID-19. Similar findings were observed in a WIEGO-led 12-city study on the impact of the pandemic, where the widespread loss of income, unemployment and the inability to recover pre-COVID income ravaged informal workers [13]. These results show the precariousness of the informal sector during health pandemics that attack the very fibre of livelihood strategies. Essentially, there may be a need to relook at how informal sector policies and wider pandemic responses impact informal workers and design counter-cyclical policies capable of protecting livelihoods.

In addition to the noted loss of employment and income in the two municipalities, informal workers also alluded to the loss of assets. For informal workers who sold perishable goods that could not be sold in their communities, this meant the loss of stock. In focusing on the impact of the pandemic on informal economy livelihoods, the majority of the participants from both municipalities highlighted the struggle to afford food, rent and other daily living expenses as the foremost challenge as per Figure 3. This can be explained based on the evidence from a study that revealed that food prices increased by approximately 30% during the first year (2020) of COVID in South Africa [40]. Another study also revealed that 81% of informal workers in eThekweni experienced hunger during the stringent lockdown period [41]. This predicament mostly presented a dire situation as approximately 66% of respondents from both municipalities (respectively) cited challenges in paying rent, and up to 44.7% in eThekweni struggled to pay for business premises. This suggests that while the two municipalities are distinct, various factors influence different impacts and outcomes. This is depicted through the high rates of impoverishment caused by the pandemic in the two municipalities and the impact caused based on distinct levels of economic wellness.

The lockdown regulations had a severe impact on eThekweni as over 207,000 (17%) lost their employment in quarter two of 2020 [42]. In totality, the entire country lost 2.2 million jobs in the second quarter of 2020. This means that eThekweni lost job losses represent 9.4% of the entire job losses recorded by the country in the same period. Similar trends were observed in many global cities, such as New York, Rome and Toronto, where mass job losses were reported because of the lockdown measures. Durban's Economic Activity Outlook Survey found that most jobs were lost in the tertiary sector, with wholesale and retail in wholesale accounting for 20% of all job losses and another 20% in business services [43]. While these figures are quantifiable for eThekweni, difficulties are observed in the failure to produce similar statistics for KwaDukuza because of the lack of extrapolated data. This can be blamed on the lack of data on the informal economy in small-town and rural municipalities, a trend mainly evident in developing nations. It also shows varying capacities for the different categories of municipalities to invest resources capable of producing economic intelligence reports, as is in the case of the Durban Edge in eThekweni. These revelations contribute to the broader need for literature highlighting the spatial impact and outcomes of pandemics for low-income households.

The eThekweni region was the first city to design and implement a COVID-19 Economic Recovery Plan that included the city supporting 12 foreign investors and retaining over ZAR 10 billion in foreign direct investments [37]. The Durban Edge projections show

that the city's Economic Recovery Plan prevented approximately +2% GDP loss, estimated to be 6.02 billion, and further monetary interventions contributed +1.2% of GDP to eThekweni's economy in 2020 [44]. This demonstrates the importance of ensuring complementary fiscal policies at the national and subnational levels, and the need to ensure complementarity between fiscal and monetary policies as effective counter-cyclical measures. While eThekweni was able to implement a laudable economic recovery plan, the worrying trend is that most South African municipalities (including KwaDukuza) failed to supplement central fiscal responses despite the increased demand for municipal services. This predicament does not represent the failure of municipalities but the institutional and financial incapacity of municipalities to financially support businesses and indigent citizens. This is observable in that KwaDukuza could only offer a once-off ZAR 1500 to informal workers. In eThekweni, the municipality only responded by assisting registered informal traders and other informal businesses applying for external funding, but only a few businesses received funding. Better capacitated municipalities in Europe offered as much as EUR 22 million for small businesses instead of relying on national government support [31].

In studying the impact of COVID-19 in urban centres, Schotte and Zizamania found that the pandemic has deepened socio-economic vulnerability, undermined social networks and caused people to depend on government grants [45]. Our study found that among those who received the ZAR 350 relief in KwaDukuza, 56.6% felt that the grant assisted, whereas only 17.2% in eThekweni shared similar sentiments. Furthermore, 82.8% of participants in eThekweni felt that the grant was insufficient to sustain their livelihoods, whereas only 38.9% of the participants in KwaDukuza shared this belief. Government measures included increasing the child grant by an additional ZAR 300 for six months, increasing the pension and disabled grant by ZAR 250 and establishing a ZAR 350 Social Relief of Distress [39]. These findings paint the plight of workers in the most precarious working conditions who had limited access to daily income. From a practical perspective, this suggests the need to introduce cash transfers to informal workers in the bid to create sustainable resilient structures. Without such interventions, it may be hard to address the country's high poverty and inequality rates.

Based on effective cooperative governance, cities and towns have significant opportunities to strengthen their economic responses by using context-specific impacts to design responses [27]. This approach is important because local authorities and the bureaucracy have resourceful information that may not be immediately available to the national government. For this study, the main conundrum is that while the municipal revenue base was shrinking, demand for municipal services increased, meaning that municipalities had to spend over and above their budget to fulfil their mandate. These challenges mean that the national government needs to adopt approaches to ensuring municipalities have the sufficient capacity to address emergencies that threaten sustainable development. There are broader implications for municipalities across the African continent where limited fiscal packages were adopted and many municipalities did not have appropriate measures in place. The fiscal difference between rural and urban municipalities is also determined by the different revenue base. While it may be practical to disburse more funds to small-town and rural municipalities during pandemics, it is equally important to ensure such municipalities are capacitated to design effective counter-cyclical policies.

5. Conclusions

The COVID-19 pandemic has required innovative counter-cyclical policies to be implemented due to the immediate public health risks that forced social distancing and the lockdown of national economic activities to combat the spread of the deadly virus. Many studies have focused on the macro impact and responses to the pandemic, which does not suffice in explaining the territorial implications of the pandemic. This study contributes to understanding the impact of the pandemic and responses adopted from a micro landscape through the case studies of eThekweni Metropolitan Municipality and KwaDukuza Local Municipality. The wide-scale localised responses adopted by both municipalities

demonstrate political will to address the plight caused by the pandemic to businesses and vulnerable groups. This is evident in the adopted measures such as increasing rapid responses by sanitising public spaces, identifying indigent citizens to receive food parcels and creating safe spaces for the homeless. These localised interventions could not be possible outside of decentralised interventions that target the worst affected areas or sectors of the economy.

This article found that the territorial impact of the pandemic in South Africa, particularly in the case of the two municipalities in KwaZulu-Natal, depends on the population, density size and the economy. This observation is because all municipalities economically linked to eThekweni have slightly higher numbers of COVID-19 cases. The case of eThekweni shows that COVID-19 ravaged urban areas because of their status as economic hubs and the increasing rate of urbanisation in Africa. Similar trends were observed in Indian cities such as Delhi and Mumbai, with density and population playing an essential role in determining COVID-19 outcomes. These observations impel governments to ensure sufficient infrastructure investment and promote good governance in lagging regions to address the large-scale movement of people between urban and rural areas. Improving the fiscal capacity of municipalities to attend to unfunded mandates in times of crisis is critical because contractionary periods increase the demand for municipal services.

The study findings also reveal the socio-economic impact of the pandemic on the livelihoods of informal workers. The main findings show that informal workers lost employment, income, assets, and savings due to the COVID-19 restrictions. In terms of livelihood, informal workers in both municipalities struggled to buy food and pay for living expenses, with informal workers in eThekweni largely affected by being unable to pay for their business premises. While eThekweni made progress in tracking the impact of COVID because of abundant resources as a metropolitan municipality, KwaDukuza struggled because of a lack of resources that contributed to a lack of coherent economic intelligence. This reveals the territorial factors that contribute to uneven responses to the pandemic between small-town and rural municipalities and metropolitan municipalities. From a practical perspective, the government needs to invest in resources to mitigate the increasing disparities between cities and small town municipalities.

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