Rural–urban inequalities amplified by COVID-19: evidence from South Africa

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ABSTRACT
Like most governments around the world, the South African government adopted a uniform, place-blind response to the coronavirus pandemic, including a hard lockdown. New evidence from a large household survey reveals that the socioeconomic effects have widened pre-existing inequalities between cities and rural areas. More could be done to complement national relief programmes with targeted efforts to boost jobs and livelihoods in the most vulnerable areas. In addition, the premature withdrawal of relief measures before the economy has recovered would aggravate the hardship in poorer communities that have come to rely on these resources following the jobs slump.

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RESUMEN
Desigualdades rurales–urbanas agravadas por la COVID-19: el ejemplo de Sudáfrica. Area Development and Policy. Al igual que la mayoría de los Gobiernos en todo el mundo, el Gobierno de Sudáfrica ha adoptado una respuesta uniforme y espacialmente ciega a la pandemia del coronavirus, incluyendo un confinamiento estricto. Los nuevos datos de una extensa encuesta de hogares indican que los efectos
 COVID-19 has had devastating health and socioeconomic effects throughout the world. National governments have generally led the response, because of their unique powers, responsibilities, authority and legitimacy. Some countries seem to have managed the situation better than others, with less severe consequences for public health and economic activity. Yet, these health and economic impacts have been very uneven within national territories, illustrated by particularly high morbidity and mortality in major, globally connected cities such as New York, London, Paris and Madrid (Aalbers et al., 2020; Florida et al., 2020; Rose-Redwood et al., 2020). Countries in the Global South have not had the same fiscal capacity to support their economies and limit the economic damage, thereby causing great concern about the impact on jobs and livelihoods in all areas.

One would expect the socioeconomic impact of the crisis to vary between different kinds of places within countries, depending on the resilience of their local economies and the strength of their institutions. Indeed, media reports suggest that the pandemic has raised public awareness about the underlying inequalities in society, particularly within cities in developing countries (Acuto et al., 2020; United Nations, 2020). For instance, many vulnerable communities living in informal settlements have poor access to clean water and basic sanitation, whilst overcrowding makes it difficult to comply with social distancing rules. Yet, there has been little systematic analysis to date of these uneven territorial impacts.
This paper contributes to the literature with a simple assessment of the uneven impact of COVID-19 across South Africa, an upper-middle-income country with large pre-existing social and spatial inequalities, reflecting its troubled history of colonial and apartheid rule (Todes & Turok, 2018; World Bank, 2018). A key feature of the government’s response to the pandemic has been its uniform, place-blind character. The arrival of the coronavirus posed a threat to the well-being of all citizens and a challenge to the fragile health system, which risked being overwhelmed. The government was widely commended for its prompt response in implementing one of the most stringent national lockdowns in the world, and in due course for providing relief packages to households and firms that were applied like a blanket across the whole country. However, there were massive unintended consequences for the economy. Early estimates suggest that between February and June 2020, roughly 15% of the workforce lost their jobs (amounting to 2.8 million jobs) and as much as one-third of the workforce temporarily lost their earnings (through being furloughed) during the hard lockdown (Spaull et al., 2020a; Statistics South Africa, 2020).

Furthermore, different places face different health risks and economic vulnerabilities. South Africa is one of the most unevenly developed countries in the world, with implications for the ability of different cities, towns and villages to cope with shocks of this nature and to bounce back from social and economic distress. Understanding these differences is essential for state efforts to organize a more targeted response that is effectively tailored to diverse realities on the ground.

Until the present research, little evidence was available about the geography of the disaster in South Africa. Previous studies focused on the attributes of individuals who were more or less vulnerable (race, gender, education, occupation, etc.) and paid little attention to spatial considerations (Shifa et al., 2020; Spaull et al., 2020a). A crucial dimension of the crisis is the distinctive prospects for urban and rural areas. For instance, Shifa et al. (2020) predicted that rural communities in South Africa would be significantly more vulnerable to COVID-19 infection and less prepared to cope with the lockdown than those living in urban areas. It makes sense to further refine this dichotomy in South Africa into differences between people living in large cities (or ‘metros’), those in secondary cities and towns, and households in commercial farming regions or rural areas governed by traditional authorities.

Metropolitan municipalities (metros) made up 40% of the country’s population in 2016 but just 2% of the total land area. Metros have borne the brunt of infections due to their relative size, population density and connectivity to the rest of the world (COVID-19 South Africa Dashboard, 2020). Yet, they also have stronger health infrastructure and medical capacity to test, treat and manage the spread of the virus. Their economies are larger, more diversified and more productive than other places (Baffi et al., 2018; Turok, 2014). Their bigger firms have access to cash reserves, bank credit and other financial assets to fall back on during times of crisis. They may also be better equipped to adopt the new health protocols and to diversify into producing goods and services for new markets (e.g., for personal protective equipment (PPE) and other medical supplies). The speed and coverage of broadband infrastructure in the metros would more easily support employees working from home. Consequently, one would expect cities to be better positioned than towns and rural areas to resist the economic consequences of the pandemic. Yet, this advantage may also be offset by their greater openness to external trade and consequent susceptibility to the closure of national borders, airports and seaports.

The incidence of infections in secondary cities and towns has been more limited than in the metros, although this could easily change through its continuing dispersal (COVID-19 South Africa Dashboard, 2020). Approximately 26% of the country’s population in 2016 was living in such areas. The economic impact of the lockdown for smaller cities and towns is bound to be sensitive to the industry mix (Muro et al., 2020). For instance, tourism
destinations would be far more vulnerable to the crisis than mining towns. Many industries in South Africa are dominated by large corporates, which could make smaller branches susceptible to plant closures (World Bank, 2018). Towns where business communities are well-organized may be able to coordinate their response and stave off bankruptcies. Greater flexibility to work from home could encourage some backwash of professionals out of large cities and into outlying centres by staying with friends or family or in second homes.

Rural areas in South Africa are quite diverse and their economies are generally fragile. People living in commercial farming areas constituted only 4% of the national population in 2016, whereas areas governed by traditional authorities made up 32% of the population. Tribal areas have little formal economic activity and surprisingly low levels of subsistence agriculture (Aliber & Hart, 2009). Most rural households depend on state cash transfers (social grants) or remittances as their main source of livelihood (Makgetla, 2018). There are limited opportunities to replace lost jobs or incomes with other sources. Nevertheless, high levels of grant dependence could mean some places were temporarily cushioned by the special top-up of social grants, which paid out over R40 billion during the first six months of the crisis (Parliament, 2020). Anecdotal evidence suggests that consumer spending and retail sales in some rural settlements held up during the crisis (Business Day, 2020; Daily Maverick, 2020b). Such effects are bound to be short-lived if these additional payments were to be terminated.

Overall, anticipating the detailed spatial impact of COVID-19 is clearly difficult. This is an important lesson that emerges from analysing the geographical consequences of recessions (Harris et al., 2020; Martin & Gardiner, 2019; Overman, 2020). The next section describes a new source of household survey data that we examined to provide preliminary insights into the socioeconomic impact of COVID-19 on cities, towns and rural communities. We were curious to discover whether the pandemic has aggravated pre-existing rural–urban disparities, and what this might mean for government efforts to stimulate an economic recovery.

**DATA AND METHODS**

On 27 March 2020, the President of South Africa, Cyril Ramaphosa, imposed a lockdown on the whole country in a desperate effort to prevent the spread of COVID-19. Five different levels of lockdown severity were devised in order to manage the risk, and the same standards were applied to all places without exception. The country began at ‘alert level 5’, which included a total shutdown of all sectors of the economy (excluding essential services and retail of essential goods), a ban on the sale of alcohol and cigarettes, a ban on all public gatherings, severe restrictions on the movement of persons, and a scaling back of public transport. In some instances, the regulations were clearly unreasonable and potentially socially destructive, such as limitations on informal traders selling food or the imposition of red tape on non-profit organizations distributing food relief parcels (Battersby, 2020). The South African army was even deployed to enforce the lockdown for a period of several months, especially in the townships, which became a source of obvious tension (Daily Maverick, 2020a).

The ‘hard’ lockdown lasted just over a month and on 1 May the lockdown restrictions were lowered slightly to level 4. This permitted some sectors of the economy to return to work, usually at less than full capacity. Restrictions remained on the movement of people, with a curfew imposed between 19.00 and 05.00 hours, although outdoor exercise was now permitted, subject to restrictions. Most sectors of the economy were reopened from 1 June under level 3, although many businesses were still unable to return to full capacity because of continuing rules governing their operating procedures. Inter-provincial travel remained banned along with most public gatherings.

From 17 August lockdown restrictions were further eased to level 2 and then down to level 1 from 21 September. Restrictions on domestic travel and tourism were relaxed and some
public gatherings were permitted under strict conditions. The South African borders were reopened for international business and leisure travel from 1 October, although restrictions were still imposed on travel to and from 22 high-risk countries. Whilst the government has been praised for its swift and evidence-based response to the crisis, there have been ongoing concerns about the severity, fairness and blanket approach to the lockdown (Habib, 2020). A global panel of the policy response from governments to the pandemic covering more than 180 countries suggests that South Africa had one of the longest and most stringent lockdowns in the world (Hale et al., 2020).

The hard lockdown was accompanied by a programme of screening and testing with some 28,000 health workers mobilized across the country doing their best to screen as many people as possible. However, the proactive approach soon proved unsustainable with turnaround times for the test results increasing from less than 24 hours to between five and 14 days over this period (Mendelson & Madhi, 2020). Waiting up to two weeks for the results jeopardized the chances of tracing people’s contacts and isolating those at risk. There were also concerns about the feasibility of self-isolation or self-quarantine for poorer individuals living in informal settlements or in multi-generational homes. Hence, the government retreated from mass screening and testing to apply fairly restrictive testing criteria requiring a person to have symptoms such as a dry cough or fever (Daily Maverick, 2020c; NCID, 2020). A lack of capacity for widespread testing has probably blunted attempts to operationalize a localized response to slowing infections in most hotspots and favoured nationwide restrictions.

Official information about the geographical spread of the COVID-19 virus in South Africa has been scant apart from basic provincial level statistics on new infections, deaths and recoveries which are published daily. These data indicate that Gauteng has been hit hardest by the pandemic, followed by KwaZulu Natal and the Western Cape, which together account for nearly two-thirds of all COVID-19 cases, but 57% of the national population (Department of Health, 2020). The Western Cape is the only province to release more fine-grained spatial data, which show that the city of Cape Town has more than 70% of their cases (Western Cape Government, 2020).

Therefore, the health and economic consequences of the COVID-19 pandemic on South African households has been both severe and far-reaching, but is still poorly understood in terms of the impact on different places. To start to plug this gap, we make use of longitudinal data for a panel of individuals for a period of roughly six months comparing responses for February (pre-COVID), April (hard lockdown) and June (reopening) 2020. The evidence comes from Waves 1 and 2 of a nationally representative household survey, the National Income Dynamics Study: Coronavirus Rapid Mobile Survey (NIDS-CRAM). The survey was designed as a ‘barometer’ to assess the socioeconomic impact of COVID-19 (Spaull et al., 2020b). It was based on a sample of adults who were previously surveyed in Wave 5 of the NIDS in 2017. They were re-interviewed in May–June 2020 (NIDS-CRAM Wave 1) and again in July–August (NIDS-CRAM Wave 2). 1 Thus, the NIDS-CRAM surveys provide an additional two rounds of socioeconomic data, for a subsample of these adults, to assess the impact of the COVID-related crisis and relief measures.

We are interested in household-level impacts across three spatial types: metropolitan municipalities, secondary cities and towns, and rural areas.2 A particular location’s resilience depends on a range of factors including the demography, industry mix, skills of the workforce, sources of income and strength of local institutions. These will vary from place to place, although there are likely to be some key similarities and differences across spatial types which underpin existing rural–urban inequalities. The metros have a larger and more diversified economic base that includes knowledge-intensive forms of production. They have access to superior skills and digital infrastructure which might mean the workforce is better able to cope with a lockdown. Smaller cities tend to have narrower economies with
particular strengths in sectors such as minerals, tourism or public administration. For instance, a tourism town would be relatively more vulnerable to the crisis compared with a public service centre. Rural communities in South Africa are the most precarious with low levels of economic activity and fairly limited pockets of commercial agriculture.

We focus on three crucial dimensions of the COVID-19 health crisis and lockdown for communities: the impact on the labour market, household incomes and the incidence of hunger. These are obviously connected, with causation presumed to run from the labour market to household incomes and onto hunger. The logic is that changes in employment (job losses) are transmitted to households through a loss of earnings, which in turn affects whether people go hungry.

**THE GEOGRAPHY OF THE CRISIS**

**Labour market**

The evidence from the NIDS-CRAM suggests that COVID-19 has amplified labour market inequalities between urban and rural areas. Figure 1 shows fluctuations in total employment (i.e., the labour absorption ratio) during the first six months of the crisis across metros, cities/towns and rural areas. Employment is broken down into individuals in paid employment, along with furloughed workers (i.e., individuals who had a job but received no earnings).

Previous efforts to present national estimates mask vital distinctions between rural and urban areas. First, employment levels were already much lower in rural areas than in cities, as measured in February before the crisis hit. The labour markets of the metros were much stronger with 60% of all adults (aged 18 years and older) holding a job, compared with 43% in rural areas.

Second, the impact of the crisis was severe across both urban and rural areas. All regions initially experienced a severe decline in total jobs between February and April of roughly 15%. This reduction was even larger at approximately 20% if furloughed workers are excluded from the employed. According to estimates from the Quarterly Labour Force Survey (QLFS), the impact of the crisis has eroded about a decade-worth of jobs growth (Statistics South Africa, 2020). The size of the shock appears to have been similar across urban and rural areas. This

![Figure 1](image-url)

**Figure 1.** Percentage employed or furloughed.

Note: The sample is adults aged 18 years and older. Furloughed workers had a job but reported zero earnings. Data are weighted. Source: NIDS-CRAM W1 and W2.
Figure 2. Rate of unemployment.
Note: Expanded rate of unemployment (i.e., includes the non-searching unemployed). The sample is adults aged 18 years and older. Error bars reflect 90% confidence intervals. Data are weighted. Source: NIDS W5, NIDS-CRAM W1 and W2.

probably reflects the uniform character of the lockdown across the whole country when all activities except essential services were prevented from operating.

Third, whilst the initial shock may have been similar for rural and urban areas, only the metros and cities/towns showed any signs of recovery between April and June. To be sure, job gains for urban areas were modest and appeared to be mostly as a result of furloughed workers being brought back onto the payroll or returning to self-employment. There were still large net job losses for cities comparing February and June. However, rural areas lost jobs in each period with no signs of recovery once the lockdown was eased.

Figure 2 mirrors these trends by showing changes in the rate of unemployment by location. The onset of COVID-19 caused a dramatic surge in unemployment everywhere. In 2017, the unemployment rate in cities/towns and metros was 18% compared with 28% in rural areas. The rate of unemployment in the metros increased to 37% in April 2020 and then fell slightly to 35% in June. In contrast, unemployment in the rural areas shot up to 48% in April and continued to climb even higher to 52% in June. Hence, the gap in the rate of unemployment between the metros and rural areas widened from 10 to 18 percentage points when comparing pre- and post-lockdown. The rate of unemployment for cities/towns showed a similar trajectory and ended the period in between metros and rural areas.

Overall, the findings suggest that the pandemic has amplified labour market inequalities between urban and rural areas, although the size and severity of the shock was similar to start with across places. Further research is needed to explain more precisely what lies behind the apparent resilience of urban areas.

Social assistance
An important component of the government’s relief package has been the top-up of social grants (available for childcare givers, older persons, people with disabilities and war veterans). In addition, a special COVID-19 Social Relief of Distress (SRD) grant worth R350 per month was introduced in June 2020 for unemployed people ineligible for other grants, and is reported to have benefited between 4 and 5 million people. Grant top-ups and the SRD grant were only planned as temporary relief measures until mid-October 2020. The implication for urban and rural areas is that cash payments would be skewed towards places with more people in need.
Looking at the breakdown of sources of household income in June 2020, Figure 3 shows that almost half of individuals located in rural areas reported that social grants were their household’s only source of income compared with one in three in towns/cities and one in four in metros. At the same time, rural respondents were far less likely to be reliant on employment in the labour market, with fewer than one in five rural residents (21%) living in households that depended on work-related earnings only, compared with fewer than one in three residents in cities/towns (33%) and close to half of metro residents (45%). Roughly 10% of respondents in either rural or urban areas had access to both grants and labour market earnings.

Figure 4 shows that one in three adults in rural areas (33%) reported that someone in their household had received a COVID-19 grant compared with less than one in four in cities/towns (24%) and just over one in five in the metros (21%). These proportions are lower than for other grants, and the differences between cities and rural areas are narrower, suggesting that the COVID-19 grant is benefiting groups who have not qualified for government support before – as intended. The higher proportion of rural beneficiaries is consistent with the higher rate of unemployment in the countryside.

In summary, social welfare was the main source of livelihood protection in rural areas, where the proportion of residents receiving grants was nearly double the proportion in the metros. Therefore, government payments have clearly helped to compensate rural areas for

Figure 3. Sources of household income, June 2020.
Note: Data are weighted. Source: NIDS-CRAM W2.

Figure 4. Percentage adults reporting their household received a COVID-19 SRD grant.
Note: Error bars reflect 90% confidence intervals. Data are weighted. Source: NIDS-CRAM W2.
their fragile local economies and the shortfall in employment. Without this form of income support, the economic gap between cities and rural areas would have been much larger. However, increasing reliance on grants is also a source of vulnerability for these communities, especially if and when the temporary component of cash transfers is withdrawn.

Hunger

A devastating consequence of the COVID-19 crisis is rising levels of hunger and food insecurity across the country. Once again, important differences have emerged between metros, cities/towns and rural areas that have so far gone unreported.

Figure 5 shows differences in the percentage of respondents whose household had run out of money to buy food in April between metros (44%), cities/towns (48%) and rural areas (52%). The figures are very high everywhere, but rural households were clearly finding it more difficult than their counterparts in the metros. Figure 5 also shows that the problem was much worse in April 2020 than it was in 2016 when the last Community Survey was conducted. Roughly twice as many respondents were experiencing this hardship as in 2016.

The data also show that the number of respondents who had run out of money to buy food had fallen by about one-fifth in all areas in June compared with April. This is a noticeable improvement and is likely to reflect the extra government support through social grants which took some time to roll out. Nevertheless, more than one-third of respondents were still struggling to buy food at some point during June 2020. This is significantly higher than in 2016, indicating a persistent problem.

The NIDS-CRAM survey also asked respondents whether anyone in the household had gone hungry in the last seven days (Figure 6). There was a large difference in levels of hunger overall between the big cities and rural areas, indicating the much higher incidence of food poverty in the countryside. Nearly one in three rural respondents (29%) said someone had gone hungry in May–June compared with one in six metro respondents (17%).

In July–August, the proportion of respondents saying that someone in their household had gone hungry in the last seven days had fallen to 13% in the metros, 16% in the cities/towns

![Figure 5. Percentage of those who ran out of money to buy food.](image)

Note: *The CS2016 asks individuals if their household had run out of money to buy food in past 12 months. Error bars reflect 90% confidence intervals. Data are weighted. Sources: NIDS-CRAM W1 and W2, and Community Survey 2016.
and 20% in the rural areas. This was a significant fall in hunger of close to 10 percentage points between May–June and July–August for rural areas, which is larger than in cities. This is consistent with the earlier findings that a higher proportion of rural households benefited from social grants, so rural areas benefited in a tangible way from a top-up to these grants.

**CONCLUSIONS**

This brief exploration of the evolving geography of the COVID–19 crisis in South Africa demonstrates that different parts of the country face challenges of a different magnitude. The evidence suggests that rural areas have borne a higher burden from the economic slump, despite some shielding through the extension of government cash transfers. Looking ahead, there are several important implications for the government’s response to the crisis.

First, a premature withdrawal of current government relief schemes could aggravate the hardship and suffering in poor communities that have come to rely on these resources following the jobs slump. Many rural communities, in particular, have limited opportunities to replace lost jobs or incomes with alternative sources because their local economies are narrow and precarious.

Second, treating unequal places in the same manner will not narrow the gap between them. Uniform national policies and actions have proved to be insensitive to these variations and can have unintended consequences in amplifying inequalities. National programmes need complementary efforts to boost jobs and livelihoods in lagging areas. This means targeting places as well as people in tackling poverty and unemployment.

Third, wide disparities between urban and rural areas may continue to spur migration out of the countryside and into cities in search of a better life. The process cannot be suppressed. Rather, local authorities should work with national and provincial governments at recognizing people’s constitutional right to freedom of movement and support the provision of basic services and shelter in the cities. Preparing land for human settlement in anticipation of
urbanization is more cost-effective than trying to retrofit infrastructure into dense informal settlements and fend off unauthorized land occupations from disaffected groups.

Lastly, more effort is required to improve the quality of information and intelligence on local economic and health conditions (Turok, 2016). The focus of the COVID-19 analysis and response has been at the national and provincial levels, yet the transmission mechanisms are essentially local, and the public health, economic and social impacts have also been highly localized. Stronger evidence and research would improve the understanding of these dynamics and help to empower local institutions and partnerships to develop constructive responses. This would go some way to help kick-start the recovery and realize the potential of all places.

NOTES

1. The NIDS was a national household survey conducted between 2008 and 2017 with a nationally representative sample of over 28,000 individuals and 7300 households. The NIDS-CRAM was a subsample of the NIDS 2017 population and collected data from 7074 adults in Wave 1 and 5676 adults in Wave 2. It was weighted and adjusted for non-response to represent the national population of the NIDS sample in 2017. Hence, the NIDS-CRAM reflects ‘outcomes for a broadly representative sample of those 15 years and older in 2017 who were followed up 3 years later’ (Kerr et al., 2020, p. 2). The NIDS-CRAM was conducted as a short 20-minute telephone survey, and each participant received a R20 airtime voucher per wave for participating.

2. The NIDS-CRAM was a telephone survey and an individual’s self-reported address was used to derive their geographical type according to StatsSA’s classifications of sub-places. Hence, the precise coordinates of the location of the household could not be independently verified. This is unlikely to impact the results because we make use of only broad classifications between urban and rural areas. Another concern is the extent that the NIDS-CRAM might under- or over-sample segments of the population. Both the NIDS and NIDS-CRAM apply weights which are calibrated to improve representivity and explicitly include spatial controls. We also provide error bars owing to the sample size.

3. The Community Survey 2016 asked individuals whether their household had run out of money to buy food in the past 12 months, whereas the NIDS-CRAM only asked about the past month. The much wider timeframes in the Community Survey means that the level of food poverty would be even lower in 2016 if individuals had been asked about the past month.

DISCLOSURE STATEMENT

No potential conflict of interest was reported by the authors.

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