

The economic impact of restrictive measures by selected countries in Southern Africa to the COVID-19 pandemic



Authors:

Mokome S. Ditsela¹ 
Babette Rabie¹ 

Affiliations:

¹School of Public Leadership,
Faculty of Economic and
Management Sciences,
Stellenbosch University,
Stellenbosch, South Africa

Corresponding author:

Babette Rabie,
brabie@sun.ac.za

Dates:

Received: 26 May 2025

Accepted: 03 Oct. 2025

Published: 18 Nov. 2025

How to cite this article:

Ditsela, M.S. & Rabie, B.,
2025, 'The economic impact
of restrictive measures by
selected countries in Southern
Africa to the COVID-19
pandemic', *Jàmbá:
Journal of Disaster Risk
Studies* 17(1), a1937.
[https://doi.org/10.4102/
jamba.v17i1.1937](https://doi.org/10.4102/jamba.v17i1.1937)

Copyright:

© 2025. The Authors.

Licensee: AOSIS.

This work is licensed
under the Creative Commons
Attribution 4.0 International
(CC BY 4.0) license ([https://
creativecommons.org/
licenses/by/4.0/](https://creativecommons.org/licenses/by/4.0/)).

Read online:



Scan this QR
code with your
smart phone or
mobile device
to read online.

The coronavirus disease 2019 (COVID-19) pandemic triggered severe health and economic disruptions worldwide, with developing regions experiencing deeper setbacks because of structural vulnerabilities. In Southern Africa, limited research has examined how restrictive measures influenced economic outcomes, despite the region's dependence on trade and tourism. This study evaluates the economic impact of restrictive measures implemented by Botswana, South Africa, Zambia and Zimbabwe to manage the COVID-19 pandemic. Using a comparative case study design and secondary data analysis, the research highlights how the pandemic escalated from a health crisis to an economic crisis, affecting gross domestic product growth, unemployment, poverty and inflation. The findings indicate that while lockdowns effectively curbed virus transmission, they exacerbated pre-existing economic vulnerabilities, especially in countries heavily reliant on trade and tourism. The findings further show that the lockdown escalated economic vulnerabilities – worsening unemployment, poverty and inflation – underscoring the need for coordinated regional recovery strategies. It exposed possible gaps in the institutional capacity, mandates and resource allocation that left countries ill-prepared to mitigate the economic and social impacts of the pandemic.

Contribution: The study underscores the need for economic diversification, enhanced disaster risk governance and social safety nets to mitigate future economic disruptions. Policy recommendations include strengthening institutional capacity, improving infrastructure resilience and fostering regional economic cooperation for effective crisis response.

Keywords: COVID-19; economic impact; Southern Africa; lockdown; disaster risk governance.

Introduction

The coronavirus disease 2019 (COVID-19) pandemic resulted in a global health crisis that disrupted every aspect of our lives, including health, the economy and social activities (Nyaruwata & Mbasera 2021:1). The rapid spread of the virus and its ability to cause severe respiratory symptoms and diseases led to the urgent need for effective containment measures and treatment strategies. In response to the spread of the virus, many governments in Southern Africa declared national lockdowns to limit free travel, limit the size of public gatherings, and enforce preventive isolation (Banda-Chitsamatanga & Malinga 2021:3). These lockdowns had a severe impact on business continuity and the delivery of public services such as schooling. Low-income countries and vulnerable populations were particularly hard hit, as inadequate healthcare responses, limited economic support mechanisms, and increased poverty resulting from lockdown measures delayed economic recovery after the pandemic (Hill & Narayan 2020:20).

The COVID-19 pandemic exposed critical weaknesses in disaster risk governance across Southern Africa. Although Botswana, South Africa, Zambia and Zimbabwe each have legislative and policy frameworks in place, these arrangements proved insufficient to prevent severe economic and social impacts. Weak institutional capacity, unclear mandates, limited resources and inadequate coordination magnified the consequences of the pandemic, particularly for vulnerable populations dependent on informal economies, and left the region highly vulnerable to future pandemics and systemic disasters. This article analyses the governance frameworks of four Southern African countries and how these were activated during the COVID-19 pandemic. By tracking the immediate economic impact and subsequent recovery of these countries, the article offers recommendations for strengthened disaster governance arrangements.

Research methods and design

This study adopted a desktop approach review of the available data reflecting changes in the gross domestic product (GDP), unemployment, poverty and inflation for four selected countries in Southern Africa (Botswana, South Africa, Zambia and Zimbabwe) to determine the economic impact of the COVID-19 lockdown measures. While these four countries share geographic proximity and regional trade and migration agreements, differences in their baseline economic system, infrastructure and governance style offer an interesting comparison of the effects of lockdown measures.

The study focused on information published from 2019 to 2022 to determine the immediate effect of the lockdown measures. Literature and statistics were obtained through two targeted search strategies:

1. Google Scholar and the academic journal catalogue of the university where the study was conducted were searched using the following key terms: 'COVID-19 economic impact', 'lockdown', 'Southern African economy', 'macro- and micro-level impacts', 'policy initiatives', 'socio-economic impact of COVID-19', 'poverty', 'unemployment', 'lack of income', 'closures' and 'restrictions'.
2. The disaster management risk frameworks of the four selected countries and the various government statements and ordinances issued in response to the pandemic were reviewed.

Socio-economic data were extracted from the World Health Organization, the World Bank, the International Monetary Fund and the African Development Bank, as well as the health ministry reports, official reports and national statistics databases of the four countries. Where different data sources offered duplicate data or showed discrepancies, data from the most recent and comprehensive dataset were used.

This study focused on the first 18 months after the introduction of lockdown measures and is limited to only secondary data. This may present inconsistencies and gaps, potentially affecting the accuracy and completeness of the findings and conclusions. The evolving nature of the pandemic and the emergence of new variants may have resulted in further government responses and economic impacts that were not captured in this study. Moreover, the comparative analysis may not fully consider the unique socio-political and economic contexts of each country, which could influence the effectiveness of lockdown measures and policy responses.

Disaster risk governance

Governments play a critical role in protecting citizens and promoting development through economic and social progress (Welby 2019:23). A key responsibility of the government is to ensure a stable and predictable macroeconomic environment (Abaidoo & Agyapong 2022:213). This includes maintaining low and stable inflation, ensuring a sound currency, upholding

property rights, enforcing contracts, protecting consumers from unfair practices, responsibly managing public finances, and stimulating human capital development through education and skills training programmes (Cozzens & Sutz 2014:7–13). Stability gives businesses and citizens the confidence to invest and plan for the long term and protects them from the harmful effects of inflation and currency volatility. In an increasingly volatile context, the role of government becomes increasingly important to mitigate emerging risks and address social vulnerabilities (Shi 2012:139). Equally important is a comprehensive national disaster risk governance strategy that provides a unifying vision, clear institutional role players, and mechanisms for coordination across sectors and levels of government. Such a strategy anchors disaster risk reduction (DRR) within broader development and governance systems, ensuring that risk considerations are systematically integrated rather than treated as ad hoc crisis responses.

Disasters, such as the COVID-19 pandemic, impact the government's ability to achieve development targets as disasters divert resources (Nandi 2022:325). Disasters disrupt the delivery of essential services and infrastructure and negatively impact institutional capacity and livelihoods, thereby exacerbating inequalities and vulnerability. Vulnerable sectors and populations are those deemed to be most susceptible to harm as a result of a disaster or rapid change, as they have limited capacity to adapt (Dube 2008:26–27). Disasters heighten vulnerability and can lead to loss of life, property, livelihoods or infrastructure and can further lead to population displacement, social system breakdown, trauma, stress and anxiety. Disasters create a downward spiral whereby one disaster may weaken the ability to deal with future disasters (Dube 2008:34). This highlights the importance of a proactive approach to disaster risk governance that clearly defines responsibilities across government departments to enable an efficient response to disasters when they arise.

Risk mitigation includes a range of actions to reduce or avoid the impact of risks and disasters (Edirisooriya et al. 2018:1034). Governments may adopt disaster management plans, risk reduction strategies, regulations, early warning systems, and support packages that address weaknesses and vulnerability, and increase resilience and the ability to recover (Chipenda & Tom 2021:6–7; Dube 2008:77). By bringing together diverse perspectives and expertise, the government can ensure comprehensive and well-coordinated disaster risk mitigation strategies (Van Niekerk & Wentink 2017:2–3). Regular risk assessments help to identify vulnerable populations, areas, and infrastructures and assist in the formulation of targeted interventions and resource allocation to reduce vulnerabilities (Pieri 2019:74). Strong disaster risk governance requires not only plans and early warning systems but also a legal framework that mandates preparedness, allocates dedicated resources, and ensures accountability and transparency in implementation. These components reflect the priorities outlined in the Sendai Framework for DRR, which emphasises

understanding disaster risk, strengthening governance to manage risk, investing in resilience and enhancing preparedness for effective response.

Capacity-building initiatives strengthen the skills and knowledge of communities, emergency responders, and officials in DRR and response (Elston et al. 2017:61). Including stakeholders such as communities, civil society and the private sector as partners in the disaster risk governance processes can help to build legitimacy of these strategies and enable more locally grounded risk reduction strategies. Similarly, public awareness education, support to research and innovation, and facilitation of international cooperation play an important role to increase resilience (Shah et al. 2023:1–4).

When a disaster occurs, the government can implement interventions and measures to stabilise and reduce the impact and duration of the disaster. These may include additional public services such as healthcare, transportation or accommodation, or financial assistance such as grants, tax incentives or relief measures to support affected sectors, businesses or individuals (Alajlan 2024:323–329). Effective responses to disasters require clear decision-making processes, stakeholder engagement, rapid communication corridors, coordination of efforts by multiple actors and accountability mechanisms (Elbanna et al. 2019:113; Murray 2017:43). Given the unique nature of each disaster, generic disaster preparedness plans must provide for quick adaptation to the specific context on the ground (Kim & Ashihara 2020:3). However, a prior review of the completeness of pandemic plans of 35 countries on the African continent found only a 36% completion rate (Evanson et al. 2018:7). Clear decision-making processes and accountability mechanisms ensure that relief measures are delivered fairly and transparently, strengthening public trust. Without accountability, resources may be misallocated, undermining resilience and widening inequalities. Effective governance requires crisis management coordination at the strategic level and effective implementation at the local level (Uddin, Haque & Khan 2021:96–97).

Disaster risk mitigation efforts are complicated by the level of ambiguity, complexity and sophistication of the disaster (Murray 2017:42–43). Effective disaster risk governance can be strengthened by a national strategy that offers institutional clarity, legal authority, dedicated resources, inclusive participation and a clear accountability framework. These elements, consistent with the Sendai Framework, enable governments to move beyond reactive disaster management towards proactive and systemic risk reduction. The novel nature of the COVID-19 pandemic, differences in outbreaks and mortality levels between contexts, variations of the virus, and varying baseline social, health and economic conditions in countries complicated the disaster management response (Verikios 2020:6). In addition, a lack of coordination and collaboration among the different sectors and stakeholders intensified the short- and long-term impact of the pandemic. Effective disaster risk mitigation to deal with similar events

in the future requires governments to strengthen their disaster risk mitigation measures while building baseline capacity by identifying and strengthening vulnerable sectors and communities (Verikios 2020:6).

National disaster risk management frameworks

Governments adopt policies and legislation to guide disaster risk mitigation efforts. Country frameworks complement implementation of the regional Southern African Development Community Disaster Risk Management Strategy and Action Plan (SADC, 2023). This section compares the disaster risk management frameworks of South Africa, Botswana, Zimbabwe and Zambia to outline the respective approaches and available capacity to respond to disasters.

Botswana has an *Emergency Powers Act* (1984) that may be evoked to declare states of emergency and a Disaster Risk Management Policy (01 October 2009), in line with the Southern African Development Community Regional DRR Strategy. In South Africa, the *Disaster Management Act* (2002) is the primary legislation for disaster management and established the National Disaster Management Centre and Provincial Disaster Management Centres that coordinate disaster management activities. Zambia has a *Disaster Management Act* (13 April 2010), and the National Disaster Management Policy (adopted in 2015) provides the framework for risk reduction, preparedness, response and recovery. Table 1 offers a synopsis

TABLE 1: Disaster management frameworks in South Africa, Botswana, Zimbabwe and Zambia.

Country	Risk management mandate	Main aim	Available coordinator capacity
Botswana	<i>Emergency Powers Act, No. 20 of 1984</i> and Disaster Risk Management Policy, 2009	To integrate disaster preparedness and response with development activities	The disaster risk management framework is a coordinated strategy involving national, district and community efforts. The <i>Emergency Powers Act</i> of Botswana empowers the President to proclaim a state of emergency subject to a temporal limitation and to promulgate temporary legislation during periods of crisis, with oversight provided by the National Assembly.
South Africa	<i>Disaster Management Act, No. 57 of 2002</i>	To develop and implement disaster management plans and coordinate emergency responses	The act provides for the establishment of national and provincial disaster management centres.
Zambia	<i>Disaster Management Act, No. 2 of 2010</i> and National Disaster Management Policy, 2015	To establish a comprehensive disaster management framework for preparedness, prevention, mitigation, response and recovery	The act provides for the establishment and maintenance of disaster management organisations and emphasises a decentralised approach, integrating national and community efforts to enhance resilience and reduce disaster vulnerability.
Zimbabwe	<i>Civil Protection Act, No. 10 of 1982</i>	To protect people and property from disasters	The act coordinates disaster management activities across all levels, integrating disaster preparedness and response with ongoing development activities.

of the main disaster management legislation in these countries. Zimbabwe adopted a *Civil Protection Act* in 1982, with Chapter 10 providing a legal basis for reacting to disasters but not necessarily pre-empting risks.

Effective disaster management requires a robust legal framework, a strong institutional capacity and effective coordination among stakeholders. While the four selected countries have adopted legislation to facilitate disaster mitigation, the focus seems to be more on reactive measures, with limited institutional capacity or resources to respond to multiple or reoccurring risks.

Effective DRR requires clear roles, responsibilities and accountability. While Botswana, South Africa, Zambia and Zimbabwe have established legal foundations for disaster management, their frameworks remain variably equipped to respond to the magnitude and scope of systemic crises such as the COVID-19 pandemic.

Clarity of institutional roles and responsibilities remains uneven. For example, South Africa's Disaster Management Act provides for national and provincial centres, but enforcement mechanisms and accountability lines remain weak (Taljaard, Van Niekerk & Weerts 2019:9–10). Botswana's reliance on emergency powers concentrates authority at the executive level, which can bypass inclusive, multilevel governance. Zimbabwe's *Civil Protection Act* establishes broad authority but lacks clear allocation of responsibilities across ministries and local levels, leading to fragmented responses. Zambia's decentralised approach is promising, but resource limitations weaken implementation at community level. Strengthening all four frameworks requires more precise mapping of responsibilities across government tiers and robust accountability mechanisms to ensure implementation.

Across the four cases, a recurring gap is the absence of dedicated and sustainable resources for disaster risk governance. During the COVID-19 pandemic, this was evident in Zimbabwe and Zambia, where fiscal constraints severely limited relief and recovery efforts (Braimoh et al. 2018:53; Runga 2023:88). Botswana's financial support mechanisms were modest relative to the scale of disruption (Abrahamsson & Becker 2010:17), while South Africa's broader fiscal space allowed a more significant response but also highlighted the importance of enforcement and coordination. Embedding resource allocation mandates within legislation, rather than ad hoc mobilisations, would make frameworks more resilient to shocks of pandemic scale.

The comparative review suggests that existing frameworks are often reactive and insufficiently aligned with the systemic, multisectoral approach required by the Sendai Framework for DRR. Sendai emphasises governance structures that ensure shared responsibility, transparency and stakeholder inclusion. In all four countries, community participation and inclusive decision-making remain underdeveloped, weakening legitimacy and resilience.

Strengthening these frameworks requires moving beyond reactive, event-driven responses to proactive disaster risk governance rooted in clear institutional mandates, accountability, sustainable resource allocation and inclusive participation. Aligning national frameworks with the Sendai principles of shared responsibility and resilience-building is critical to ensuring that future disasters do not destabilise development gains but instead become opportunities for strengthening adaptive governance.

Ethical considerations

Ethical approval for this study was granted by the Research Ethics Committee: Social, Behavioural and Education Research (Project number: School of Public Leadership Public Administration and Development [SPLPAD]-2022-26322) of Stellenbosch University. The Research Ethics Committee: Social, Behavioural and Education Research of Stellenbosch University issued an ethics waiver for the study because the project does not involve the participation of human participants or the use of personal, identifiable information.

Results

This section compares the COVID-19 response strategies adopted by Botswana, South Africa, Zambia and Zimbabwe and the economic impact on GDP growth, unemployment rates, poverty rates and inflation rates of these strategies. Figure 1, Figure 2, Figure 3 and Figure 4 provide visual depictions of the data presented next.

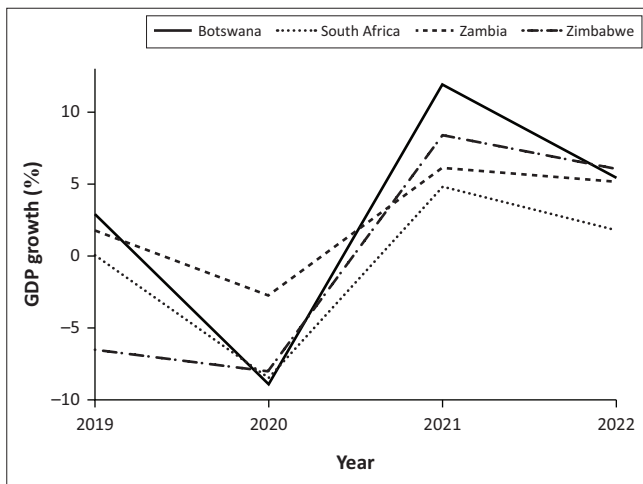
Botswana

Botswana implemented lockdowns after its first case on 30 March 2020, declaring a state of emergency in April and a 28-day lockdown from 2 April (Gronbach & Seekings 2021:459; Stone et al. 2021:265). Borders were closed, movements restricted by permits, and gatherings prohibited (Gronbach & Seekings 2021:459). Measures tightened in mid-May and extended for 3 months (Seloilwe et al. 2022:164–165). Restrictions curbed infections but disrupted the diamond industry, GDP and employment:

- **GDP:** Reliance on diamonds and tourism made Botswana vulnerable. GDP fell from 3% in 2019 to a negative growth of between 8.5% and 8.9% in 2020 (Bank of Botswana 2020; Statistics Botswana 2021). This decline signified one of the most substantial economic downturns in recent Botswanan history. Reduced exports, tourism and customs revenues revealed structural economic weaknesses (Mogapi & Badirwang 2021:1–4).
- **Unemployment:** Rates rose from 17.6% in 2019 to 24% in 2020 (Statistics Botswana 2021), a significant increase of 6.4% that defies more recent economic trends for the country. Informal workers, youth, women and rural poor were most affected (Mashek 2021:45). Tourism suffered job losses as a result of border closures and travel restrictions, while the mining and diamond sector was severely hit because of global supply chain disruptions (Phiri et al. 2022:14).

- **Poverty:** Job losses increased poverty, with overall poverty at 14% (\$2.15 line) and 62% (\$6.95 line) during lockdown (World Bank 2023). Poverty rose to 16% (\$2.15 line) in 2020. The inability to work and to access essential services worsened the economic challenges faced by low-income households who struggled to meet their basic needs (Stone et al. 2021:271).
- **Inflation:** Average inflation declined from 2.8% in 2019 to 1.9% in 2020 (Statistics Botswana 2020). Low demand, falling oil prices and subdued activity kept inflation below target, although electricity tariffs, public transport costs and food prices increased from December 2019 to December 2020 (Matsheka 2021:6; Pelaelo 2020). Despite the lower inflation rate, commodities required for survival by poorest households increased because of the disruption of global supply chains and domestic production, leading to commodity shortages and subsequent price increases (Kootsholetse 2022:4).

Government relief included food packages to 430 000 households and P150m for food, transport and social workers (Gronbach & Seekings 2021:459–460). P800m (0.45% of GDP)



GDP, gross domestic product.

FIGURE 1: Change in gross domestic product 2019–2022 per country.

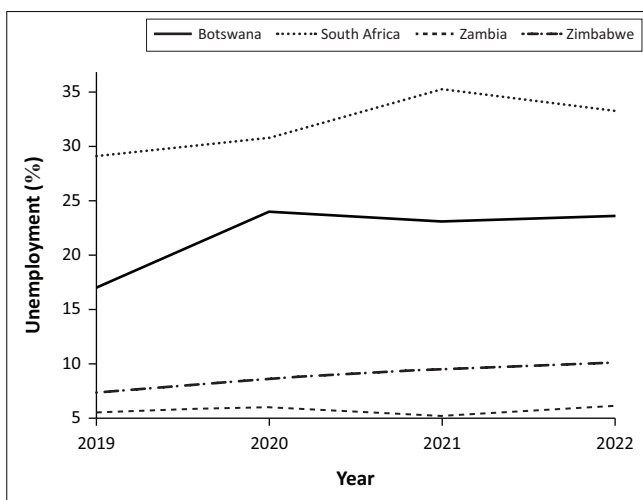


FIGURE 2: Change in unemployment rate 2019–2022 per country.

in wage subsidies supported 200 000 workers, administered through the Botswana Unified Revenue Service (Gronbach & Seekings 2021:460). The Economic Recovery and Transformation Plan (P14.5bn) targeted long-term recovery (Ekenberg et al. 2022:49).

South Africa

South Africa imposed some of the strictest lockdown measures in the region, severely limiting movement and economic activity (Masiya et al. 2021:6–7). A five-tier lockdown system was adopted to respond to COVID-19 prevalence over time (Olivier, Botha & Craig 2020). While there were only 402 confirmed cases by 23 March 2020 (Department of Planning, Monitoring and Evaluation, Government Technical Advisory Centre & National Research Foundation [DPME, GTAC & NRF] 2021:3), lockdown level 5, the most severe, commenced on 27 March 2020 and placed severe restrictions on movement, business activities and international travel. The aim was to curb the spread of the pandemic to allow the health sector time to prepare for the pandemic (DPME et al. 2021:29). The lockdown level was adjusted to level 4 on 01 May 2020, level 3 on 01 June, level 2 on 18 August and level 1 on 21 September, with a brief return to level 3

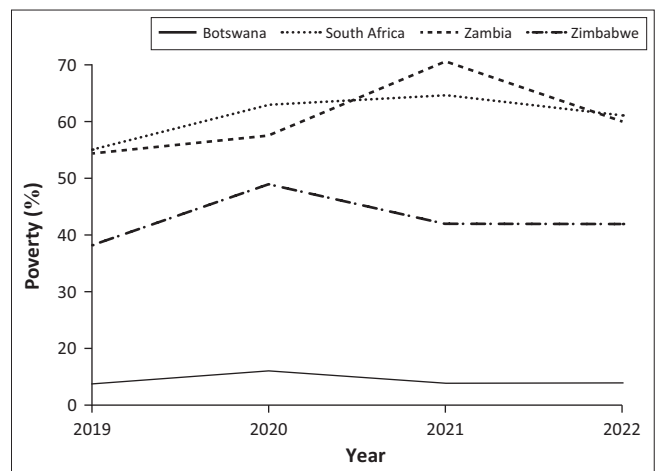


FIGURE 3: Change in poverty rate 2019–2022 per country.

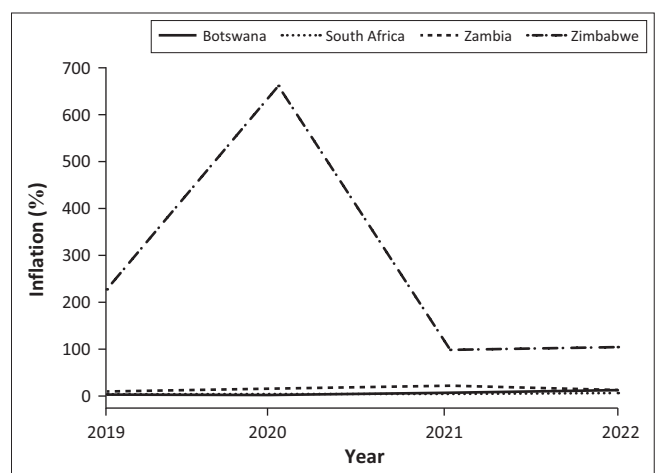


FIGURE 4: Change in inflation 2019–2022 per country.

during the 'second wave' that occurred in December 2020 (DPME et al. 2021:33). Early lockdown slowed infection trends, but the abrupt and protracted measures caused a sharp GDP decline and significant increases in unemployment, poverty and inflation:

- **GDP:** Lockdown measures caused a GDP fall from 0.2% in 2019 to -8.2% in 2020 (Statista 2024), or 0.3% to -6.2% (World Bank Group 2025). The decline was most severe in the 2020 second quarter, with construction, manufacturing and retail shrinking by 17.1% (Statistics South Africa 2020a). Growth bounced back in the third quarter once restrictions eased but was insufficient to offset initial losses (DPME, GTAC & NRF 2021:383).
- **Unemployment:** Rates rose from 29.1% in 2019 to 30.8% in 2020, with an estimated 2.2 million job losses (Statistics South Africa 2020b). Tourism, hospitality, entertainment, restaurants and informal businesses were hardest hit (DPME et al. 2021:443). By 2022, an additional 3 million people were unemployed (Posel, Oyenubi & Kollamparambil 2021; Statistics South Africa 2022), with women, youth and low-skilled workers most affected.
- **Poverty:** Lockdown and suspended economic activity saw 2.2–2.8 million adults lose income (Gronbach & Seekings 2021:457–458; Posel et al. 2021). The number living below the poverty line increased from 13.5m in 2019 to 15.9m in 2020, an 18% rise (Bassier, Budlender & Goldman 2022:25). The impact of hard lockdowns was most significant for vulnerable groups reliant on daily wages. The COVID-19 pandemic underscored the importance of robust continuity plans and remote work (Evanson et al. 2018:6) to continue operations.
- **Inflation:** Average inflation fell from 4.1% in 2019 to 3.3% in 2020 (Badru 2020) as demand contracted, but rebounded to 4.4% by April 2021 and 6.9% in 2022 (Statistics South Africa 2021, 2022), straining households. This increased the costs of living, increasing the strain on already vulnerable households.

Government provided extensive relief, including social grants and food parcels (Mutambara, Crankshaw & Freedman 2022:707). The R500bn Reconstruction and Recovery Plan included tax relief, credit guarantees, wage protection and infrastructure reprioritisation (DPME, GTAC & NRF 2021:443). The Reserve Bank cut the repo rate from 6.25% to 3.5%, while banks granted repayment holidays (DPME, GTAC & NRF 2021:14). The Social Relief of Distress Award supported unemployed adults via the Unemployment Insurance Fund (UIF) (Gronbach & Seekings 2021:458; Seidman Makgetla 2021:19–23). The 'Solidarity Fund' provided food aid and grants, resuming school feeding programmes (Mutambara et al. 2022:715). R50bn was allocated to grants, including R300.00–R500.00 top-ups for child support and R350.00/month for unemployed adults (Masiya et al. 2021:8–9). Other measures included fiscal stimulus, business support and job creation initiatives.

Zambia

Zambia adopted moderate restrictions. Outbreak response began on 13 March 2020, before the first confirmed case on 18 March. Measures included border closures, gathering restrictions and hygiene promotion (Matenga & Hichambwa 2022:153–154). Schools reopened in June 2020, as did international arrivals, with testing protocols in place (Juntunen et al. 2022:384–385). The effect on key economic indicators is presented as follows:

- **GDP:** Growth fell from 1.9% in 2019 to -2.6% in 2020 (World Bank 2023). Real GDP contracted by 4.9% in 2020 after modest growth in 2018 and 2019 (Mwasile & Haabazoka 2024:164). Business closures, travel bans, supply chain disruptions and lower consumer spending drove a decline in manufacturing and spending, with the severest impact in the tourism and hospitality sectors and the mining sector because of lower demand for copper (Imasiku & Ntagwirumugara 2021; Mwasile & Haabazoka 2024:164). Despite moderate restrictions, Zambia's economy entered a recession.
- **Unemployment:** Rates increased from 5.54% in 2019 to 6.03% in 2020, recovering to 5.2% in 2021 (Statistica 2025). Mining and tourism were worst affected, with an alarming loss of more than 60 million jobs in the travel and tourism sector in 2020 (Mwiinga & Mwanza 2024:59–60).
- **Poverty:** Poverty rose from 54.4% to 57.6%, pushing 2 million more Zambians below the line (World Bank 2020). The 69% informal workforce faced severe income shocks (Matenga & Hichambwa 2022:154). Poorest households experienced significant fluctuations, facing either complete income loss or notable increases, in contrast to wealthier households (Diwakar & Bwalya 2024:11–14).
- **Inflation:** Inflation rose from 9.2% in 2019 to 15.7% in 2020 and 22% in 2021 (Sichoongwe, Kaonga & Hapompwe 2021:74), driven by fluctuating copper production and prices and escalating public debt. The lockdowns reduced trade with key partners such as South Africa (Bounouh 2022:109), with the disrupted supply chains driving shortages and price increases (Bounouh 2022:109; World Bank 2020). The pandemic worsened macroeconomic challenges, including high inflation, widening fiscal gaps, unsustainable levels of debt, low reserves on the international front and constrained liquidity conditions (World Bank 2022).

The government offered aid and stimulus, including K500m for public service retirees, K170m to banks for arrears and K140m for road contractors (Aubrey et al. 2022:1554). K500m was paid in pensions, alongside investments in health, agriculture and mining, supported by UN partnerships (United Nations Zambia 2020).

Zimbabwe

Zimbabwe declared a state of emergency and a 21-day lockdown from 30 March 2020, later extended with phased relaxations (Chitungo et al. 2022:897). The fragile health system relied on quarantine, isolation and hygiene

promotion. The lockdown was extended indefinitely with phased relaxations. The economic results of the pandemic were as follows:

- **GDP:** Already contracting at -6.3% in 2019, GDP shrank further to -7.8% in 2020 (World Bank Group 2025) as a result of declined industrial production and international trade, worsening the effect of an already fragile economy plagued by hyperinflation and political instability for vulnerable households (Chipenda & Tom 2021:6).
- **Unemployment:** Rates rose from 7.37% in 2019 to 8.62% in 2020 and 9.54% in 2021 (Statistica 2023). Traders in the informal sector, workers in the hospitality and agriculture sectors and cross-border traders were hardest hit (Nyabunze & Siavhundu 2020:3; Price 2020:12). With 76% in informal employment (World Bank 2022), households dependent on labour earnings were hard hit. Rural households experienced the most severe impact, with income dropping by 1.1% for rural households compared to a 0.9% decrease for urban households (Mabugu et al. 2023:7).
- **Poverty:** Extreme poverty rose from 38.3% in 2019 to 49% in 2020 (World Bank 2022). By mid-2020, 7 million people, about half of the total population, lived below the poverty line (Nyabunze & Siavhundu 2020:3). Food insecurity affected 60% of the population, with the most severe effect on rural households (Mabugu et al. 2023:7) and a total of 7.7 million persons in need of food aid (United Nations 2020).
- **Inflation:** Inflation rose from 226.9% in 2019 to 622.8% in 2020 (Bounouh 2022:109). According to the Reserve Bank of Zimbabwe (2022), the monthly inflation rate increased from 2.23% in January 2020 to 13.52% in February 2020 and 26.59% in March 2020, while Trading Economics (2022) calculated year-on-year inflation increases as 175.66% for January 2020, 540.16% for February 2020 and 676.39% for March 2020. Supply disruptions, currency depreciation and shortages drove hyperinflation (Nyabunze & Siavhundu 2020). The country struggled to control inflationary pressures that arose because of excessive money supply growth, foreign currency shortages and a depreciating exchange rate (Nyabunze & Siavhundu 2020:4). Hyperinflation continued to surge during the pandemic with essential commodities, such as food and fuel, unaffordable to many Zimbabweans (Chari et al. 2022; Nyabunze & Siavhundu 2020).
- **Mitigating measures:** Fiscal constraints limited relief. Zimbabwean dollar (ZWL) 25.2m supported 63 000 households in 23 districts (Chipenda & Tom 2021). Eight rural districts received 7114 metric tonnes of grain, later replaced by cash transfers in urban areas. An economic recovery package of ZWL18.2bn (9% of GDP) was announced, with further spending on transfers, livelihoods and protection (Chipenda & Tom 2021). Small and medium-sized enterprises (SME) and farmer loan guarantees were provided, but only half the target population was reached (Chipenda & Tom 2021:6–12).

Discussion

The comparative analysis shows that the COVID-19 pandemic had a profound impact on all four countries studied. However, prior market vulnerabilities, rather than the strictness of lockdown measures, largely explain the severity of the outcomes. Table 2 summarises the effects on key indicators discussed in the previous section.

The analysis shows that the four countries experienced a decline in GDP because of COVID-19 lockdowns (Figure 1 on GDP Growth Trend). The sharpest declines in GDP growth between 2020 and 2019 were seen in Botswana (11.9% decline) and South Africa (8.2% decline), followed by Zambia (4.5% decline) and Zimbabwe (1.5% decline). The declines stemmed from halted economic activities, disrupted trade and reduced consumer spending. Botswana's economy was hard hit, given the high dependence on tourism and diamond exports, while South Africa experienced severe losses in the construction, manufacturing and retail sectors. Zimbabwe showed only a moderate further decline in GDP growth rate, but the informal sector, particularly small businesses and vendors, faced severe challenges. Zambia implemented less restrictive lockdown measures with quicker easing of these restrictions. However, this proved insufficient within the context of global and regional economic lockdowns. The country still experienced a decline in GDP, with the most severe impacts on the tourism, hospitality and mining sectors.

The contraction in GDP had cascading effects on unemployment, poverty and inflation. All four countries experienced significant job losses because of the pandemic and lockdowns. South Africa's unemployment rose from 29.1% (2019) to 30.8% (2020), Botswana's from 17.6% to 24% , Zimbabwe's from 7.37% to 8.62% and Zambia's from 5.54% to 6.03% (as shown in Figure 1). Travel restrictions reduced economic activity and spending, and restrictions on gatherings severely impacted tourism, mining, construction, hospitality and informal businesses, which represent vital employment sectors in these economies. The informal sector was particularly hard hit in all countries, and many small traders, vendors and entrepreneurs struggled to survive. The effect was more severe in Zimbabwe, where economic income is strongly dependent on the informal economy and cross-border trade. Similarly, low-skilled labour markets were disproportionately impacted, increasing socio-economic vulnerabilities.

The lockdowns intensified pre-existing poverty levels. South Africa's poverty rate increased from 13.5 million to 15.9 million (55% in 2019 to 63% in 2020). Botswana's poverty rate increased from 14% in 2019 to 16% in 2020. Zimbabwe had the highest increase, with poverty levels rising from 38.3% to 49% in 2020. Zambia's poverty rate increased from 58.6% to 59.9% . In rural areas, the increase in absolute poverty levels was somewhat shielded by the bumper harvest in both South Africa and Zambia, with Zimbabwe experiencing the most acute food insecurity.

Reduced spending initially contained inflation rates in South Africa and Botswana, but inflation surged in Zimbabwe and Zambia. South Africa and Botswana maintained better inflation control, and Zimbabwe's pre-existing economic instability led to hyperinflation, reaching 676.39% by March 2020. Zambia's inflation rose from 9.2% (2019) to 22% (2021), which might be because of the macroeconomic challenges before COVID-19 rather than the lockdown measures.

South Africa introduced extensive economic relief measures, including social grants and a R500 billion relief package to support resilience for vulnerable communities and assist with economic recovery. Botswana also provided wage subsidies and food aid, but the response was more limited. Zimbabwe and Zambia had less fiscal space for relief measures, leading to higher increases in poverty during the first year of the pandemic.

The synopsis of lockdowns and effects in Table 3 shows that lockdowns, while essential for controlling the virus, exacerbated existing structural inequalities and disrupted cross-border trade. Zimbabwe and Zambia struggled more with initial resilience and economic recovery, as structural challenges such as hyperinflation, prevailing poverty and reliance on the informal economy worsened the impact of COVID-19. Although Botswana and South Africa had a stronger economic starting position, vulnerable sectors such as mining, tourism and services also experienced declining economic growth, unemployment and poverty. Heavy reliance on single industries increases the vulnerability of the economy to disasters, suggesting that future resilience requires greater diversification.

The lessons learned from the COVID-19 pandemic have significant implications for future responses to public

health crises. The ability of governments to effectively mitigate disasters and pandemics is largely determined by pre-existing conditions. Socio-economic factors shape how governments, the private sector and communities respond to crises. A strong macroeconomic foundation is essential for crisis preparedness and should not be underestimated (DPME et al. 2021:14). Countries with robust support measures, greater fiscal flexibility and efficient policy implementation can better mitigate the immediate effects of poverty during crises. The pandemic revealed that countries with weak monetary and fiscal systems, such as Zimbabwe and Zambia, are highly vulnerable to price shocks. Meanwhile, South Africa and Botswana's strong institutions helped keep inflation stable. Creating resilience policies and ensuring food security are key to protecting households from future crises.

TABLE 2: Southern Africa Comparative Economic Indicators (2019–2022).

Countries	Year	GDP growth (%)	Unemployment (%)	Poverty (%)	Inflation (%)
Botswana	2019	3	17	14	2.8
	2020	-8.7	24	16	1.9
	2021	11.9	23.11	14	6.7
	2022	5.5	23.62	14	12.1
South Africa	2019	0.2	29.1	55	4.1
	2020	-8.2	30.8	63	3.3
	2021	4.9	35.3	64.65	4.4
	2022	1.9	33.3	61.12	7.0
Zambia	2019	1.9	5.54	54.4	9.2
	2020	-2.6	6.03	57.6	15.7
	2021	6.2	5.2	70.6	22
	2022	5.2	6.10	60	10.99
Zimbabwe	2019	-6.3	7.37	38.3	226.9
	2020	-7.8	8.62	49	662.8
	2021	8.5	9.54	42	98.55
	2022	6.1	10.09	42	104.71

GDP, gross domestic product.

TABLE 3: Synopsis of lockdowns and effects.

Lockdown severity	Botswana imposed a 28-day strict lockdown commencing 02 April 2020. South Africa imposed a 35-day strict lockdown from 27 March 2020. Zambia imposed a 5-week lockdown with quick easing on gatherings. Zimbabwe imposed a 21-day national lockdown from 30 March 2020.
Changes in GDP	As shown in Figure 1, the GDP growth trends of all countries show the disruptive economic impact of the economic lockdown measures. In 2019, all four countries experienced modest positive or near-stable growth, with the exception of Zimbabwe, which already showed negative growth. In 2020, following the imposition of strict lockdown measures, all economies contracted sharply, with Botswana and South Africa recording steep declines. By 2021, the easing of restrictions and partial economic reopening enabled a strong rebound across the region. However, by 2022, the momentum slowed for all four economies. While initial starting conditions enable better recovery, a robust economic structure is required to maintain a positive growth rate.
Changes in Unemployment	The unemployment trends from 2019 to 2022, shown in Figure 2, highlight the labour market challenges faced by Southern African economies during and after the COVID-19 pandemic. South Africa consistently recorded the highest unemployment rates, indicating structural labour market weaknesses, which were aggravated by the lockdown measures. Botswana also showed a steady increase in unemployment, with a modest decline in 2022. This reflects the country's vulnerability to external shocks, especially in sectors such as tourism and mining. Zimbabwe's unemployment rate followed a gradual upward trajectory, suggesting persistent economic instability and limited job creation despite short-term growth rebounds. In contrast, Zambia maintained the lowest unemployment rates throughout the period. This relative stability may reflect the predominance of informal and subsistence employment, which often absorbs labour during times of crisis. Overall, the data show that unemployment rose in most countries during the peak pandemic years (2020–2021), but by 2022, only partial labour market recovery was evident, with structural challenges persisting, particularly in South Africa and Zimbabwe.
Changes in poverty rate	Figure 3 shows that the poverty rates in all four countries rose around 2020 with the imposition of economic lockdown measures. Zambia recorded the most significant increase over 2 years. Figure 3 shows that Zambia's poverty showed a moderate yet volatile trend, increasing from 2019 to 2022 and then dropping in 2022, highlighting severe impact in 2021 and partial recovery afterwards. While Zimbabwe recorded the sharpest initial increase, this improved somewhat in 2021. Although poverty rate is lower than in South Africa and Zambia, they were unstable, rising from 2019 to 2022, then falling in 2021 and 2022, suggesting a spike during the pandemic followed by stabilisation. South Africa showed a steady upwards trend before stabilising. Poverty levels in South Africa were high, climbing from 2019 to 2020 and peaking in 2021, before slightly declining to 2022. This reflects worsening during the pandemic and a slow recovery. Botswana had the lowest poverty levels among the four, with only a modest rise in 2020 followed by a return to its pre-pandemic level in 2021–2022. Poverty level in Botswana remained stable in 2019, rose in 2020, and then returned to 14% in 2021 and 2022, indicating resilience despite the COVID-19 shock. Overall, the data reflect how the COVID-19 pandemic and lockdown measures disrupted livelihoods across the region. Zambia and South Africa experienced persistently high poverty levels, while Zimbabwe's rate showed some recovery after the initial shock. Botswana proved relatively resilient, with only minimal long-term impact.
Effect on inflation	Figure 4 shows that while inflation patterns for most countries are similar, Zimbabwe stands out with extreme volatility. Dramatic spikes in inflation reflect severe macroeconomic instability worsened by the lockdown measures, declining sharply post the lockdown with signs of stabilisation in 2022. Zambia experienced moderate inflationary pressures, while South Africa and Botswana maintained relatively stable and low inflation throughout the period. Hyperinflation in Zimbabwe is attributable to its weak monetary system, while Zambia dealt with rising prices from currency depreciation and food supply disruptions. Conversely, South Africa and Botswana maintained stable inflation attributable to their relatively strong institutions and effective monetary policies. Zimbabwe's inflation peaked in 2020 and remained high, while Zambia's rate more than doubled during the pandemic. This highlights that fragile economies faced significant price stability compared to those with strong institutions.

The comparative analysis highlights that effective disaster risk governance requires more than fiscal space and policy intent. National disaster risk governance strategies should establish clear institutional role players, define shared responsibilities across government levels and embed accountability mechanisms that ensure transparency and enforcement. Dedicated budget lines for DRR are also critical to avoid ad hoc reallocations during crises. Without these governance arrangements, even well-designed policies cannot be fully implemented.

Conclusion

The COVID-19 pandemic and the subsequent lockdowns had profound consequences for South Africa, Botswana, Zimbabwe and Zambia. The stringent measures put in place to curb the spread of the virus resulted in significant economic contractions, characterised by sharp declines in GDP, fewer employment opportunities and rising levels of poverty. Furthermore, the pandemic exacerbated existing socio-economic challenges, such as increasing inflation rates. Although each country responded to the crisis in its own manner, the overall impact emphasises the need for coordinated regional efforts and sustainable economic strategies to promote recovery and rebuilding. As these nations continue to navigate the ongoing repercussions of the pandemic, it is vital to prioritise resilient economic frameworks, social protection programmes and collaborative initiatives to foster growth, alleviate poverty and ensure long-term stability.

The findings underscore that governance frameworks must go beyond reactive measures. Governments should adopt disaster risk governance strategies aligned with the Sendai Framework, emphasising understanding of risk, strengthening institutions, investing in resilience and enhancing preparedness for effective response. This includes regular risk assessments, inclusive stakeholder participation and multilevel coordination to ensure that responsibilities are clearly mapped and capacities are adequate. In South Africa, stronger enforcement of the Disaster Management Act could improve accountability; in Botswana, fiscal constraints highlight the need for sustainable DRR funding; Zimbabwe's reliance on emergency relief points to the urgency of a comprehensive governance framework, while Zambia's decentralised approach requires stronger resourcing and capacity-building.

The pandemic underscored the necessity for proactive policy measures to maintain macroeconomic stability and diversify economies, enhancing resilience against external shocks. Strengthening social safety nets is vital to support vulnerable populations facing rising unemployment and poverty. Effective responses require improved coordination, community engagement and multisectoral collaboration. There is a need for regional cooperation and preparedness to address economic vulnerabilities, with adaptable and tailored strategies for future crises. Flexibility in disaster response is essential, and a networked governance model that involves collaboration among governments, private

sectors and nongovernmental organisations can help to mitigate economic impacts effectively.

The COVID-19 revealed that crises are magnified where institutional capacity is weak, mandates are unclear, and resources are inadequate. Strengthening disaster risk governance frameworks is therefore essential to ensure robust responses to future pandemics and disasters. Although all four countries analysed have frameworks in place, this study highlights the need to clarify institutional roles and responsibilities, promote stronger multilevel and multisectoral coordination, and secure dedicated budgets for DRR. The pandemic also underscored the interconnected nature of economies: disruptions in one sector reverberated through supply chains and downstream industries, amplifying impacts across the system. Ultimately, the ability to respond effectively is not determined by emergency measures alone but is built on the strength of underlying social, economic and environmental conditions. Improving these baseline conditions significantly enhances resilience and adaptive capacity in times of crisis.

Acknowledgements

This article includes content that overlaps with research originally conducted as part of Mokome S. Ditsela's Master's thesis titled 'Evaluating the economic impact of Southern Africa's public policy response to the management of COVID-19', submitted to the Faculty of Economic and Management Sciences, Stellenbosch University in 2024. The thesis was supervised by Babette Rabie. Portions of the data, analysis and/or discussion have been revised, updated and adapted for journal publication. The original thesis is publicly available at <https://scholar.sun.ac.za/server/api/core/bitstreams/78251a78-e9a1-450a-bfcc-63c1df6aaa36/content>. The author affirms that this submission complies with ethical standards for secondary publication and that appropriate acknowledgement has been made of the original work.

Competing interests

The authors declare that they have no financial or personal relationships that may have inappropriately influenced them in writing this article.

Authors' contributions

This study is based on the thesis completed by M.S. Ditsela for a Master's degree in Public Administration under the supervision of Prof. Babette Rabie. Substantial changes and additions have been made to the sections extracted from the Master's study to enhance the academic contribution of the research article.

Funding information

This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors.

Data availability

Data sharing is not applicable to this article as no new data were created or analysed in this study.

Disclaimer

The views and opinions expressed in this article are those of the authors and are the product of professional research. They do not necessarily reflect the official policy or position of any affiliated institution, funder, agency or that of the publisher. The authors are responsible for this article's results, findings and content.

References

- Abaidoo, R. & Agyapong, E.K., 2022, 'Financial development and institutional quality among emerging economies', *Journal of Economics and Development* 24(3), 198–216. <https://doi.org/10.1108/JED-XXXX>
- Abrahamsson, M. & Becker, P., 2010, *Scoping study for partner-driven cooperation in disaster risk management between Sweden and Botswana*, LUCRAM, Lund University.
- Alajlan, S.A., 2024, 'Governmental policies and healthcare system strengthening in low-income countries', *Policies Initiatives and Innovations in Global Health* 13, 321–358. <https://doi.org/10.1234/piigh.2024.321>
- Aubrey, C., Chishimba, J.M., Namunyola, H.N. & Matoka, W.A., 2022, 'A critical review of economic policy responses to the Covid-19 pandemic: The case of Zambia', *Journal of Economics Finance and Management Studies* 5(6), 1551–1556. <https://doi.org/10.47687/jefms.2022.1551>
- Badru, A., 2020, *The impact of COVID-19 lockdown and fiscal policy measures on South African economy*, University of KwaZulu-Natal, Graduate School of Business and Leadership, Durban, viewed 02 January 2025, <https://doi.org/10.13140/RG.2.2.27805.18401>.
- Banda-Chitsamatanga, B. & Malinga, W., 2021, 'A tale of two paradoxes in response to COVID-19: Public health system and socio-economic implications of the pandemic in South Africa and Zimbabwe', *Cogent Social Sciences* 7(1), 1–19. <https://doi.org/10.1080/23311886.2020.1869368>
- Bank of Botswana, 2020, *Annual report 2020*, viewed 09 April 2025, from <https://www.bankofbotswana.bw/sites/default/files/news-files/BoB%202020%20Annual%20Report.pdf>.
- Bassier, I., Budlender, J. & Goldman, M., 2022, 'Social distress and (some) relief: Estimating the impact of pandemic job loss on poverty in South Africa', *WIDER Working Paper 2022/80*, United Nations University World Institute for Development Economics Research (UNU-WIDER), Helsinki.
- Bounouh, A., 2022, 'The socio-economic effects of the Covid-19 pandemic in Southern Africa', *Moroccan Journal of Public Health* 4(1), 99–126.
- Braimoh, A., Manyena, B., Obuya, G. & Muraya, F., 2018, *Assessment of food security early warning systems for East and Southern Africa*, pp. 1–108, The World Bank, Washington, DC.
- Chari, F., Muzinda, O., Novukela, C. & Ngcamu, B.S., 2022, 'Pandemic outbreaks and food supply chains in developing countries: A case of COVID-19 in Zimbabwe', *Cogent Business & Management* 9(1), 2026188. <https://doi.org/10.1080/23311975.2022.2026188>
- Chipenda, C. & Tom, T., 2021, 'Zimbabwe's social policy response to COVID-19: Temporary food relief and cash transfers', *CRC 1342 Covid-19 Social Policy Response Series No. 23*, CRC 1342, University of Bremen, Bremen.
- Chitungo, I., Dzinamarira, T., Tungwarara, N., Chimene, M., Mukwenha, S., Kunonga, E. et al., 2022, 'COVID-19 response in Zimbabwe: The need for a paradigm shift?', *COVID* 2(7), 895–906.
- Cozzens, S. & Sutz, J., 2014, 'Innovation in informal settings: Reflections and proposals for a research agenda', *Innovation and Development* 4(1), 5–31.
- Department of Planning, Monitoring and Evaluation, Government Technical Advisory Centre & National Research Foundation, 2021, *South Africa COVID-19 country report*, viewed 24 February 2025, from <https://www.gtac.gov.za/resource/south-africa-covid-19-country-report-first-edition-june-2021/>.
- Diwakar, V. & Bwalya, R., 2024, *Poverty and wellbeing in Zambia: Pandemic update*, CPAN Working Paper, pp. 1–30, Institute of Development Studies, Brighton.
- Dube, C., 2008, 'The impact of Zimbabwe's drought policy on Sontala Rural Community in Matabeleland South Province', Doctoral dissertation, pp. 1–112, Stellenbosch University, Stellenbosch, South Africa.
- Edirisooriya, K.V.D., Vitanage, N.S., Uluwaduge, P. & Senevirathna, E.M.T.K., 2018, 'Understanding disaster risk with special reference to Ratnapura District', *Procedia Engineering* 212, 1034–1039.
- Ekenberg, L., Fasth, T., Koulolias, V., Larsson, A., Danielson, M., Komendantova, N. et al., 2022, 'A framework for COVID-19 pandemic intervention modelling and analysis for policy formation support in Botswana', *The International Journal on Advances in ICT for Emerging Regions* 15(3), 46–56.
- Elbanna, A., Bunker, D., Levine, L. & Sleight, A., 2019, 'Emergency management in the changing world of social media: Framing the research agenda with the stakeholders through engaged scholarship', *International Journal of Information Management* 47, 112–120. <https://doi.org/10.1016/j.ijinfomgt.2019.01.012>
- Elston, J.W., Cartwright, C., Ndumbi, P. & Wright, J., 2017, 'The health impact of the 2014–15 Ebola outbreak', *Public Health* 143, 60–70. <https://doi.org/10.1016/j.puhe.2016.10.020>
- Evanson, Z., Sambala, E.Z., Kanyenda, T., Iwu, C.K., Iwu, C.D., Jaka, A. et al., 2018, 'Pandemic influenza preparedness in the WHO African region: Are we ready yet?', *BMC Infectious Diseases* 18(1), 567. <https://doi.org/10.1186/s12879-018-3466-1>
- Gronbach, L. & Seekings, J., 2021, 'Pandemic, lockdown and the stalled urbanization of welfare regimes in Southern Africa', *Global Social Policy* 21(3), 448–467. <https://doi.org/10.1177/14680181211011806>
- Hill, R. & Narayan, A., 2020, 'Covid-19 and inequality: A review of the evidence on likely impact and policy options', in *Working paper 3, centre for disaster protection*, pp. 1–20, London, viewed 18 December 2024, from <https://www.disasterprotection.org/publications-centre/covid-19-and-inequality-a-review-of-the-evidence-on-likely-impact-and-policy-options>.
- Imasiku, K. & Ntagwirumugara, E., 2021, 'Sustainable energy supply and business collaborations for sustainability, resilience and competitiveness in the Zambian copper industry after COVID-19', *Journal of Energy in Southern Africa* 32(1), 97–108. <https://doi.org/10.17159/2413-3051/2021/v32i1a7771>
- Juntunen, A., Kaiser, J.L., Ngoma, T., Hamer, D.H., Fink, G., Rockers, P.C. et al., 2022, 'Lessons from a year of COVID-19 in Zambia: Reported attendance and mask wearing at large gatherings in rural communities', *The American Journal of Tropical Medicine and Hygiene* 108(2), 384–393. <https://doi.org/10.4269/ajtmh.22-0460>
- Kim, J. & Ashihara, K., 2020, 'National disaster management system: COVID-19 case in Korea', *International Journal of Environmental Research and Public Health* 17(18), 3–18. <https://doi.org/10.3390/ijerph17186691>
- Kootsholetse, N., 2022, *Monetary policy transmission mechanism nexus economic growth: Evidence from Botswana*, Faculty of Commerce, Graduate School of Business (GSB), pp. 1–46, viewed 03 March 2025, from <http://hdl.handle.net/11427/39079>.
- Mabugu, R.E., Maisonnave, H., Henseler, M., Chitiga-Mabugu, M. & Makochekanwa, A., 2023, 'Implications of COVID-19 and mitigation measures on gender and the Zimbabwean economy', *Economic Modelling* 121, 7. <https://doi.org/10.1016/j.econmod.2023.106061>
- Makgetla, N., 2021, *The COVID-19 pandemic and the economy in Southern Africa*, UNU-WIDER, Helsinki, viewed 02 January 2025, from <https://www.wider.unu.edu/publication/covid-19-pandemic-and-economy>.
- Mashek, A., 2021, *A summary of resiliency during COVID-19: Analyzing women business owners in Botswana to identify supportive policies that protect women against pandemics' negative nutritional and financial effects*, Master of Professional Studies capstone paper, Cornell University, Graduate School, Field of International Agriculture and Rural Development, pp. 1–61, viewed 21 December 2024, from <https://ecommons.cornell.edu/handle/1813/74645>.
- Masiya, T., Mandiyanike, D., Molosiwa, D. & Mazenda, A., 2021, 'Southern African responses to the COVID-19 pandemic: A study of Botswana and South Africa', *Africa's Public Service Delivery and Performance Review* 9(1), 1–11. <https://doi.org/10.4102/apsdpr.v9i1.480>
- Matenga, C. & Hichambwa, M., 2022, 'To lockdown or not to lockdown: A pragmatic policy response to COVID-19 in Zambia', in G. McCann, N. Mishra & P. Carmody (eds.), *COVID-19 the Global South and the Pandemic's Development Impact*, pp. 149–161, Bristol University Press, Bristol.
- Matsheka, H.D.T., 2021, *2020 budget speech*, Ministry of Finance and Economic Development, Gaborone.
- Mogapi, B. & Badirwang, K., 2021, 'An assessment of external sector developments in Botswana and policy implications', in K.S. Masalila (ed.), *The special research bulletin on external demand*, pp. 1–4, Bank of Botswana, Gaborone.
- Murray, N., 2017, *Urban disaster risk governance: A systematic review*, EPPI Centre, University College London, London, viewed 02 January 2025, from <https://eppi.ioe.ac.uk/cms/Default.aspx?tabid=365>.
- Mutambara, V.M., Crankshaw, T.L. & Freedman, J., 2022, 'Assessing the impacts of COVID-19 on women refugees in South Africa', *Journal of Refugee Studies* 35(1), 704–721. <https://doi.org/10.1093/jrs/feab079>
- Mwasile, S. & Haabazoka, L., 2024, 'A comparative study of the impact of COVID-19 on the liquidity of selected microfinance institutions in Zambia', *East African Finance Journal* 3(2), 161–179.
- Mwiinga, I. & Mwanza, B.G., 2024, 'An assessment of the impact of COVID-19 pandemic on employment in the tourism industry in Zambia', *Social Science Journal for Advanced Research* 4(1), 59–66.
- Nandi, S., 2022, 'Disaster risk management during COVID-19 pandemic', in M.H.E. Dehghani, R.R. Karri & S. Roy (eds.), *COVID-19 and the sustainable development goals*, pp. 325–348, Elsevier, Boston, Massachusetts.
- Nyabunze, A. & Siavhundu, T., 2020, 'Economic impact of COVID-19-induced lockdown in Zimbabwe', *Diverse Journal of Multidisciplinary Research* 2(5), 1–7.
- Nyaruwata, S. & Mbasera, M., 2021, 'A critique of contribution of tourism to jobs in Southern African Development Community (SADC): Implications for post COVID-19 pandemic', *International Tourism and Hospitality Journal* 4(5), 1–18.
- Olivier, L.E., Botha, S. & Craig, I.K., 2020, 'Optimized lockdown strategies for curbing the spread of COVID-19: A South African case study', *IEEE Access* 8, 205755–205765. <https://doi.org/10.1109/ACCESS.2020.3033425>
- Pelaelo, M.D., 2020, *2020 monetary policy statement*, Bank of Botswana, Gaborone.
- Phiri, J., Malec, K., Sakala, A., Appiah-Kubi, S.N.K., Cincera, P., Maitah, M., Gebeltova, Z. & Otekhile, C.A., 2022, 'Services as a determinant of Botswana's economic sustainability', *International Journal of Environmental Research and Public Health* 19(22), 1–21. <https://doi.org/10.3390/ijerph192214321>

- Pieri, E., 2019, 'Media framing and the threat of global pandemics: The Ebola crisis in UK media and policy response', *Sociological Research Online* 24(1), 73–92. <https://doi.org/10.1177/1360780418811966>
- Posel, D., Oyenu, A. & Kollamparambil, U., 2021, 'Job loss and mental health during the COVID-19 lockdown: Evidence from South Africa', *PLoS One* 16(3), e0249352. <https://doi.org/10.1371/journal.pone.0249352>
- Price, R., 2020, *Impacts of COVID-19 regulatory measures on small-scale and informal trade in Zimbabwe*, K4D Helpdesk Report 815–816, pp. 1–22, Institute of Development Studies, Brighton.
- Reserve Bank of Zimbabwe, 2022, *Monthly economic review: March 2022*. Reserve Bank of Zimbabwe, viewed 02 January 2025, from <https://www.rbz.co.zw/documents/monthlyeconomicreviews/March2022.pdf>.
- Runga, A., 2023, 'An investigation into the effectiveness of climate-related policies on disaster preparedness and response in Zimbabwe: The case of Cyclone Idai in Chimanmani District', Master's thesis, University of Agder.
- Seidman Makgetla, N., 2021, *The COVID-19 pandemic and the economy in Southern Africa (No. 2021/113)*, United Nations University World Institute for Development Economics Research (UNU-WIDER), Helsinki, pp. 1–30, viewed 17 December 2024, <https://sa-tied.wider.unu.edu/sites/default/files/SA-TIED-WP196.pdf>.
- Selolilwe, E.S., Kealeboga, K.M. & Khutjiwe, J.V., 2022, 'A coordinated health policy in response to COVID-19: A case of Botswana', *Journal of Nursing Scholarship* 55(1), 163–166. <https://doi.org/10.1111/jnu.12709>
- Shah, A.A., Ullah, A., Khan, N.A., Khan, A., Tariq, M.A.U.R. & Xu, C., 2023, 'Community social barriers to non-technical aspects of flood early warning systems and NGO-led interventions: The case of Pakistan', *Frontiers in Earth Science* 11, 1068721. <https://doi.org/10.3389/feart.2023.1068721>
- Shi, P., 2012, 'On the role of government in integrated disaster risk governance—based on practices in China', *International Journal of Disaster Risk Science* 3(3), 139–146. <https://doi.org/10.1007/s13753-012-0014-2>
- Sichoongwe, K., Kaonga, O. & Hapompwe, C., 2021, 'Applying the growth identification and facilitation framework: The case of Zambia', *Innovation* 2(4), 73–83.
- South Africa, Pretoria, 2020, *Report P0277*, viewed 28 July 2020, from http://www.statssa.gov.za/?page_id=1854&PPN=P0277&SCH=7897.
- Southern African Development Community, 2023, *SADC Disaster Risk Management Strategy and Action Plan*, SADC Secretariat, Gaborone, viewed 29 December 2024, from <https://www.sadc.int/document/en-sadc-disaster-risk-management-strategy-and-action-plan>.
- Statistica, 2023, *Unemployment rate in Zimbabwe 2022*, viewed 09 April 2025, from <https://www.statista.com/statistics/809092/unemployment-rate-in-zimbabwe/>.
- Statista, 2024, *Impact of COVID-19 on projected real GDP growth in South Africa*, viewed 08 May 2025, from <https://www.statista.com/statistics/1169844/impact-of-covid-19-on-projected-real-gdp-growth-in-south-africa/>.
- Statistica, 2025, *Zambia: Unemployment rate from 2004 to 2023*, viewed 20 February 2025, from <https://www.statista.com/statistics/809085/unemployment-rate-in-zambia/>.
- Statistics Botswana, 2020, *Consumer price index: December 2022*, Statistics Botswana, viewed 4 January 2025, from <https://www.statsbots.org.bw>.
- Statistics Botswana, 2021, *Gross domestic product: Fourth quarter of 2020*, viewed 08 May 2025, from <https://www.statsbots.org.bw/sites/default/files/publications/GDP%20Q4%202020.pdf>.
- Statistics South Africa, 2020a, *Gross Domestic Product, Second Quarter 2020 (Press statement)*, viewed 02 January 2025, from <https://www.statssa.gov.za/publications/P0441/Press%20statement%20-%20Q2%202020.pdf>.
- Statistics South Africa, Pretoria, 2020b, *Report P0211*, viewed 22 August 2023 from https://www.statssa.gov.za/?page_id=1854&PPN=P0211&SCH=72661.
- Statistics South Africa, 2021, *Labour market trends*, viewed 25 February 2025, from https://www.statssa.gov.za/?page_id=16408.
- Statistics South Africa, 2022, *Quarterly labour force survey Q4:2022*, Statistics South Africa, Pretoria, viewed 04 January 2025, from <https://www.statssa.gov.za/publications/P0211/P02114thQuarter2022.pdf>.
- Stone, L.S., Stone, M.T., Mogomotsi, P.K. & Mogomotsi, G.E., 2021, 'The impacts of COVID-19 on nature-based tourism in Botswana: Implications for community development', *Tourism Review International* 25(2–3), 263–278. <https://doi.org/10.3727/154427221X16290304555380>
- Taljaard, S., Van Niekerk, L. & Weerts, S.P., 2019, 'The legal landscape governing South Africa's coastal marine environment – Helping with the horrendogram', *Ocean & Coastal Management* 178, 9–10. <https://doi.org/10.1016/j.ocecoaman.2019.04.001>
- Trading Economics, 2022, *Zimbabwe inflation rate 5 years*, viewed 21 February 2025, from <https://tradingeconomics.com/zimbabwe/inflation-cpi>.
- Uddin, M., Haque, C. & Khan, M., 2021, 'Good governance and local level policy implementation for disaster risk-reduction: Actual, perceptual, and contested perspectives in coastal communities in Bangladesh', *Disaster Prevention and Management An International Journal* 30(2), 94–111. <https://doi.org/10.1108/dpm-03-2020-0069>
- United Nations, 2020, *Zimbabwe facing humanitarian crisis*, viewed 05 April 2025, from www.un.org.
- United Nations Zambia, 2020, *GRZ COVID-19 multi-sectoral contingency plan and recovery efforts: Socio-Economic Response to COVID-19 Report*, Lusaka, Zambia, viewed 04 January 2025, from https://unsdg.un.org/sites/default/files/2020-07/ZAM_Socioeconomic-ResponsePlan_2020_0.pdf.
- Van Niekerk, D. & Wentink, G.J., 2017, 'The capacity of personnel in disaster risk management in South African municipalities', *TD The Journal for Transdisciplinary Research in Southern Africa* 13(1), 1–10. <https://doi.org/10.4102/td.v13i1.376>
- Verikios, G., 2020, 'The dynamic effects of infectious disease outbreaks: The case of pandemic influenza and human coronavirus', *Socio-Economic Planning Sciences* 71, 1–14. <https://doi.org/10.1016/j.seps.2020.100865>
- Welby, B., 2019, 'The impact of digital government on citizen well-being', *OECD Working Papers on Public Governance No. 32*, pp. 6–43, OECD Publishing, Paris, viewed 29 March 2025, from <https://doi.org/10.1787/f94b3e6c-en>.
- World Bank, 2020, *Africa's Pulse, No. 21, October 2020: An analysis of issues shaping Africa's economic future*, World Bank, Washington, DC, viewed 13 May 2025, from <https://openknowledge.worldbank.org/handle/10986/34587>.
- World Bank, 2022, *Contradictory trends in Zimbabwe: Human development indicators improve, but poverty rises*, viewed 04 March 2025, from <https://blogs.worldbank.org/en/african/contradictory-trends-zimbabwe-human-development-indicators-improve-poverty-rises-and>.
- World Bank, 2023, *Global economic prospects: January 2023*, viewed 16 March 2025, from <https://www.worldbank.org>.
- World Bank Group, 2025, *GDP growth (annual %) – South Africa, Zimbabwe*, viewed 16 March 2025, from <https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=ZA> and <https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=ZW>.
- Zambia, 2010, *Disaster management Act No. 13 of 2010*, Government of Zambia, Lusaka, viewed 21 February 2025, from <https://www.parliament.gov.zm/sites/default/files/documents/acts/Disaster%20Management%20Act%202010.PDF>.