

Government Capacity and Management of COVID-19 In Kilifi County, Kenya

FAITH CHEROTICH NAMANGA¹, DR. EDNA MOI², DR. HILDA F MAKHAMARA³

^{1,2} *Department of Public Policy and Administration Kenyatta University-Kenya*

³ *Department of Business Administration, Kenyatta University-Kenya*

Abstract- *The main objective of this paper was to economic support measures effects towards COVID-19 management in Kilifi County. The study utilized a descriptive research design, targeting a population of 432 individuals, consisting of county and national government employees in Kilifi County involved in the management of the COVID-19 pandemic. The study used disproportionate stratified sampling and purposive sampling to sample 207 research participants. From the study it was established that majority of the respondents (29.7%), were health officer. Additionally, finding revealed that that most of the respondents (34.4%), had stayed in their current working position for a period between 5 years to 10 years. The findings as well indicated that most of the respondents 187 (98.02%) were aware and fully conversant with the measure that were formulated to curb COVID-19. On average, the overall rating level on general COVID-19 management and response in Kilifi County was 82.4% (mean=4.12) with a standard deviation of 0.29 and a standard error of 0.01. Through linear regression the study concluded that Economic support had positive influence in management of COVID-19 in Kilifi County, Kenya.*

Indexed Terms- *Crisis management policy, Economic policy, mitigation*

I. BACKGROUND TO THE STUDY

The COVID-19, also known as the Coronavirus Disease 2019, is a highly contagious respiratory illness caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). It was initially identified in Wuhan, China, in 2019. And within three months, the viral disease had spread throughout the entire world (Gupta, 2020; WHO, 2019; WHO, 2020). Consequently, the World Health Organization (WHO)

formally announced COVID-19 as a global pandemic, prompting worldwide actions, acknowledgment and the need to develop strategies for its management. (Gostin et al, 2020; WHO, 2020). This followed the WHO declaration of measures and policies for all member states across the world on how to curb COVID-19 (Gostin et al, 2020; WHO, 2020).

Consequentially, the pandemic severely damaged the economies of developed and developing nations through the loss of lives and high unemployment rates that affected development and general global economic growth (Chen & Assefa, 2021). Some consequences that the nations grappled with were the outbreak, isolation, quarantining of positive cases. The body disposal measures, restriction of movements, the closure of learning institutions and churches, and the closure of some industries and employment companies, which led to reduced household incomes and business, hence the threat of the imminent collapse of once vibrant economies (Chen & Assefa, 2021).

The global impact of COVID-19 persists, with over 110 million new cases and 300,000 deaths reported from January to December 2023 (WHO, 2023). The emergence of new sub-variants, like JN.1 in the USA, is highly contagious, accounting for 85.7% of new cases (WHO, 2024). The phased relaxation of non-pharmaceutical measures has led to surges and resurgences of COVID-19 infections, posing the risk of increased cases and the possibility of another pandemic wave (Cascini et al., 2022).

India received praise from WHO for its "tough and timely" implementation of various restrictive measures, including extended lockdowns, curfews, regional containment strategies, social distancing, strict barrier protection and adherence to personal hygiene practices (Clark et al., 2020). Managing

COVID-19 in India, with its massive population of 1.3 billion, posed challenges due to health inequalities, widening economic and social disparities, and unique cultural values (Lancet, 2020). As of May 2021, India ranked second globally with 24.2 million COVID-19 cases (Dong, 2020). The stringent lockdown played a key role in flattening pandemic trajectory, Noteworthy declines in new cases and relatively low infection rates during widespread and local lockdowns (Mave et al., 2021).

European nations incorporated risk communication as a pivotal element of public health interventions amid an outbreak (WHO, 2019). This is in line with WHO strategies for risk communication to enable the public to verify information in a timely manner, narrowing the information divide and persuading the public to modify their behavior during a crisis (Zhang, 2020). The Global Outbreak Alert and Response Network (GOARN) played an active role in collaboratively developing and executing risk communication messages tailored to the local context (WHO, 2023).

African nations, particularly South Africa, Egypt, and Algeria, anticipated severe pandemic impacts due to underdeveloped health systems marked by inadequate infrastructure, a scarcity of skilled critical care personnel, and insufficient intensive care facilities (Makoni, 2022; Hopman & Mahtar, 2020). Despite initial concerns, proactive measures such as South Africa's nationwide lockdown and comprehensive public health response, as well as Egypt's pandemic preparedness plan with enhanced surveillance, helped mitigate the spread (Massinga et al., 2020; Robert & Jan, 2020; Abu El Sood et al., 2021). Nevertheless, these efforts did not fully shield economies and fragile health systems, leading to widespread socio-economic damage, safety concerns, financial insecurity, and elevated poverty levels that affected public healthcare provision and coverage (Makoni, 2020; Olaniran & Ilesanmi, 2021; Hatefi et al., 2021).

The East African countries exhibited diverse response mechanisms influenced by factors such as leadership, culture, beliefs, technology, and financial stability. Notably, Tanzania adopted a unique and seemingly contradictory approach by relying on traditional herbal remedies instead of scientific methods to address the pandemic, leading to a failure in implementing WHO-

recommended measures such as testing, restrictions, and transparent COVID-19 data disclosure (Mtani & Ngohengo, 2023; IOM, 2020b; Makoni, 2021). This departure from earlier adherence to WHO guidelines and Ministry of Health directives in the initial phase of the pandemic is evident (WHO, 2020; Makoni, 2021; MOH, 2020).

Uganda's government imposed several policies, including a stay-home policy, a lockdown policy, and public health measures, which exerted a substantial influence on pandemic containment and control, resulting in a relatively slow pace of spread (GOU, 2020; Besigye *et al.*, 2020; Kitara & Ikoona, 2020). Additionally, it leveraged on the previous experience on preparedness and response to the Ebola outbreak and was ranked 63 out of 195 according to the Global Health Security Assessment (GHSA) (Lamorde *et al.*, 2022), and finally political support by the top leadership (Kitara & Ikoona, 2020).

Kenya effectively managed the pandemic by leveraging its existing healthcare system and pandemic preparedness and demonstrating strong political will through an elaborate coordination mechanism. Additionally, the country allocated adequate healthcare funding, reaching 16% in the 2018/2019 budget, and surpassing the Abuja Declaration's recommendation of 15% of the national GDP (Kenya Ministry of Health, 2017a). As a result, Kenya recorded a low case fatality rate of 1.3%, notably below the global estimate of 2.2% (Salyer *et al.*, 2020).

The Kenyan government, less experienced in handling pandemics like COVID-19 compared to South Africa, demonstrated a 60% preparedness level (Wachira & Mwai, 2021). WHO's joint external evaluation (JEE) indicators revealed low preparedness, scoring 2.9 in prevention, 2.9 in detection, and a weak 2.0 in response (GoK, 2020). Adhering to WHO guidelines, the government implemented economic recovery policies, including food aid, tax relief, health insurance expansion, and cash transfers to vulnerable groups (Ogira et al., 2022; Ouma, 2021). Restriction measures included a nationwide curfew, school and workplace closures, gathering bans, and lockdowns in high-incidence counties like Nairobi, Kilifi, and Mombasa, all of which have high informal

settlements, with Kilifi reporting the first COVID-19 case (MOH, 2020). Despite these efforts, the impact on economic development and the healthcare system necessitates an assessment of preparedness and response to COVID-19 within Kenya.

Post recovery phase on COVID-19 is uneven across world economies with most of LMIC continue to struggle from the effect of economic shock while advanced economies are struggling with rising cases COVID-19 (UN, 2022). In Kenya, a total 120 (7.2%) of the sample collected in Kilifi health demographic surveillance system (KHDSS) and another 39 sample outside the KHDSS confirmed with SARS-CoV-2 infection in the initial 6 month of 2023 (Mwanga et al, 2023). The figures could be an under estimation because of lack of elaborate surveillance system for detecting and reporting cases of COVID-19 (GOK, 2022).

A. Problem statement

Throughout the crisis, there is crucial need to systematically assess government capacity in effectively addressing public health crises. Limited government capacity raises concerns about the adequacy of policies related to response mechanisms, encompassing economic support, crisis communication, legal instruments, and actions by response committees (Hale et al., 2020). The evidence of underfunding in the initial supplementary budget of 2020, leading to a 1.4 billion reduction in the healthcare budget for 2020–2021, highlights challenges faced by government capacity (Ogira et al., 2022).

The Kenya health policy strategy 2014–2030 lacked sufficient details for pandemic management (MOH, 2017), relying instead on WHO recommendations for COVID-19 management (WHO, 2019). The Kenyan health sector's vulnerabilities, including scarce resources, inadequate infrastructure, a limited workforce, and frequent medical supply shortages, became challenging (Ginsburg et al., 2012; Dalinjong et al., 2017).

Corruption, misappropriation, and a lack of political accountability negatively impact COVID-19 management in Kenya (Quaife et al., 2020), resulting in unequal access, inconsistent policy support,

inflation, disrupted supply chains, and sustained uncertainty (Agarwal et al., 2020). There is also a recognized absence of a communication strategy and a weakened health system in developing countries (Ataguba & Ataguba, 2020). Community initiatives in economically disadvantaged regions are less effective due to a lack of mitigation measures and a scarcity of local primary data (Abdullahi et al., 2020; Wangari et al., 2021; Tessema et al., 2021).

In response to these gaps, this study investigated government capacity in managing the COVID-19 pandemic, providing insights to strengthen Kenyan health system policies.

B. Study Objectives

To examine economic support measures effects towards COVID-19 management in Kilifi County.

C. Research Hypothesis

H₀: Economic support has no significant effect in managing COVID-19 pandemic in Kilifi County

H₁: There is significant effect of economic support in managing COVID-19 pandemic in Kilifi County

II. RESEARCH METHODOLOGY

A. Study Design

The research employed a descriptive study design to depict the distribution of variables associated with the capability of the COVID-19 pandemic management. This design focuses on providing a detailed account of the situation without exploring causal or other hypotheses, except for the research hypothesis (Aggarwal & Ranganthan, 2019). The design described the variables that cannot be manipulated by the researcher (Cooper & Schindler, 2008), provided summaries about the sample measure of central tendencies and dispersion in quantitative data (Mishra et al., 2019) while the content analysis provided the summaries of qualitative data. The choice of descriptive design is because it's easy to conduct, inexpensive, do not face critical ethical challenges and the results are used to make generalization or inferential statistics.

B. The study location

The research took place in Kilifi County, which covers an area of 12,552 Km² with a population of 1,452,787.

The county government administrative structure is divided into 7 administrative units, namely Kilifi North, Kilifi South, Kaloleni, Malindi, Magarini, Ganze, and Rabai, with 35 sub-county wards (KNBS, 2019, IEBC, 2022), while the national government is divided into 9 administrative units with the addition of Chonyi and Kauma to the existing administrative structure.

C. Target Population

A total of 432 staff drawn from county and national governments who were involved in the controlling of the COVID-19 disease as per existing records from county government and national government human resource departments (KCIDP, 2018–2022).

D. Sampling Technique

A mixed-method technique of stratified sampling and purposive sampling used as outlined by Teddlie and Tashakkor (2009). Stratified sampling guided in identifying the sub-groups with similar or different characteristics and ensure precision estimate on each stratum by placing similar characteristics into the subgroup in order to give higher statistical power (Parson, 2014). Purposive sampling was used to select research participants with certain skills and expertise on COVID-19 pandemic management (Cresswell & Plano, 2011; Patton, 2002).

E. Sample Size

The sample size was determined using Yamane formula (Yamane, 1967) where 207 research participants was selected.

$n = N / (1 + N(e)^2)$. Therefore, $n = 432 / (1 + (0.5)^2) = 207$
 Where n represent sample size, N represent Population size, e is the precision level with the sampling error of 5%

III. DATA ANALYSIS, PRESENTATION AND DISCUSSION

A. Analysis of General Information

Demographic attributes of the respondents and general information are paramount parameter in research since they determine the nature of the results. Therefore, this study evaluated some key variables as outlined below.

B. Title of the respondents

Title of the respondents was analysed and the findings are as shown in table 1.

Table 1 Title of Respondents

Title	Frequency	Percentage
Deputy county commissioner	4	2.0
Assistant county commissioner	12	5.9
Chiefs	30	14.9
Police officer	36	17.8
County administrative officers	4	2.0
Education officer	56	27.7
Health officer	60	29.7
Total	202	100.00

From table 1, 29.7% of the respondents were health officer. This comprised of sub-county medical officers, deputy sub-county nursing officers, sub-county clinical officers, sub-county disease surveillance coordinators, sub-county laboratory officers, sub-county public health officers, sub-county dental officers, sub-county radiology officer, sub-county health management information system officer, sub-county administrators and Kilifi county referral hospital management cadres. Additionally, 27.7% of the respondents were education officer which comprised of county director of education, county quality assurance, sub county directors, quality assurance officers under ministry of education, County director teachers service commission, county human resource officer, sub county directors, human resource under teacher’s service commission, KEPHSA Chairman, KEPHSA vice chairman, KEPHSA secretary, KEPHSA treasurer, KEPHSA organizing secretary and KEPHSA vice secretary, women representative County and sub-county officers, KESHA Chairman, KESHA vice chairman, KESHA secretary, KESHA vice secretary, KESHA treasurer and KESHA organizing secretary.

C. Distribution of Experience

This study analysed the duration the officer had been in their current position. The results are displayed in figure 1. The finding revealed that that most of the respondents (34.4%), had stayed in their current

working position for a period between 5 years to 10 years. 8.9% of the respondents had stayed in their current working position for a period of more than 20 years. This implied that more than half of the respondents had sufficient knowledge on government capacity and management of COVID-19 in Kilifi County.

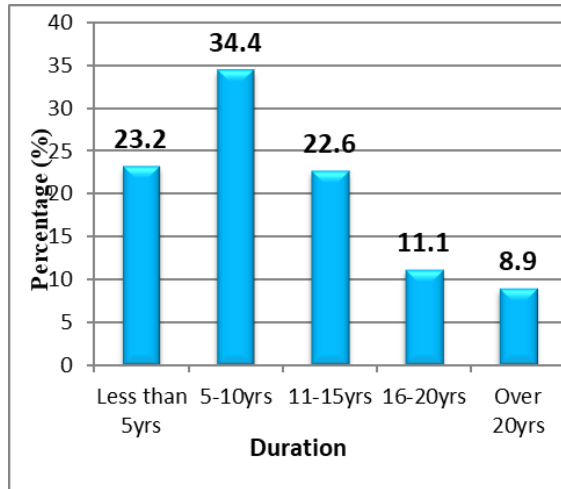


Figure 1 Number of Working Years

The relationship between job experience and effective management practices has been a subject of extensive research in organizational behavior. Job experience is often viewed as a critical component that shapes managerial skills, leadership styles, and decision-making processes. The management of the COVID-19 pandemic required a multifaceted approach involving healthcare professionals, government officials, business leaders, and organizational managers. Work experience in relevant fields played a crucial role in shaping the responses and strategies employed to tackle the crisis.

D. Descriptive Analysis on Economic support on COVID-19

Various variables that were used to examine economic support on COVID-19 were analysed and results are as shown on table 2.

Table 2. Economic support on COVID-19

Variable	Category	Frequency	Percentage
COVID-19 policies and	Yes	186	92.08
	No	16	7.92
	Total	202	100.00

regulations			
considerate of common citizen			
Were	Yes	191	94.55
Economic	No	11	5.45
support on COVID-19	Total	202	100.00
timely			
Best Financial support	1. Cash transfer	38	18.81
	2. Food aid	62	30.69
	3. Kazi mtaani	91	45.05
	4. others	11	5.45
	Total	202	100.00
Tax Relief Policies	1. income tax reduction for some low earning populations	74	36.63
	2. tax exemption and reduction for producing companies	58	28.7
	3. Pay cut for government officials	48	23.76
	4. None of the above	12	5.94
	5. Others	10	4.95
Total	202	100	

The findings from table 2 revealed that 92.08% of the respondents confirmed that COVID-19 policies and regulations were considerate of common citizen and the unemployed and cushioned them from the negative effect of COVID-19. Similarly, 94.55% confirmed that economic support on COVID-19 put up by the government were timely and effective in fighting COVID-19. Additionally, respondent reported that kazi mtaani was the best financial support that COVID-19 policies incorporated to cushion restriction measures. In regards to tax relief and pay cut policies, respondents confirmed that income tax reduction for some low earning populations, was the most timely

and effective intervention with regards to economic support on COVID-19.

E. Linear Regression on Economic Support and Management of COVID-19

Simple linear regression was used to test the second research hypothesis that stated that, *Economic support has no significant effect in managing COVID-19 pandemic in Kilifi County*. The findings of the linear regression were displayed in table 3.

Table 3: Linear Regression on Economic Support and Management of COVID-19

Model Summary

Model	R	R Square	Adjusted Square	R Std. Error of the Estimate
1	.475 ^a	.226	.222	.45563

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	10.608	1	10.608	51.099	.000 ^b
Residual	36.329	175	.208		
Total	46.937	176			

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	Beta	Std. Error	Beta		
1 (Constant)	1.942	.335		5.801	.000
<i>Economic support</i>	.552	.077	.475	7.148	.000

Model summary from table 3 had R² value of 0.226. R² measured how much variability in the dependent variable (that is, *management of COVID-19*) the predictor (*Economic support*) accounted for. This implied that *Economic support* explained about 22.6% of the variation of management of COVID-19. The remaining unexplained variation in management of COVID-19 in Kilifi County could be attributed and accounted for by other factors that influence management of COVID-19.

Additionally, table 3 showed that ANOVA test was statistically significant with an F value of 51.099 and

a p-value of 0.00. This indicated that the linear regression model had good fit and was appropriate in determining the linear association between Economic support and management of COVID-19 in Kilifi County, Kenya.

Further, table 3 revealed that Economic support had a linear regression standardized coefficient Beta of 0.475 with a t value of 7.148 which was statistically significant testing at 0.05 alpha level. This coefficient implied that a unit change in Economic support would result in 47.5% increase in management of COVID-19 in Kilifi County, Kenya. This led to the rejection of the null hypothesis that stated H₀: *Economic support has no significant effect in managing COVID-19 pandemic in Kilifi County, Kenya*. The study therefore concluded that Economic support had positive influence in management of COVID-19 in Kilifi County, Kenya.

The constant had a coefficient value of 1.942 which was statistically significant testing at 0.05 alpha level since P-value was less than 0.05. This implied that, besides Economic support positively influencing management of COVID-19, there were other many factors not included in this linear regression model and they affect management of COVID-19.

To predict the management of COVID-19 in Kilifi County, this study adopted the following linear regression model.

$$\text{Management of COVID-19} = 1.942 + 0.475(\text{Economic support})$$

These findings concurred with earlier findings by Londono-Velez and Querubin (2022) who conducted a study in Colombia on the impact of cash transfers to households during the COVID-19 pandemic. They reported that economic support has positive influence in management COVID-19. They revealed that enhanced financial support, food access and fosters cooperation in pandemic response. They further reported that economic support positively affects management of COVID-19 by fostering household wellbeing, including financial health and food support. These study results were also in line with the report by Nantulya and Mavhinga (2020). Nantulya and Mavhinga (2020) results revealed that economic impact of lockdown on low-income workers and unemployed influence management of COVID-19.

They reported that, cash transfers reduce the effect of COVID-19 on vulnerable families, despite challenges like political interference and a lack of transparency. Their study further reported that providing economic assistance is more impactful in increasing consumer confidence, whereas relief in debts and contracts contributes to confidence in developing economies.

Food assistance programs were also expanded to address food insecurity exacerbated by the pandemic. According to Bauer et al. (2020), food assistance programs such as the Supplemental Nutrition Assistance Program (SNAP) in the United States played a vital role in ensuring access to food for vulnerable populations. Similar programs in other countries helped mitigate the risk of hunger and malnutrition during the crisis.

Loans and grants provided crucial liquidity to businesses facing revenue losses and operational challenges. The Paycheck Protection Program (PPP) in the United States, for example, offered forgivable loans to small businesses to cover payroll and other expenses, helping to retain employees and sustain operations (Granja et al., 2020). Similar programs in other countries, such as the Coronavirus Business Interruption Loan Scheme (CBILS) in the UK, provided vital financial support to businesses (Cowling et al., 2020).

Tax relief measures, including deferrals and reductions, helped businesses manage cash flow challenges. According to De Vito and Gómez (2020), tax relief provided immediate financial relief to businesses, allowing them to allocate resources to critical areas such as payroll and operational costs. These measures were particularly important for small and medium-sized enterprises (SMEs) that lacked substantial financial reserves.

Economic support measures also had positive impacts on public health outcomes. By providing financial assistance and social protection, these measures helped address the social determinants of health, reducing the risk of adverse health outcomes. Research by Bauer et al. (2020) suggests that food assistance programs and cash transfers helped improve food security and reduce stress, contributing to better health and well-being during the pandemic.

Additionally, support for healthcare systems and medical expenses ensured access to essential healthcare services, improving overall public health outcomes (Liu & Li, 2020).

The pandemic and the associated economic support measures highlighted and, in some cases, exacerbated existing social and economic inequalities. According to Alon et al. (2020), while economic support measures provided crucial relief, disparities in access and benefits underscored the need for more inclusive and equitable policies. Addressing these inequalities and building more resilient social protection systems will be crucial for ensuring long-term economic and social stability (Katz, 2020).

CONCLUSION

Economic support had a linear regression standardized coefficient Beta of 0.475 with a t value of 7.148 which was statistically significant testing at 0.05 alpha level. The study therefore concluded that Economic support had positive influence in management of COVID-19 in Kilifi County, Kenya. Additionally, the study concludes that economic support enhances financial support and food access and fosters cooperation in pandemic response. This study further concludes that providing economic assistance is more impactful in increasing consumer confidence, whereas relief in debts and contracts contributes to confidence in developing economies.

Additionally, timely and adequately scaled economic support measures are crucial for mitigating the impact of crises. Swift action can help stabilize economies, protect livelihoods, and support recovery (Chetty et al., 2020). Comprehensive and inclusive support measures that reach all affected individuals and businesses are more effective in providing relief. Policies should be designed to address the needs of marginalized and vulnerable populations (Bitler, Hoynes, & Schanzenbach, 2020).

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