

Influence of Coronavirus (Covid-19) Control Strategies on Financial Performance of Private Pharmacies In Mandera County, Kenya

KhalifYussuf Hassan; Nyamboga Constantine and Ongoncho Samuel.

** School of Business and Economics, Lukenya University.*

***School of Business and Economics, Lukenya University*

**** School of Business and Economics, Lukenya University.*

Abstract

The onset of covid-19 pandemic brought about global suffering among the people and organizations. Millions of people lost their lives while others were hospitalized and in intensive care units across many hospitals. While the focus was in hospitals little attention was given on the influence of the pandemic on financial performance of private pharmacies especially in Mandera County hence the need for this study. This study achieved four objectives notably: influence of lockdowns on financial performance of private pharmacies in Mandera County; influence of social distancing on financial performance of pharmacies; influence of covid-19 preventive measures on financial performance of pharmacies and influence of quarantine on financial performance of private pharmacies respectively. Quantitative approach was adopted using the descriptive survey research design. Data was collected from the total population of 30 managers of pharmacies in Mandera County through questionnaires whose reliability was ascertained using Cronbachs Alpha Coefficient method at .92 for 25 items in the questionnaire. Data was analyzed descriptively using frequencies, percentages and means leading to generation of inferential statistics that was achieved through linear and multiple regression models formulated to measure the influence of Covid-19 control measures on financial performance of private pharmacies in Mandera county. The findings show that Lockdowns; social distancing, covid-19 preventive measures; and, quarantine significantly influenced financial performance of the private pharmacies. The multiple regression model yielded $R=.869$ and $R^2=.714$ suggesting that the model could explain 71.4 % of covid-19 influence on the financial performance of pharmacies. Consequently, all the four null hypotheses were rejected and the alternative hypotheses were adopted leading to the conclusion that the four Covid-19 control strategies significantly influenced the financial performance of private pharmacies in Mandera County. The findings are significant to the management of private pharmacies who can utilize them to develop and review strategic plans for their pharmacies to ensure that they are prepared to face emerging health pandemics in future such as the covid-19.

The County Government of Mandera can also utilize these findings to develop the public-private partnership (PPP) framework for all players in the health sector which is a devolved function. Information generated in this study is of invaluable use to researchers who will seek to establish the influence of health pandemics on the performance and productivity of organizations. In view of the findings of this study, it was recommended that the management of private pharmacies should reengineer their corporate social responsibility (CSR) frameworks to ensure that no drugs expire while in their stores by donating some medication to the needy before expiry. Finally, further research is recommended to assess the influence of covid-19 pandemic on the performance of public pharmacies in Mandera and neighboring counties.

Key Words: *coronavirus; control strategies, lockdowns; social distancing; quarantine; financial performance*

Date of Submission: 10-11-2022

Date of Acceptance: 25-11-2022

I. Introduction

Since the breakdown of novel Corona Virus Disease (COVID-19), lives were threatened and over 4 million lives lost. In response to this, World Health Organization issued policies and guidelines that were meant to curb the spread of the virus which in turn affected negatively the global economy including that of developed countries like Britain, United States, and Germany among others (Amewu, 2020). In addition to the WHO's directives, every country came up with strategies to control the spread of the Covid-19 which included lockdowns and curfews, social distancing, wearing of masks, isolation and self-quarantine, sanitizing and hand washing (Valaquez, 2022). At the helm of the pandemic was business turbulence which saw a shift from normal business operations to the uncertainties that were to befall the future. With the collapse of world trade network,

most businesses were left in a limbo and more so those that depend mostly on foreign trade. In most cases, the foreign exchange was direly affected and flow of cash disrupted leading to financial difficulties. Governments of the day to an extent felt the heat of the day as the rise in pandemic and the quest for economic well-being were the concern of the time (Seo, 2022).

Covid-19 did not hit the world in equal measure as some countries were affected more than others. For instance, the global economic growth was reduced by the pandemic in the year 2020 at the rate of -4.5% to -6.5%. Included in the deteriorating economy is the pharmaceutical sector which has equally suffered the loss (Jackson et al, 2021). United States and Brazil were among countries that were severely hit by the pandemic. However, countries like Taiwan, South Korea and Japan were not hit that too much with the pandemic. As most researchers established, every country in the world was to an extent affected with the presence of pandemic despite the level of infection. Given that there is no country that can depend on itself for everything to do with trade, imports and exports as well as internal businesses were direly affected in one way or another (Appleby, 2020).

In the wake of reality of the control strategies put in place by World Health Organization (WHO) respective governments, the world realized that business was not going to be business as usual especially, Small and Medium Enterprises (SMEs). Various industries like hotel, entertainment, learning institutions especially those that are private among others collapsed at high rate globally (Zainal et al, 2022). For instance, in America, nearly 30% of restaurant in California closed down in 2021 due to the covid-19 control strategies put in place. Similarly, in 75,000 businesses in the Ontario, Canada and 14% of businesses closed in United Kingdom (UK) were on the risk of closed due to the restrictions put in place for Covid-19 (Seo, 2022; Appleby, 2022).

In china, where covid-19 originated from, evidence indicates that business suffered through financial turbulence and closures. Businesses in China were marked by increased costs, prolonged operations and reduced cash flow as a result of control strategies that were put in place. At the end of 2021, about 4.17 million businesses in china had closed down while others were facing the risk of closure in the midst of the pandemic. Africa as a developing region saw its economy shrink by 2.1 percent in 2021. In Africa, almost every country experienced the harsh effects of Covid-19 especially on the economic part. The fact that Africa as a continent encompasses less developed countries, the reality associated with tough economic effects coupled with stringent Covid-19 control strategies spelt doom to SMEs. One of the key pillars that promote economic wellbeing in sub-Saharan Africa for instance is tourism. Given that the control strategies included lockdown, travel restriction, social distancing and isolation and self-quarantine, most hospitality industry suffered a lot affecting other industries across. By doing so, jobs were lost, profitability affected and traffic flow to shops and markets decreased (Agwanda et al, 201).

For instance, Ghana GDP in 2020 fell by 27.9% as a result of spillover effects of the restrictions put in place to curb the spread of the pandemic. Since the economy of the state was affected, 3.8 Ghanaians found themselves in the state of poverty. The reason was that some of the businesses closed down, some companies fired employees to reduce wage bill while some farmers would not find market network to sell their farm products (Amewu, 2020). Additionally, countries that depend mostly on foreign trade like Democratic Republic of Congo, which 60% of its business is foreign experienced the reality of travel restrictions, quarantines, lockdowns and other measures. As this was happening, the value of currency was depreciating while the prices of commodities they imported were appreciating. Besides that, most of the SMEs were collapsed given the supply chain was totally affected (Pinshi, 2020). The pharmaceutical sector in Africa nations which depends mostly on importations was shaken seriously since the inception of the pandemic. For instance, Nigeria depends more on medicine from china and India, the two nations with interest in Covid-19 progression; therefore, supply chain has been totally affected given the inter-country restrictions in place (Akande-Sholabi&Adebisi, 2015). Additionally, pharmaceutical businesses in Africa have been affected by government initiatives like lockdowns, curfews and free supply of some medical equipment, vaccines and personal protective equipment by the national governments (Jackson et al, 2021).

Kenya as a nation has not been spared either by the pandemic. As a matter of fact, economic status of the nation is wanting. A series of government initiatives aimed at curbing the spread of the virus has crippled every sector of the economy including the healthcare systems and more so private pharmaceutical businesses. For instance, the aspect of curfews and lockdown was a real threat to business operations in that it has been limiting people to explore various business environments. Most SMEs in Kenya were not prepared to face such scenarios of pandemics which occur ones in a lifetime. Therefore, the shake-up caught most business unaware leading to disruption of most of the businesses (Kiithia, 2020). Given the fact that business depend on each other, closure of some businesses have direly affected the pharmaceutical business. This, coupled with loss of jobs has siphoned the little money that people had out of pockets, hence, paralyzing operations of buying and selling of pharmaceutical products (Wangari et al, 2021).

II. Statement of the problem

Businesses operate to make profit; however, prevailing circumstances force business entities into losses. According to a study conducted by World Bank (2021), close to 93% of businesses in Kenya experienced decline in sales which dropped by about 50%. Furthermore, the report indicated that 65 % of the firms were experiencing decline in demand, cash flow and finance availability and expected sales to deteriorate further so long as stringent Covid-19 control strategies were in place. During the Covid-19 period, governments put in place control strategies such as lockdowns, preventive measures, social distancing and quarantine which were likely to influence the financial performance of businesses including those in the sector of healthcare provision. Private pharmacies play a major role in the sector of healthcare provision in Kenya. Across the country, healthcare providers experienced upsurge of demand for services and equipment that led to increased volume of services dispensed to patients and other stakeholders in the sector. The influence of covid-19 control measures on the financial management of over 12000 private pharmacies in Kenya has not been adequately documented, hence, the need for this study.

III. The purpose of the study

This study assessed the influence that the Covid-19 control strategies on financial performance of private pharmacies in Mandera County.

IV. Objectives of the study

The objectives of this study were to:

- a) establish the influence of lockdowns on financial performance of private pharmacies in Mandera County.
- b) determine the influence of social distancing on financial performance of private pharmacies
- c) establish influence of covid-19 preventive strategies on performance of private pharmacies
- d) determine the influence of quarantine on financial performance of private pharmacies.

V. Research Hypotheses

This study tested the following null hypotheses:

- i. H01: Lockdowns have no significant influence on financial performance of private pharmacies in Mandera County, Kenya
- ii. H02: Social distancing has no significant influence on financial performance of private pharmacies
- iii. H03: Covid-19 preventive measures have no significant influence on financial performance of private pharmacies
- iv. H04: Quarantine has no significant influence on financial performance of private pharmacies

VI. Research Design and Methodology

This study embraced the quantitative approach through the descriptive survey design. This design ensured that all appropriate quantitative information was collected by use of the questionnaire. The study targeted the entire population of managers of all 30 pharmacies in the area. According to Mugenda and Mugenda (2003), a research is allowed to use entire population as a sample when the population is small. Through questionnaires whose validity was determined by experts in the field of research, and reliability established using Cronbachs' Alpha Coefficient method at .93. The quantitative data obtained was analyzed using Pearson's Correlation Coefficient Alpha and regression analysis.

VII. Research Findings

Table 1 shows the quantitative findings on the four research objectives that were analysed using the Pearsons Correlation Coefficient method with the aid of the SPSS computer programme.

Table 1
Correlation between covid-19 control measures and financial performance of pharmacies

Variables	Performance	Lockdowns	Distancing	Prevention	Quarantine
Performance	1	0.691	0.703	0.603	0.733
Lockdowns	0.691	1	0.205	0.312	0.320
Distancing	0.703		1		
Prevention	0.603	0.111	0.312	1	0.211
Quarantine	0.733	0.320		0.211	1

Pearson Correlation (r)

Influence of Coronavirus (Covid-19) Control Strategies on Financial Performance ..

	Quarantine	0.733	0.121	0.320	0.211	1
	Performance	-	0.077	0.312	0.098	0.066
	Lockdowns	0.02*	-	0.073	0.160	0.082
	Distancing	0.01*	0.073	-		0.061
<i>p</i> -value	Prevention	0.04*	0.066	0.160	-	0.097
	Quarantine	0.03*	0.082	0.061	0.097	-

N= 24, $\alpha = 0.05$ *Significant at 0.05 level of confidence

Source: Filed data

The findings as shown in Table 1, for the four research objectives are as follows:

The first research objective was to establish the influence of lockdowns on financial performance of private pharmacies. Results of the Pearsons' Correlation Coefficient yielded a coefficient $r(24) = 0.691$, p -value = $0.02 < 0.05$ which depict a strong positive relationship that is significant at 5% level of confidence.

Similarly, the second research objective was to determine the influence of social distancing on financial performance of private pharmacies. The results show a coefficient $r(24) = .703$ p -value = $0.01 < 0.05$ depicting a strong positive relationship that is statistically significant at 5% level of confidence.

Likewise, the third research objective was to establish the influence of preventive measures on financial performance of private pharmacies. The results show a coefficient $r(24) = .603$, p -value = $0.04 < 0.05$ indicating a strong positive relationship and statistically significant at 5% level of confidence.

Finally, the fourth objective was to establish the influence of quarantine on financial performance of private pharmacies and a coefficient $r(24) = .733$, p -value = $0.3 < 0.05$ was obtained indicating a strong positive relationship and statistically significant at 5% level of confidence.

To test the four null hypotheses of this study, a multiple regression model was developed to ascertain the extent to which covid-19 control measures predicted financial performance of private pharmacies in Mandera County. The regression model summary is shown in Table 2.

Table 2
Regression statistics of covid-19 control measures and financial performance

	Adjusted R Square	Std. Error of the Model	R
		Square	Estimate
1	0.869	0.714	0.012
			0.293

a) Predictors: (Constant), Lockdowns , distancing, prevention and quarantine

b) Dependent Variable: Financial performance of private pharmacies

<i>Coefficients</i>					
Variables	B	Std. Error	Beta	t	Sig.
(Constant)	2.839	0.819	-	1.468	0.05
Lockdowns	1.012	0.785	0.025	2.136	0.05
Social distancing	3.041	0.792	0.045	2.254	0.05
Preventive measures	2.033	0.438	0.027	2.035	0.05
Quarantine	1.037	0.583	0.031	1.781	0.05

N= 24, $\alpha = 0.05$ * Significant at 0.05 level of confidence

Source: Field data

The multiple linear regression developed for the purpose of ascertaining the influence of all the four dependent variables on the financial performance of private pharmacies yielded a Pearsons' Coefficient $R = .869$ indicating a strong and positive relationship between Covid-19 indicators and financial performance of private pharmacies in Mandera county. The computed $R^2 = .714$ suggests that the four Covid-19 variants explained 71.4 % of financial performance of private pharmacies all other factors held constant. Adjusted R^2 also showed that covid-19 control measures explained 1.2% of the variation in financial performance of the private pharmacies.

The p-value computed by the statistical package for social sciences (SPSS) computer programme was .038 which was less than the critical p-values set at .05 confidence level. This led to the conclusion that covid-19 control measures *significantly influenced the financial performance of private pharmacies in the study locale*. The standard error of estimate (e) was established at .293 suggesting that there were other factors of the magnitude of .293 other than the four covid-19 factors that influenced the financial performance of private pharmacies. Some of these factors were not taken into consideration because only four hypotheses were formulated in this study. The contribution of the four covid-19 control measures to the financial performance of private pharmacies was indicated by $\beta=.065$ which shows that one unit change in the four Covid-19 control measures is expected to cause .065 change in the financial performance of private pharmacies in Mandera County

VIII. Interpretations and Discussions

The findings of this study contribute to existing literature on Covid-19 and its implications on business organizations in African Countries. Studies conducted in South Africa, Egypt, Algeria, Nigeria, Senegal and Kenya underscores the significance of covid-19 control measures such as inpatient quarantine, contact tracing, control over population movement, and interventions from the government and assistance from overseas (Zang et al, 2020). These studies established that such control measures were viable in contexts where the infection was serious. Additionally, the findings of this study contributes to the existing literature by proving empirical information on the influence of specific Covid -19 control measures on financial performance of private pharmacies in Mandera County.

Some studies show that financing of health services was not directly affected by Covid-19 control measures (Barasa et al, 2021). Other studies acknowledge that covid-19 impacted negatively on the performance of businesses (Bularafa&Adama, 2020; Kaberia&Muathe, 2020; Hazima, 2019). Businesses reacted to lockdown measures by reducing the number of employees (Lastauskas, 2021), remote working, adjusted supply networks, and managed operations with minimal resources (Bhattacharyya &Thakre, 2021). The severity of Covid-19 control measures depended on the seriousness of the pandemic in those countries (Tison et al, 2020). The findings of this study that lockdowns significantly influenced financial performance of private pharmacies is in agreement with findings from studies by Bularafa and Adama (2020); Hazima (2019); Kaberia and Muathe (2020); Lastauskas (2021) and Ngwacho (2020) respectively.

In other studies, social distancing was found to lead to reduced buying uncertainties, depreciation in the value of products and disrupted flow of people (Kumar et al, 2020). As a result, businesses were forced to change the manner in which they advertised their goods. Some other businesses resulted in product innovations (Christa and Kristae (2021) which had significant effect on the performance of product-based business. Working from home was also common during the pandemic period. Research on this phenomenon by Zang, Garlowski and Acs (2021) established that working from home had significantly negative effect on the performance of businesses. Available literature underscores the negative impact of social distancing on businesses. The findings of this study agrees with those of Christa and Kristae (2021); Koren (2020); Kumar et al (2020); and Zang, Garlowski and Acs (2021) respectively. However, the research findings of this study are specific to the influence of covid-19 control measures on financial performance of private pharmacies in Mandera County.

Research on covid-19 preventive measures such as masks, hand washing, putting on PPEs and sanitizing were found to be costly to both the public and businesses (Lazzarino et al, 2020). Business on these materials flourished during the high periods of the pandemic and slackened during the low periods of the pandemic (Magani, 2020). Even during the high periods, the consumption of these materials depended on government requirements that made it mandatory for people to use them in social places (Cotrin et al, 2021). Other studies found out several side effects of using masks (Lazzarino et al, 2020) while other studies underscored the significance of using masks (Ngonghala, 2020). The use of PPEs was found to be a costly affair for businesses (Kamerow, 2020). The findings of this study that covid-19 preventive measures significantly influence financial performance of private pharmacies is consistent with conclusions made by Lazzarino et al (2020) and Kamerow (2020).

Research studies show that Quarantine was forcibly imposed by governments raising legal issues on the manner in which they were enforced (Gostin& Wiley, 2020). Quarantine led to loss of hope in doing business, emotional disturbance, social complications, adapting to new changes and generally failure to enjoy life amongst people. Mandatory quarantine measures did more harm to business owners than good because the effects of such stringent measures were collapse of some businesses. Travel restrictions also affected the performance of the tourism market (Aburumman, 2020). The finding of this study that quarantine significantly influenced financial performance of private pharmacies agrees with the findings of Aburumman (2020) and Gostin and Wiley (2020). However, this study provides a focused view on how quarantine measures impacted on financial performance of private pharmacies in Mandera County.

IX. Conclusions and Recommendations

In the light of the research findings of this study, the following four conclusions policy recommendations and suggestions for further research were made:

Conclusions

The first finding that lockdowns significantly influence financial performance of private pharmacies was expected given the fact that this Covid-19 control measure denied customers access to the pharmacies for their services. Even in cases where delivery of medication was not restricted, logistical delays could eventually lead to decline in sales. Although lockdowns did not directly affect the operations of the pharmacies, they indirectly affected the volumes of sales and hence decreasing their profit margins.

The second finding that social distancing significantly influences financial performance of private pharmacies led to the conclusion that lockdowns affected private pharmacies like it did to other general businesses despite the fact that pharmacies were major players in fighting covid-19 pandemic. The cost of providing their products and services rose as a result of declining demand leading to reduction of profits, losses and staff layoff in order to stay afloat as was reported by most managers.

Similarly, the third finding that covid-19 prevention measures such as personal protection gear, fumigation, use of masks, and handwashing significantly influenced financial performance of private pharmacies led to the third conclusion that although the preventive measures imposed additional expenses to pharmacies directly, they may have also contributed indirectly through impacting on the clientele of pharmacies in a similar manner. The effects of that were felt by the general businesses and the general public was similar to those that private pharmacies experienced during the pandemic period.

The fourth and last finding that quarantine significantly influenced financial performance of private pharmacies led to the fourth conclusion that quarantine affected pharmacies adversely especially where the staff was involved. During the pandemic period, if any of the staff was suspected of contracting the disease, all close contacts were put on quarantine for a period during which the operations of the pharmacy are halted. Given that pharmacies were frontline players in the fight against the pandemic, they were thus exposed and quarantine was a real risk that faced the pharmacies.

The ability of pharmacies to withstand a pandemic was tested and the findings of this study points to the need for private pharmacies to boost their level of preparedness through forward planning. The effects of covid-19 on the already worsened unemployment situation were also apparent in this study. All pharmacies had laid off some staff and most them are yet to stabilize in the post covid19 period so as to recall back their laid off staff. In periods of pandemics, pharmacies as major players should not be negatively affected as the situation presents an opportunity for growth that should never be missed. As the country is recovering from the negative effects of the pandemic, private pharmacies in Mandera County should reflect on the damage borne so far and proactively undertake the process of developing and reviewing strategic plans to forecast their business within likely future uncertainties.

Policy recommendations

- a) The County Government of Mandera should endeavour to partner with private pharmacies with a view to assist them develop a framework for their sustained participation in providing quality products and services now and in future especially during pandemic periods
- b) The management of private pharmacies should seek to develop and revise their strategic plans to boost their level of preparedness to face any likely future health pandemics such as the covid-19
- c) The management of private pharmacies should reengineer their corporate social responsibility (CSR) frameworks to ensure that no drugs expire while in their stores by donating some medication to the needy before they expire.

Recommendations for further research

Further research is recommended to assess the influence of covid-19 pandemic on the performance of public pharmacies in Mandera and neighboring counties.

References

- [1]. Abd-Elsayed, A., & D'Souza, R. S. (2022). The Burden of Coronavirus Disease 2019–Related Cases, Hospitalizations, and Mortality Based on Vaccination Status and Mandated Mask Use: Statewide Data from Wisconsin and Narrative Review of the Literature. *Anesthesia & Analgesia*, 134(3), 524-531.
- [2]. Akande-Sholabi, W., & Adebisi, Y. A. (2020). The impact of COVID-19 pandemic on medicine security in Africa: Nigeria as a case study. *The Pan African Medical Journal*, 35(Suppl 2).
- [3]. Agwanda, B., Dagba, G., Opoku, P., Amankwa, M. O., & Nyadera, I. N. (2021). Sub-Sahara Africa and the COVID-19 Pandemic: Reflecting on Challenges and Recovery Opportunities. *Journal of Developing Societies*, 37(4), 502-524.
- [4].

- [5]. Amewu, S., Asante, S., Pauw, K., &Thurlow, J. (2020). The economic costs of COVID-19 in subSaharan Africa: insights from a simulation exercise for Ghana. *The European Journal of Development Research*, 32(5), 1353-1378.
- [6]. Appleby, J. A., King, N., Saunders, K. E., Bast, A., Rivera, D., Byun, J., ...& Duffy, A. C. (2022). Impact of the COVID-19 pandemic on the experience and mental health of university students studying in Canada and the UK: a cross-sectional study. *BMJ open*, 12(1), e050187.
- [7]. Aquino, E. M., Silveira, I. H., Pescarini, J. M., Aquino, R., Souza-Filho, J. A. D., Rocha, A. D. S., ... & Lima, R. T. D. R. S. (2020). Social distancing measures to control the COVID-19 pandemic: potential impacts and challenges in Brazil. *Ciencia&saudecoletiva*, 25, 24232446.
- [8]. Barasa, E., Kazungu, J., Orangi, S., Kabia, E., Ogero, M., &Kasera, K. (2021). Indirect health effects of the COVID-19 pandemic in Kenya: a mixed methods assessment. *BMC Health Services Research*, 21(1), 1-16.
- [9]. Bularafa, B. A., &Adamu, U. G. (2021).Effect of COVID-19 pandemic on SME Performance in Nigeria.*Advanced International Journal of Business, Entrepreneurship and SMEs*, 3(7), 7592.
- [10]. Bhattacharyya, S. S., &Thakre, S. (2021). Coronavirus pandemic and economic lockdown; study of strategic initiatives and tactical responses of firms.*International Journal of Organizational Analysis*.
- [11]. Christa, U., &Kristinae, V. (2021).The effect of product innovation on business performance during COVID 19 pandemic.*Uncertain Supply Chain Management*, 9(1), 151-158.
- [12]. Cotrin, P., Bahls, A. C., da Silva, D. D. O., Girão, V. M. P., Pinzan-Vercelino, C. R. M., de Oliveira, R. C. G., ... &Freitas, K. M. S. (2020). The use of facemasks during the COVID-19 pandemic by the Brazilian population.*Journal of multidisciplinary healthcare*, 13, 1169.
- [13]. Enesi, O. E., & Ibrahim, U. A. (2021).Effect of COVID-19 Pandemic on the performance of small and medium business enterprises in Abuja-FCT, Nigeria.*Open Journal of Business and Management*, 9(5), 2261-2276.
- [14]. Fairlie, R. (2020). The impact of COVID-19 on small business owners: Evidence from the first three months after widespread social-distancing restrictions. *Journal of economics & management strategy*, 29(4), 727-740.
- [15]. Gostin, L. O., &Wiley, L. F. (2020). Governmental public health powers during the COVID-19 pandemic: stay-at-home orders, business closures, and travel restrictions. *Jama*, 323(21), 2137-2138.
- [16]. Hamiza, O. (2020). The Impact of Coronavirus Lockdown on Small Scale Businesses in Arua Municipality, Uganda.*International Journal of Science and Research*, 9(8), 1239-1248.
- [17]. Kamerow, D. (2020). Covid-19: the crisis of personal protective equipment in the US. *BMJ*, 369.
- [18]. Kenya National Bureau of Statistics [KNBS] (2019) Economic Survey 2019.Republic of Kenya.
- [19]. Kithiia, J., Wanyonyi, I., Maina, J., Jefwa, T., &Gamoyo, M. (2020). The socio-economic impacts of Covid-19 restrictions: Data from the coastal city of Mombasa, Kenya. *Data in brief*, 33, 106317.
- [20]. Koren, M., &Petó, R. (2020).Business disruptions from social distancing.*Plos one*, 15(9), e0239113.
- [21]. Kumar, A., Gawande, A., &Brar, V. (2020).Impact of Social Distancing on Marketing Communication.*Vidyabharati International Interdisciplinary Research Journal*, 11(2), 267270.
- [22]. Lastauskas, P. (2021). Lockdown, employment adjustment, and financial frictions. *Small Business Economics*, 1-24.
- [23]. Lazzarino, A. I., Steptoe, A., Hamer, M., &Michie, S. (2020). Covid-19: important potential side effects of wearing face masks that we should bear in mind. *The BMJ*, 369.
- [24]. Lutfi, M., Buntuang, P. C. D., Kornelius, Y., &Hasanuddin, B. (2020).The impact of social distancing policy on small and medium-sized enterprises (SMEs) in Indonesia.*Problems and Perspectives in Management*, 18(3), 492.
- [25]. Matuschek, C., Moll, F., Fangerau, H., Fischer, J. C., Zänker, K., van Griensven, M., ...& Haussmann, J. (2020). Face masks: benefits and risks during the COVID-19 crisis. *European journal of medical research*, 25(1), 1-8.
- [26]. Mikulic, M. (2019).Global pharmaceutical industry–Statistics & facts.Statista.
- [27]. Ngonghala, C. N., Iboi, E. A., &Gumel, A. B. (2020). Could masks curtail the post-lockdown resurgence of COVID-19 in the US? *Mathematical biosciences*, 329, 108452.
- [28]. Ngwacho, A. G. (2020). COVID-19 pandemic impact on Kenyan education sector: Learner challenges and mitigations. *Journal of research innovation and implications in education*, 4(2), 128-139.
- [29]. Orodho, J.A (2017). Techniques of writing research proposals and reports in education and social sciences. An illustrative guide to scholarly excellence. Nairobi. Kanazja Publishers
- [30]. Ouma, A. M. (2018). Influence of value disciplines strategy on the management of efficiency levels in the pharmaceutical industry in Kenya (Doctoral dissertation, JKUAT).
- [31]. Parent-Lamarche, A., &Boulet, M. (2021). Workers' stress during the first lockdown: consequences on job performance analyzed with a mediation model. *Journal of Occupational and Environmental Medicine*, 63(6), 469.
- [32]. Pinshi, C. (2020). What impact does COVID-19 have on the Congolese economy and international trade?
- [33]. Purba, M., Simanjutak, D., Malau, Y., Sholihat, W., &Ahmadi, E. (2021).The effect of digital marketing and e-commerce on financial performance and business sustainability of MSMEs during COVID-19 pandemic in Indonesia.*International Journal of Data and Network Science*, 5(3), 275-282.
- [34]. Runfolo, A., Milanese, M., &Guercini, S. (2021).Rethinking interaction in social distancing times: implications for business-to-business companies.*Journal of Business & Industrial Marketing*.
- [35]. Seo, S. N. (2022). The COVID-19 Pandemic as a Globally Shared Experience: An Introduction. In *The Economics of Pandemics* (pp. 1-44). Palgrave Macmillan, Cham.
- [36]. Tison, G. H., Avram, R., Kuhar, P., Abreau, S., Marcus, G. M., Pletcher, M. J., &Olgin, J. E. (2020). Worldwide effect of COVID-19 on physical activity: a descriptive study. *Annals of internal medicine*, 173(9), 767-770.
- [37]. Velásquez, G. (2022). The World Health Organization Reforms in the Time of COVID-19.In *Vaccines, Medicines and COVID-19* (pp. 93-108).Springer, Cham.
- [38]. World Bank. (2021). Socioeconomic Impacts of COVID-19 in Kenya on Households: Rapid Response Phone Survey, Round 1. World Bank.
- [39]. Zainal, M., Bani-Mustafa, A., Alameen, M., Toglaw, S., & Al Mazari, A. (2022). Economic
- [40]. Anxiety and the Performance of SMEs during COVID-19: A Cross-National Study in Kuwait. *Sustainability*, 14(3), 1112.
- [41]. Zhang, T., Gerlowski, D., &Acs, Z. (2022). Working from home: small business performance and the COVID-19 pandemic.*Small Business Economics*, 58(2), 611-636.
- [42]. Zhao, Z., Li, X., Liu, F., Zhu, G., Ma, C., & Wang, L. (2020). Prediction of the COVID-19 spread in African countries and implications for prevention and control: A case study in South Africa, Egypt, Algeria, Nigeria, Senegal and Kenya. *Science of the Total Environment*, 729, 138959.