

Effect of COVID-19 Stay at Home Requirement on Household Incomes in Uasin Gishu County, Kenya



Peris Jerop Talam¹, Dr. Richard K. Siele², Dr. Issacs Kipruto KEMBOI³

^{1,2,3} MOI University, Kenya

ABSTRACT: Pandemics are not a new phenomenon since they have happened numerous times throughout human history. Due to the globalization and interconnectedness of the business world today, the steps taken by governments around the world to stop the Corona Virus Disease 2019 (COVID-19) from spreading resulted to minimal movement of people and products, impacting business activities in Kenya. Although COVID-19 containment measures including stay at home requirement contributed to the reduction of coronavirus infection globally, household incomes were at risk due to the pandemic's effects on business operations and economic activities. The study sought to analyze effect of COVID-19 stay at home requirement on household incomes in Uasin Gishu County, Kenya. The study was anchored on the relative income theory which guided the specification framework. An explanatory research design was adopted based on 304, 943 households with a sample of 399. The data was collected using structured questionnaires issued to household heads using simple random sampling. Correlation results indicated a strong negative significant correlation between stay-at-home requirement and household income ($r = -0.570, p = 0.00 < 0.05$). OLS results indicated that stay-at-home requirement coefficient had a negative significant effect ($\beta = -0.343, p = 0.00 < 0.05$) on household income. The study concluded that COVID-19 stay at home requirement affected household incomes for Uasin Gishu County, Kenya households suggesting that the restrictions imposed to curb the menace extensively led to job loss and reduction in income.

KEYWORDS: COVID-19, Household Incomes, Stay at Home Requirement, Economy

INTRODUCTION

The COVID-19 stringent containment measures imposed by the Government of Kenya to curb the spread of the coronavirus had various implications on the household income. According to Kithiia *et al.*, (2020), restrictions to movement affected people's day-to-day activities resulting in financial losses in the coastal city of Mombasa. Business failures, debt and mortgage repayment default, layoffs/redundancies, alongside lack of credit access as a result of the strain caused on financial institutions by credit defaulters and declining cash flows/deposits were also experienced by business persons in Kenya during the pandemic (Issaias *et al.*, 2020).

In Kenya, the government declared stay at home directive to control the spread of coronavirus disease. All employers were encouraged to allow their staff to work from home with the exception of workers offering services that are essential hence cannot be delivered remotely (Muragu *et al.*, 2021). Although some individuals may be better positioned to face the challenges caused by government imposed stay at home requirement, others may not have the financial capacity to weather the storm. The study, therefore, sought to determine the effect of covid-19 stay at home requirement on household income in Uasin-Gishu County.

COVID-19 in Kenya, Economic Effects and Policy Response

On March 13, 2020, Kenya confirmed the first case of COVID-19 infection. The patient was a tourist who had recently traveled from London a week earlier. As of the 27th of April in the year 2020, there were a total of 363 confirmed cases, 114 recoveries, and 14 fatalities (12 males and 2 females) (Nanyingi, 2020). The majority of cases were caused by local transmission, which accounted for 58 percent of all cases, while imported cases made up 42 percent (Nanyingi, 2020). The outbreak began in Nairobi and expanded to 12 additional counties, with the cities of Nairobi and Mombasa recording the highest number of cases (235 and 93, respectively) (Nanyingi, 2020). As of 6th December 2021, Nairobi had the highest confirmed COVID-19 cases in Kenya, followed by Kiambu, Mombasa, Nakuru and Uasin Gishu with 102193, 16431, 15558, 13260 and 8583 confirmed cases,

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respectively (Statista, 2022). Males were infected at a higher rate (65 percent), than women at (35 percent) from March to July 2020 (Bedson, *et al.*, 2021). The response to COVID-19 is being coordinated by a multi-sectoral group known as the National Emergency Response Committee (NERC). This committee is comprised of representatives from the sectors of health, security, education, transportation, finance, and trade. The National Environmental Research Council (NERC) created protocols for case management, infection control, and surveillance after selecting certain health facilities, public and private laboratories, and isolation centers.

From the time the first incident of COVID-19 was discovered in Kenya on March 13, 2020, the country has suffered massive economic losses with regard to GDP and job losses, comparable to other countries across the world (Odhiambo *et al.*, 2020). Whereas the effects of COVID-19 have already started to be experienced in Kenya, the virus's entrance has heightened the nation's economic troubles. Financial market performance, disturbance of worldwide supply chains, currency volatility, a decline in diaspora remittances, and adjustments in monetary and fiscal policy are all signs that COVID-19 has had a detrimental influence on Kenya's economy.

The Central Bank's Monetary Policy Committee convened on March 23, 2020, with the goal of examining the outcomes of its previous policy choices in light of recent economic events. The committee decided to cut the Central Bank Reference Rate from 8.25 percent to 7.25 percent (Siringi, 2021). This action aimed at encouraging banks to lend more money into the economy, resulting in increased cash circulation. However, if economic activity in the country declines, resulting in individuals lacking money, weak purchasing power will inevitably result, hurting the economy.

LITERATURE REVIEW

Relative Income Theory

J.S. Duesenberry, an American economist, proposed a theory of consumer behavior in 1949 that emphasizes an individual's relative income rather than his absolute income as a predictor of his consumption. Duesenberry upholds that consumption decisions are driven by relative consumption concerns.

According to the hypothesis, during boom, consumption increases in accordance with the increase in income. At peak income levels, individuals are adapted to high standards of living, and they are not prepared to reduce their consumption patterns during recession. A fall in income will lead to a decline in consumption spending, although proportionately less than the decrease in income. This is because, according to Duesenberry, people attempt to keep their consumption at the highest level they've reached previously (Drakopoulos, 2021). During recovery period, consumption increases rapidly with increase in savings due to the rise in income in what is called the ratchet effect.

Empirical Literature

The directives to stay at home were designed to promote social distancing in the hopes of halting the pandemic's spread. Additionally, these orders aimed to lower the effective reproduction number (R), hence lowering the pandemic transmission rate (Anderson *et al.*, 2020; Chen *et al.*, 2020; Painter and Qiu, 2020; Prem *et al.*, 2020). In Kenya, when the COVID-19 pandemic struck, the government of Kenya declared stay at home directive to control the spread of coronavirus disease. All employers were encouraged to allow their employees to work from home with the exception of workers offering services that are essential hence cannot be delivered remotely (Kenya Department of Foreign Affairs, 2021). According to Mervosh, Swales & Swales (2020), working from home has helped workers continue working during the COVID-19 pandemic. Despite this, working from home has affected wage distribution and income inequality. According to Bonacini *et al.*, (2021), working from home resulted in a rise in average labour income, which was not equally distributed among Italian employees. Besides, working from home favored older, male, highly educated, and highly paid employees.

METHODOLOGY

Research Design

This study adopted an explanatory survey research design. A survey design involves a cross-sectional collection of insightful information from a spread out population at a particular interval (Setia, 2016). Cross-sectional survey research design was chosen because it enables the researcher to gather information regarding respondents' opinions, attitudes and perceptions on the effects of stay at home requirement on households' income in Uasin Gishu County at a particular time interval.

Target Population

Study population refers to the entire group of individuals, objects, items, cases, articles or things with common attributes or characteristics from which samples are taken for measurements. The target population for this study comprised all 304,943 households in Uasin Gishu County, Kenya (Kenya Population and Housing Census, 2019).

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Sampling Technique and Sample Size

The sample size being a representation of the target of 304,943 household population as at December 2020 was determined using Taro Yamane's (1967) formulae, whereby a sample size of 399 participants from the 304,943 household heads was obtained.

$$n = \frac{N}{1 + N(e)^2} \dots\dots\dots 3.3$$

Where N = population size, n = Sample size, e = Margin error of the study set at ± 5%. Applying this formula, the sample size is calculated as follows:

$$n = \frac{304943}{1 + 304943 (0.05)^2} = 399.47 \approx 399$$

Data Collection Procedures and Instrumentation

The data collection technique for the study was a closed-ended questionnaire that was designed to capture the study objectives. A questionnaire was chosen since it offers a high level of data uniformity and adoption of generalized information amongst any population (Chandran, 2004). It was also selected since it is time-efficient, simple to administer, and easy to analyze (Mugenda and Mugenda, 2003).

The questionnaire was divided into five parts, Part A capturing demographic characteristics and Part B to E capturing the opinions, perceptions and attitudes of households about the effects of stay at home requirement on household incomes. Section B to E has a 5-point Likert scale (1=strongly disagree, 2=disagree 3=neutral, 4=agree and 5= strongly agree) that was used to solicit respondents' perceptions and opinions regarding the effects of stay at home requirement on households' income in Uasin Gishu County.

Estimation of Parameters

In this study, a multiple regression model was used. The study employed the Ordinary Least Square (OLS) regression technique for the data obtained at the given point in time. OLS is useful for parameter estimation of functional relationships (Pavelescu, 2004). The model used is specified in equation 3.4

$$Y = F(X_i) \dots\dots\dots 3.4$$

Where; Y = Dependent Variable, X_i = Independent Variables (i = 1,2,3,.....n)

In this study, a multiple regression model was used as specified in 3.5

$$Y_i = \beta_0 + \beta_1 X_1 + \varepsilon_i \dots\dots\dots 3.5$$

Where;

Y_i =Households' income in Uasin Gishu County

X₁ = Stay at home requirement

β₀ = Constant

β₁ = Model coefficients of stay at home requirement

ε_i = error term

RESEARCH RESULTS AND DISCUSSION

Research Results

Reliability Coefficients

Reliability coefficient for household income was 89.5 percent, and stay at home requirement at 86.3 percent consistency.

Correlation Analysis

The results for correlation analysis is presented in Table 4.10

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Table 4. 1: Pearson Correlation Coefficients

		HI	SHR
HI	Pearson Correlation	1	
	Sig. (2-tailed)		
SHR	Pearson Correlation	-0.570**	1
	Sig. (2-tailed)	0.000	

Source: (Survey, 2022)

The study's correlation results showed that household income had a significant and negative association with stay-at-home restriction at 5% level of significance, ($\rho = -0.570, p < 0.05$). This implied that the more people stayed at home, household income reduced.

Regression Analysis

Before testing for the hypotheses, ordinary least square model was estimated, and results are as shown in Table 4.11

Table 4. 2: Regression Results

Coefficients					
Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	Beta (β)	Std. Error	Beta (β)	Std Error	
(Constant)	0.870	0.198		4.403	0.000
Stay at home restrictions (SHR)	-0.343	0.035	-0.410	-9.734	0.000

Source: (Survey, 2022)

From the model estimation $ADJ.R^2 = 0.431$, F -statistic = 101.537 with a significant probability $0.000 < 0.05$ indicated that the model used is robust and the explanatory variables fit the study. The results obtained can be depicted in form of an equation as follows

$Household\ Income = 0.870 - .343SHR$ Where SHR = stay-at-home requirement.

The results showed that the intercept coefficient was positive and significantly determined household income at a 5% level of significance. The intercept is the parameter in an equation obtained from a regression that corresponds to the predicted value of the response value when all independent variables are set to zero (Everitt, 2002). The regression equation revealed that the intercept coefficient was 0.877 when stay-at-home requirement was held to a constant zero.

DISCUSSION

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The regression results on stay-at-home requirement coefficient was negative and statistically significant, -0.343 , $p = 0.000 < 0.05$. The study eludes that when people were commanded to stay at home as a way of preventing the spread of corona virus, they could no longer work. Those who were able to work at home got their salary reduced. Those who used to get overtime salaries faced another shock as they could not earn it anymore. All this outrage led to the reduction of household income which had a direct impact on the people's level of living. The results of the study tally with the findings of Gondwe, (2020) in his study on the impact of Covid-19 on Africa's economic development. The study argued that the pandemic-prevention efforts have a variety of effects on African economies, including a reduction in both state revenue and merchandise exports, which are anticipated to decline by nearly 17 percent in 2020.

Mueller *et al.*, (2021) concluded that the stringent lockdown requirements implemented in China at the start of the year, followed by additional restrictions in Europe and the United States, have had a substantial influence on the worldwide flow of products and people, with considerable ramifications for international trade and tourism. In their study on food security and welfare changes under COVID-19 in Sub-Saharan Africa a case of Kenya, Nechifor *et al.*, (2021) argued that strict containment policies may harm developing countries. Poor families have limited money and food supplies, are unable to perform their jobs remotely, and are dependent on the cash generated by their day-to-day labor. Consequently, being stranded during a lockdown puts them at danger of falling into abject poverty. Pinchoff, *et al.*, (2021) concluded that the COVID-19 pandemic is expected to

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cause one of the greatest international economic downturns in decades, with the global economy requiring several years to return to pre-COVID-19 levels.

According to Turner (2010), alterations in consumer behavior occurred as a direct result of the impact the pandemic had on productive economic activity, as well as the fear and hysteria that accompanied the outbreak. This was mostly the result of falling incomes and worsening household financial situations, as well as the accompanying anxiety and panic caused by the outbreak. The study by Nafees & Khan (2020) on Pakistan's Response to COVID-19 Pandemic and Efficacy of Quarantine and Partial Lockdown argued that disease control and suppression through non-pharmaceutical treatments, like lockdowns, have resulted in loss of jobs and food shortages in many underdeveloped nations. Enforcing lockdowns creates a paradox: it is necessary to halt the spread of the infection and "flatten the curve," but individuals at the bottom of the income scale will have a difficult time surviving as a result of the economic repercussions.

In addition, national and household food security and nutrition will suffer, owing to a loss or decline in household income (both official and informal). The findings of this study add to the local proof on the effect of COVID-19 on earnings and food security. This research adds to statewide surveys documenting the pandemic's impact on Zambians' economic livelihoods in both rural and urban areas in real time, as well as tracking food consumption trends over time. This is so that empirical evidence may be used to drive government policy interventions. According to Diao and Mahrt, (2020), COVID-19 has wreaked havoc on health and economic systems around the world, with diverse effects across different economic sectors. According to projections for the pandemic's impact in early 2020, developing nations in the global south with historically inefficient systems could be the hardest hit, as the pandemic's demand on health, food, and economic systems will expose weaknesses in their economies.

CONCLUSION

Based on the results of research and discussion through the proof of the hypothesis. The conclusions of the study is that stay-at-home requirement has a negative and statistically significant effect on the household income in Uasin Gishu County Kenya

SUGGESTION

Suggestions that can be given by researchers for the perfection of further research are:

1. Since this study covered the period up to 2021, the study recommends research covering the post-pandemic period to determine how the household income has behaved after the COVID-19 restrictions were lifted.
2. Since this study used the Ordinary Least Squares method of regression, the study recommends the usage of other models, including the General Method of Moments

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