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Household Responses to COVID-19 Shocks: A Food Security Implication in Kenya

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Abstract

The primary objective of this study was to determine household coping mechanisms under COVID-19 pandemics and its implication on food security in the country. Poisson regression model was used to describe the relationship among a set of constructs that influence households meal count per month. The study identified coping strategies, credit listing and job loss as significant factors that determine the number of meals per month by various household. The study notes that the economic impact of Covid-19 has disproportionally impacted various households in the country differently based on their differential in their socio-economic status and their livelihood strategies. Based on this, it is important to understand the impact of this pandemic as well as the coping strategies employed by different household strata as they navigate the shocks of the pandemic. To combat this pandemic, households have shifted into more drastic coping mechanism to smoothen their consumption curve. More importantly, households have proportionally coped with the Covid-19-induced income shocks by changing their dietary patterns, which is also the most used coping strategy among the wage earners and those depending on transfer payments. Increased borrowing has also emerged as a major caution especially from the digital lenders who are less concerned about collateral. While this pandemic seems to continue into the foreseeable future, a raft of measures is recommended to caution the poor households against the pandemic. Protracted blanket lockdowns by the government should be the measures of last resort. Re-focusing on localized measures of 'smart containment' that both respond to the health crisis and limit economic consequences should be the focus.

Keywords: ***Covid-19; Coping mechanisms; Poor households; Localized measures***

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1. Background Information

The first case of Covid-19 was first reported in Kenya on March 13th, 2020, and this case triggered a lot of holistic measures by both the government and the households in the country to caution individuals against the effects of the pandemic [1]. These measures comprised country-wide partial lockdowns and curfews to limit the movement of individuals, suspension of international passenger flights, a ban on public gatherings, closure of all learning institutions, hotels, restaurants, and places of worship.

To cushion the Kenyan citizens against the adverse economic effects of the pandemic, the governments of Kenya (GoK) announced a 100% tax relief for individuals earning a gross monthly income of Ksh. 24,000 or less, reduction of the income tax rate from 30% to 25%, reduction of resident income tax from 30% to 25%, reduction of the turnover tax rate from 3% to 1% for all small and medium enterprises, and suspension of credit reference bureau listing for loan defaulters [2].

Further, the GoK announced the reduction of the value-added rate from 16% to 14% and an appropriation of Ksh.10 billion to the elderly, orphans, and other vulnerable members of the society [3]. In May 2020, the GoK further announced a post Covid-19 economic stimulus package of 53.7 billion shillings to support businesses that have been hit by the pandemic. While these measures seem lucrative at phase value, they came at a point when the economic situation of the country was crippling coupled by a swarm of desert locust invasion [4]. The reality is that majority of the Kenyans are unemployed and operates both in agricultural practices and the informal sectors. The interdependence between the employment and the other sectors has been crucial in the sustenance of both rural and urban households. The firms provide income to the households in return of goods and services they provide.

A study done by Kansiime *et al.*, [5] on Covid-19 implications on household income and food security in Kenya and Uganda reported the effects of the pandemic more on complete job loss and cessation of remittances as economic implications of the pandemic. With most households laid off from labor force, this means a decline in disposable income of the general households and the multiplier effect of this has been felt by all other sector of the economy in the country. Given that agriculture in Kenya is central to the economy as it produces a third of the country's GDP and employs more than half of the labor force [6], a drift in the sector translates to a great implication on the food security especially on the disadvantaged urban households.

The pandemic has had a devastating impact on both rural and urban household. When the lock down was announced, many urban dwellers fled to their rural homes in anticipation of economic go slow in their businesses. The implication of this meant that the few who were left had their businesses weakened as most of the customers went away leaving them in survival mode. On the other hand, those in the rural areas who used to supply their farm products to schools were left with no market as the schools closed.

The closure of those markets within the rural areas, urban and peri-urban areas, has disrupted food supply systems, especially for fresh produce. The impact is felt most by low-income rural and urban households which rely on these informal food markets. The same scenario is depicted by middle- and higher-income families who are unable to buy fresh produce from supermarkets and grocery shops due to the reduction in their disposable income.

2. Methodology

Nyeri County was selected purposively as the universe of the study. The county was later stratified into various strata each to represent a rural and urban setup. A household survey was undertaken between March and May 2021 from the two social set ups. Stratified and simple random sampling was used to select households to be interviewed from the rural and urban geographical locations of the households. A total of 139 households were randomly selected from two sub-counties in the county. According to the objective of the study, a well-structured questionnaire was developed through a consultative process and an interview schedule organized thereafter. Poisson regression model was used using Stata software to describe the relationship between the meal count per month (Maximum being 90) and other explanatory variables and conclusions then inferred from these analyses. The following model was estimated:

$$MC = \beta 0 + \beta_1 GENDER + \beta_2 ES + \beta_3 GR + \beta_4 CS + \beta_3 CRB + \varepsilon$$

Where;

MC= Meal Count per month (standard meal per day assumed to be 3 times)

β_0 = Constant

β_i = Coefficient for X_i = (i=1,2,3)

ES= Employment Status

GR = Geographic Region

CS = Coping Strategies

CRB = Credit Reference Bureau listing

3. Results and Discussions

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Poisson regression                              Number of obs     =        139
                                                LR chi2(7)        =      68.59
                                                Prob > chi2       =     0.0000
Log likelihood = -748.05654                     Pseudo R2         =     0.0438
```

mealcount	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
employementstatus						
employed	-.0375973	.0912804	-0.41	0.680	-.2165035	.141309
gender						
male	.0878101	.0611264	1.44	0.151	-.0319954	.2076156
geographicalregion						
rural area	.0881661	.0472321	1.87	0.062	-.0044071	.1807392
jobloss						
yes	.3687264	.0596082	6.19	0.000	.2518964	.4855564
copingstrategies						
meal reduction	-.2439965	.0528905	-4.61	0.000	-.34766	-.1403331
relocation	-.1825271	.0563207	-3.24	0.001	-.2929137	-.0721406
creditlisted						
yes	-.1423697	.0542247	-2.63	0.009	-.2486481	-.0360914
_cons	2.856152	.0705802	40.47	0.000	2.717817	2.994486

The frequency of meal skipping is a count data ranging from 0 to 90 and therefore Poisson regression analysis was justified for the regressand. While the results in the table above indicate 3 significant variables at 95% confidence interval, this paper is interested on the relationship between number of meals per month and the coping strategies. A marginal analysis of the same is tabulated as indicated in the table below.

	Delta-method					
	dy/dx	Std. Err.	z	P>|z|	[95% Conf.	Interval]
employementstatus						
employed	-.5631115	1.345	-0.42	0.675	-3.199263	2.07304
gender						
male	1.376976	.9873308	1.39	0.163	-.5581572	3.312108
geographicalregion						
rural area	1.324532	.7004602	1.89	0.059	-.0483452	2.697409
jobloss						
yes	6.413884	1.181432	5.43	0.000	4.098319	8.729449
copingstrategies						
meal reduction	-3.826868	.8453994	-4.53	0.000	-5.48382	-2.169915
relocation	-2.948907	.9123071	-3.23	0.001	-4.736996	-1.160818
creditlisted						
yes	-2.259346	.8971384	-2.52	0.012	-4.017705	-.5009867

The coping strategies by the households were categorical variable. It consisted of borrowing money, reduction in the number of meals and geographical relocation after Covid-19. The reference category was financial borrowing. The coping strategies indicate a negative relationship with the number of meal count. A unit increase in the reference variable decreased the number of meal counts reported by the sampled households.

Households in Kenya have adjusted on their livelihood norms in response to the shocks that have emanated from the Covid-19 pandemics. In particular, this paper looks at three key coping strategies by these households in response to the fall in their disposable income. First, there has been an increase in borrowing from individuals and an exponential rise from online mobile digital lenders. Reports by Safaricom indicates that the Kenyans transact to a tune of 1.2 billion a day from Fuliza and Mshwari digital lending platforms [7].

On average, from March 2020 to March 2021, Kenyans had collectively borrowed twice the amount of the government external debt obligation. The implication of this is that many Kenyans have been listed in the credit bureau as borrowing was done for consumption and not investment. This translates to a future tragedy in investment as the borrowing record has been tainted hence deterring future borrowing for investment with a multiplier effect of decreasing income based on the theory of the firm.

The second and most rampant coping mechanism has been the reduction in consumption expenditure. This has two tier approach; using nearly 50% of their investment on consumption with a 50% decline in food expenditure per adult equivalent. The argument by poor household is that most of their investment is in the form of their assets. There has been an increase in the sale of household assets to buy food. This has been coupled by a decrease in the frequency of household consumption across households. This trend has a great implication on food security as households consume only what they can afford regardless of the nutritional and health implication of the accessible food. Households have changed their dietary patterns in response to the Covid-19 outbreak by consuming less diverse diets, skipping meals, and reducing portions of food consumed [8]. These trends indicate the negative impacts of the pandemic on household food and nutrition security of the households in the country.

The last coping mechanism by households which this paper addresses and tends to have both economic and psychosocial distresses is household relocation. At the advent of the pandemics and consequent announcement of potential lockdown, most households in the country relocated to areas where they felt would have a perceived reduction in household food security. Specifically, many urban and peri-urban households relocated to rural areas to minimize the effects of the pandemic on the households [9]. Worth to note, the impact of the pandemic has been felt disproportionally between the rural and urban households with the urban poor being in the sword edge of the pandemic effects. This relocation puts pressure on rural household food security especially in areas that had previously been invaded by desert locust.

4. Conclusion and Recommendations

A holistic approach to combat these shocks in either short or long term should be the priority by the policy makers. Protracted blanket lockdowns by the government should be the measures of last resort. They have proofed to be inefficient while at the same time being an economic liability as traders and transporters are facing challenges such as accessing farms and markets due to restricted movement. This creates an artificial shortage hence a double tragedy to the poor households based on the axiom of price mechanism Re-focusing on localized measures of ‘smart containment’ that both respond to the health crisis and limit economic consequences is key. The government should ensure adequate safety nets for food security to households that will be devastated economically. The government must also continue providing support to producers to enhance supply as far as possible.

From the household perspectives, individuals should minimize contacts by embracing online platforms in accessing their products. Digital commerce has emerged as a contact-reduced way to provide products and services, allowing for food security and economic resilience even when shops are closed, or movement is restricted. Small traders who previously depended on offline retailing should transition to online platforms, utilizing social media to reach to their consumers.

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