

The Role of Social Safety Nets in Community Resilience and Performance of Food Security Projects

Ekiru Mark¹, Dr. Angeline Mulwa², Dorothy Kyalo³, Francis Opiyo⁴

¹Department of Open and Distance Learning, University of Nairobi, Kenya (Corresponding Author)

²Department of Open and Distance Learning, University of Nairobi, Kenya

³Professor, Department of Open and Distance Learning, University of Nairobi, Kenya

^{1,4}United Nations, World Food programme, Regional Office for East and Central Africa

Abstract: *This paper examines the role of social safety nets in community resilience and performance of food security projects in Loima sub-County of Turkana County, Kenya. The study was conducted in Loima Sub-County which is in Turkana County of Kenya. The study area is among the poorest in Kenya due to frequent droughts, insecurity and low investments by successive regimes. The study employed semi-structured questionnaires, interview guides and observation check lists to gather data and information on the study variables. A total of 491 households were sampled across 11 sub-locations. The study findings showed that social safety nets have weak positive influence on community resilience and performance of food security projects ($r^2 = R^2 = 0.1757$). This implied that social safety nets explained 17.57% of the variation of performance of food security projects while the other percentage was explained by other variables different from social safety nets. The overall F statistic of $F = 30.49$ ($p=0.05$) was statistically significant since at ($p = 0.000 < 0.05$) hence was suitable to analyze the relationship between social safety nets and performance of food security projects. The study found out that the amount of cash transferred from the social safety nets helped vulnerable households to purchase consumable goods but did not enhance livelihood diversification through ownership of productive assets. Resources from the social safety nets were not sufficient to cover every vulnerable household, they were influenced by targeting mechanism, institutional coordination as well as both local and national politics. The study concluded that due to frequent disasters as well as underdevelopment of infrastructure in Loima Sub-County, social safety nets alone were not sufficient to address household food insecurity in long-term. Therefore, the study recommended the need to link the social safety nets with other development programs for long-term resilience building to food insecurity.*

Keywords: Social Safety Nets, Community Resilience, Food Security, Pastoralism, Livelihoods,

1. Introduction

In developing countries studies have shown that pastoralist communities are among the poor households which often experience hardship and become vulnerable to shocks caused by droughts, floods, conflicts, economic fluctuation and livelihood failure (World Bank, 2016, Dercon, 2002). According to FAO (2015) households that rely on pastoralism in developing countries form part of the category that continue to exhibit high numbers of food insecurity as evidenced by the levels of undernourishment in the region. Empirical evidence has shown that social protection is one of the components of strengthening community resilience capacity to address challenges relating to food insecurity as well as managing risks (Chitonge, 2012). Social safety net is defined as programs that help the poorest and most vulnerable people stay out of extreme poverty by providing them with transfers which could be in kind, vouchers or cash (Brunson, 2017). The International Labour Organization (ILO) explored social protection in relation to promotive, protective and preventative measures that are geared towards addressing the complex dimensions of poverty and vulnerability (Devereux et al., 2006).

In the arid and semi-arid regions of Kenya, donor agencies, civil society and state actors have supported communities during disasters through the provision of social protection,

particularly humanitarian aid and emergency food relief. Unfortunately, these cushioning strategies have always been short term, unpredictable and have not fully addressed the underlying causes of vulnerabilities in the region. They are therefore criticized as merely treating symptoms of a more complex problem (Ellis et al, 2009). For instance, Opiyo et al., (2014) reports that despite frequent distribution of emergency food aid in arid and semi-arid regions in Kenya, the number of chronic food insecure households has continued to increase.

To address the shortcomings in the humanitarian aid and emergency food relief approach, some of the social safety nets initiated in the region include the Kenyan Hunger Safety Net Programme which was started to cushion the vulnerable and the poor through regular cash transfers as opposed to relief food aid (Garcia et al, 2012). The proponents of the initiative argued that it would aid in addressing extreme poverty and vulnerability especially among communities faced with frequent disasters in addition to improving the opportunities for build resilience (Hurrel et al., 2013; HelpAge International, 2006).

Studies have shown that inadequate institutional capacity, politics and overreliance on donor funding can have a large implication on social safety net programme in developing countries (Fitzgibbon, 2014, Hurrell et al., 2013). In Kenya

the Hunger Safety Net Programme (HSNP) Phase II, almost came into a halt due to political reasons (Merttens et al., 2013). Political representatives and their constituents disagreed with the methodology used to identify eligible beneficiaries. This was attributed to lack of clarity on the resources available for cash transfer. However, despite the challenges associated with social safety net programme, evidence suggests that if properly designed and tailored to specific needs, they can enhance responses to vulnerabilities as well as support building communities' resilience capacity to food security (HelpAge International, 2006).

1.1 Problem Statement

Evidence documented in literature shows that social safety net programmes can support the building of resilience to stresses and shocks and address means of preventing and managing vulnerabilities in an effort to boost food security (UNDP, 2014). Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life according to FAO (2000). However, food availability at the regional, national or even local level does not necessarily guarantee food security at the household or individual level.

In Loima Sub-County, households experience hardships and become vulnerable to shocks caused by climatic and related disasters as well as economic fluctuations (Watson and van Binsbergen 2008). Due to frequent disturbance of pastoralism-based livelihoods by droughts and other climate change related disasters, the main problem is lack of resources to diversify the livelihood for enhanced resilience against the impacts of climate change. Coping strategies employed by the individual households as well as support from humanitarian agencies has always been short term, unpredictable and have done little to address the underlying causes of vulnerabilities in the region.

To counter these inadequacies in traditional approaches of humanitarian response, the government of Kenya through various international and local partners initiated various social safety net programmes. Some of the social assistance programmes included the Hunger Safety Net Programme, the Orphans and Vulnerable Children Cash Transfer, the Older Persons Cash Transfer Programme, People living with Severe Disabilities Cash Transfer Programme and the Urban Food Subsidy Cash Transfer Programme. Several scholars have discussed the effectiveness of social safety nets in wider development context. For instance, Devereux and Cipryk, (2009) shared their experiences in Sub-Saharan Africa, Alderman and Hodinott, (2007), Alderman and Yemtsov, (2013), Shared their experience on how social safety nets promote growth, while Khuda (2011) shared on the success of social safety nets in Bangladesh. However, there is a lack of attention on the impact of these programmes in enhancing food security to the vulnerable target populations. With this background the current study focused on the role of social safety net programmes in promoting community resilience and food security. Results from this study will be instrumental in enhancing the performance and sustainability of the social safety net programmes in addressing medium to long term food

security needs of target populations.

1.2 Hypothesis of the Study

For this study, the following hypothesis was tested:

- 1) **H₀**: Social safety nets do not have significant influence on the performance of food security projects in Loima Sub-County.
- 2) **H₁**: Social safety nets have significant influence on the performance of food security projects in Loima Sub County.

2. Literature Review

The root of the concept of social safety net can be traced in the 'World Development Report' 1990. The report had a target of protecting the vulnerable through addressing chronic and transient poverty (Lipton 1997). Social safety net was first defined as "some form of income insurance to help people through short term stress and calamities" (World Bank, 2015). This definition was criticized for portraying social safety net as short-term relief operation separate from long term initiatives like cash transfer programmes. Following the Asian financial crisis, the concept was redefined in 2003, to incorporate risk reduction roles in various transfer programmes (Khan and Arefin, 2013). Social safety nets were redefined as programmes which protect a person or household against two adverse outcomes in welfare: chronic incapacity to work and earn (chronic poverty) and a decline in this capacity from a marginal situation that provides minimal livelihood for survival with few reserves (transient poverty)" (Khan and Arefin, 2013).

With reference to International Labour Organization (ILO), social safety nets entail promotive, protective, preventative and transformative measures utilized to address the complex, interrelated issues of underlying vulnerabilities to food insecurity (Devereux et al., 2004). Protective measures are used to support those without the means to earn an income or means of subsistence. It includes cash transfer, foster care grants, food aid, health fee waiver. Promotive and preventative measures differ but measures used can overlap as programme could prevent an individual from shocks as well as promoting opportunities for them to build a sustainable livelihood means to become less vulnerable (Thakur, 2009). Transformative measures entail addressing long-term solutions to issues of exclusion and marginalization (Devereux et al., 2004).

Understanding food security based on social safety nets is broader as it entails adequate food availability and the ability of acquiring it. Not only is producing sufficient food the most important but also the entitlement of producing, purchasing, receiving and utilizing is important in this context (Maxwell, 1992). Social safety net initiatives such as food for work and cash transfer can help in increasing the household income and reduces the need for recurrent and continued humanitarian assistance. Households may use the income to diversify their livelihoods hence become resilient to food insecurity (Slater and Dana, 2006). This enhances the economic and productive capacities of the most marginalized communities.

In the late 1990's opponents of social protection criticized it as a means of converting the poor into passive recipients with no distinct contribution to sustainable poverty reduction (Devereux, 2002). In the low income countries, they considered the initiatives as waste of public resources and questioned its affordability. However, in 2009, a study by International Labour Organization and World Health Organization showed that these minimum transfers by governments for Social protection were not that costly in terms of per capita (ILO and WHO, 2009). With reference to the ILO and WHO studies, social safety nets can be short and long term. The short term social protection programme support the poor with an immediate relief to survive in shock situations. On the other hand, long-term social protection programmes help to cushion the households and individuals through enhancing productivity and savings as well as gradually moving them towards an improved livelihood system (Pradhan et al, 2013).

Presently, in Kenya there exist 3 types of social safety net programmes namely: social security, health insurance and social assistance. Social security and health insurance fall under the National Social Security Fund (NSSF) and the National Health Insurance Fund (NHIF) respectively. The NSSF mandate is to offer services to individuals or families from the formal and informal sector with regard to receipt and management of contributions for financial security (NSSF, 2015). NHIF on the other hand is a health fund which allows minimum contribution of \$5 for individuals in informal sector for them to access medical services.

Social assistance which includes national cash transfers, food distribution, public works and grants is the third type of social safety net in Kenya. (one off payments). The national cash transfer programmes in Kenya include: Hunger Safety Net Programme (HSNP), the Orphans and Vulnerable Children Cash Transfer Programme (CT-OVC), the Older Persons Cash Transfer Programme (OPCT), People living with Severe Disabilities Cash Transfer Programme (PWSD-CT) and the Urban Food Subsidy Cash Transfer Programme (UFSD-CT) (World Bank, 2013). The programmes are funded and supported by the World Bank, the Department for International Development (DFID), and the United Nations Children's Fund (UNICEF). The government ministries which coordinate the programmes include: Ministries of Labour, Social Security and Services, Education, Health, Devolution and Planning, and the Interior and Coordination of National Government (Ikiara, 2007). However, this study focused on social safety net programmes that are directly linked to food security.

In developing countries, evidence from the literature shows existence of various factors that hinder effective delivery of social protection schemes. The first factor is on affordability and sustainability given the fact that most developing states have high dependency on foreign aid to meet financial gaps. (Nino-Zarazua et. al, 2012). The Second factor is on the institutional capacity for the state to deliver social protection programmes. Low income states in sub-Saharan Africa face difficulty with the design, implementation and evaluations of social protection programmes and thus tend to rely heavily on donor support both in terms of resources and technical skills. institutional capacity built may be lost during the

transition to full state ownership of initiatives (Gentilini, 2011). political dimensions and their relation to cash transfer programs is another factor hindering sustainability of the programme in developing countries. Evidence has shown that formulation of social transfer programmes during elections has been used by those in government in accruing votes from citizens who may believe that their vote could enable them to participate in a programme (Hurrell et al., 2012). Political engagements have equally affected social cash transfer in relation to registration of target members, delivering payment, transfer values management of grievances and distribution of communities that are eligible (Hurrell et al., 2012).

Different literature shows different result on the performance of the Hunger Safety Net Programme in Kenya. For instance, Kabare (2015) in her study on the use of cash transfer programmes in progressively addressing poverty and vulnerability in Kenya found out that, that the HSNP has decreased the levels of food insecurity and poverty in the four arid and semi-arid counties through an improvement on food expenditure and malnutrition rates, a lessened dependence on emergency food aid and an increase in the accrual and retention assets rather than selling off assets when faced with unexpected shocks and stresses which showed increased resilience. Sophie and Katsushi (2019) also evaluated the hunger safety net program in Kenya and found out that 30% of the poverty reduction in the implementing counties was due to cash transfer while 70% was as a result of economic growth. Case studies of Ethiopia, Kenya and Uganda, as well as wider social protection literature, confirm there is currently an evidence gap when it comes to social protection's contribution to long-term adaptation and resilience to food insecurity.

3. Theoretical Framework

The study adopted the political economy theory to explain the vulnerabilities among the pastoralist households and the need for government investment in the sector. The political economy theory asserts that poverty is a product of certain economic and social processes that are inherent in given social systems. It argues that there is a conflict of interest between the rich and poor in society, and that the food poor remain poor not because of any individual or personal qualities, but because society denies them the legitimate share of benefits that should accrue to them (De Silva, 1982). Analysis of intervening factors on social safety nets was highly informed by Desai (2007) and Moges (2013) whose arguments suggest that there are political as well as institutional factors in the society that limit the expansion and survivability of antipoverty programmes which are meant to share economic growth and engage the poor in more productive endeavours.

With reference to political economy theory, community resilience and food security are determined by political, economic as well social factors. There are unique underlying factors to food insecurity among pastoralist communities, including high rates of poverty coupled with frequent disasters and economic marginalization (Kareithi, 2010). The political as well as the economic decisions of those in government has resulted in lack of sufficient infrastructure

to aid in food production and adaptation to climate change by the pastoralist communities. Based on this background, social protection emerged as a key development and humanitarian policy issue to support the different components of food systems and maintain their resilience in the face of major shocks.

4. Methodology

4.1 Study Area

The study was conducted in Loima Sub-County which is in Turkana County of Kenya. Turkana county is among the

poorest counties in Kenya due to frequent droughts, insecurity and low investments by successive government due to its remotely located at the periphery of Kenyan northern frontier boarder (Kareithi, 2010). Due to high poverty rate, Turkana County is among the four arid and semi-arid counties in Kenya where the Hunger Safety Net Programme was initiated in 2007-2012 and 2013-2017. The programme was meant to contribute towards reduction of poverty, vulnerability and food insecurity through the delivery of cash to households that were deemed to be extremely poor. Figure (1) shows a map of Turkana County with an indication of study area which is Loima Sub-County.

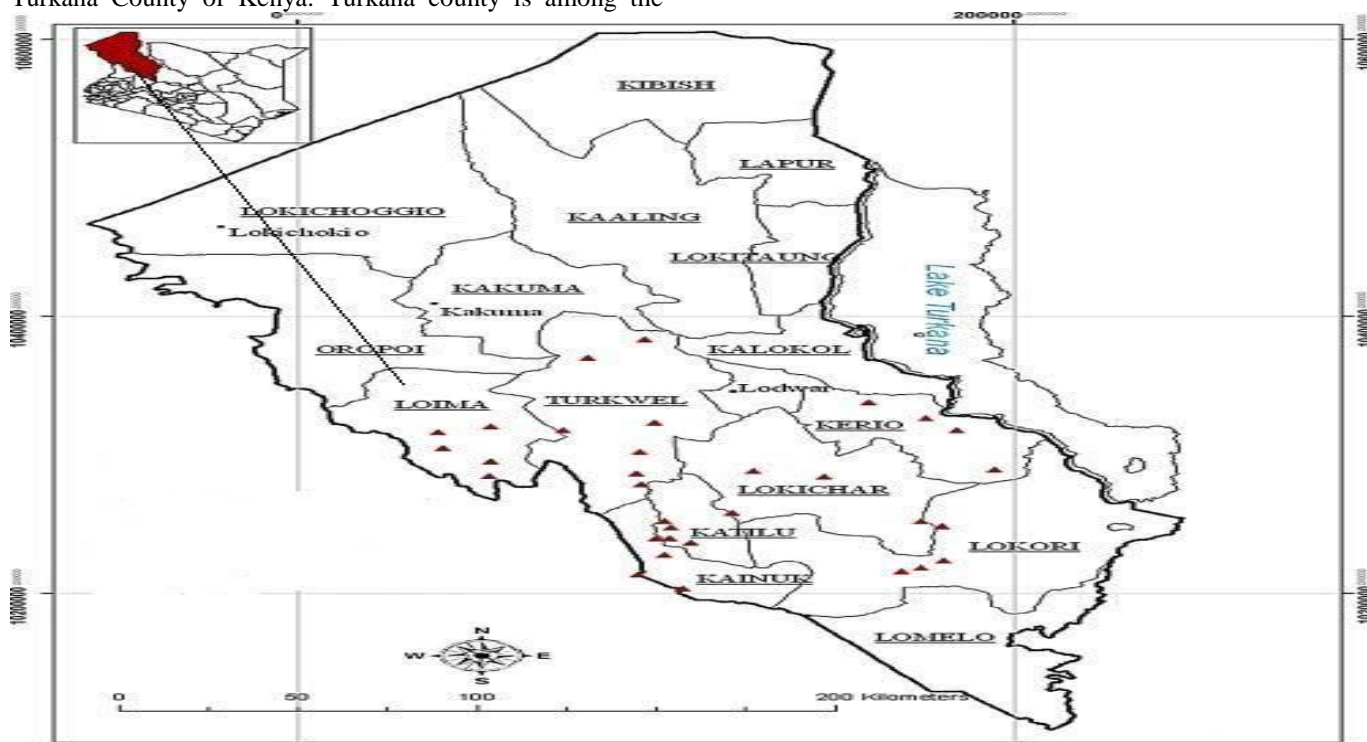


Figure 1: Map of Turkana County showing the study area, (Source: ILRI, 2009)

Data and Sampling

Descriptive and correlational research designs were adopted for the study (Thomas, Silverman and Nelson, 2015). Both qualitative and quantitative descriptive research design were used to describe the existing social safety net programmes in the community while correlational design was used to measure the relationship between the variables on the performance of food security projects.

This study explored the experiences of pastoralist households and the perceived impacts of social safety net programmes in Kenya on their food security and diversification to non-pastoralist based livelihoods. The target population comprised 16,517 households in Loima Sub County which was arrived at by dividing the total population (229,863) of Loima Sub County by 6 which was the average number of individuals per household in Turkana County according to the 2019 census in Kenya. The unit of analysis in this study was the households, their analysis was categorized in reference to the 31 existing sub-locations in the study area. Selection of sub-locations for the study was guided by Slovin’s formula which led to random selection of 35% of 31 sub-locations for the study (Table1).

Table 1: Sample Size for Sub-Locations of Study

	Sub-location	Population	No. of hh	Sample size
1	Kotaruk	3,925	654	25
2	Naipa	4,502	750	28
3	Turkwel	19,700	3,283	88
4	Napeikar	5,500	917	32
5	Lorugum	11,200	1,867	54
6	Nadapal	25,000	4,167	99
7	Kawalathe	4,000	667	26
8	Lochor-edome	4,500	750	28
9	Lochor-ekuyen	4,000	667	26
10	Lochor-alomala	6,907	1,151	27
11	Lokiriama	9,865	1,644	49
		99,099	16,517	491

A multi-stage sampling strategy was used to select the sample from the 11 sub-locations selected. Sample size for the households was obtained using Slovin’s formula denoted by the population size and the acceptable margin of error of 0.05 as indicated in the following formula:

$$\text{Sample Size (n)} = \frac{N}{1 + Ne^2}$$

Where:

- n = Number of samples
- N = Number of Households
- e = Marginal error (0.05)

Calculating the sample size,

$$\text{Sample Size } (n) = \frac{16,517}{1+16,517*0.05^2} = 390.54 \approx 391$$

An extra 100 households were added to make the sample size to be 491 so as to take care of the sampling errors. Simple random sampling strategy was used to select 491 households for the study. Purposive sampling was employed to identify key informant interviewees who in this case were the project managers Mertens (2014). The main instruments of data collection for the study were semi-structured questionnaires, interview guides and observation check lists.

Data Analyses

To establish performance of food security projects, the four standard components of food security were analyzed. A three-tier food consumption score on a scale of poor (1-21), borderline (21.5-35) and acceptable (>35) was used to analyze food access. Dietary diversity index was used to analyze food utilization and the nutritional value of food consumed.

The research instruments were checked for validity to ensure that they measure correctly the intended constructs (Heale and Twycross, 2015). In this study the reliability of the instruments was taken at Cronbach’s alpha coefficient of 0.8, since it is greater than 0.7. Descriptive analysis was used to understand non-parametric data while inferential statistics were used to test the hypotheses which were further used to generalize the findings. Linear regression model was developed to establish relationships between the dependent and independent variables on social safety nets and food security projects in the study area. The model equation is illustrated below.

Performance of food security projects = f(Social safety nets)

$$Y = f(X, \epsilon)$$

$$Y = \beta_0 + \beta_1X + \epsilon$$

Where

- Y = Performance of food security projects
- X = Social Safety nets
- β_0 = Constant term
- β_1 = Beta Coefficient

5. Results

Major Shocks threatening Food Security in Loima sub county

Major shocks that threatened food security in the study area include: climate related shocks and disasters, conflicts and insecurity as well as economic crises (Table 2). Loima Sub-County is located in the arid and semi-arid region of Kenya thus households are exposed to frequent droughts and other climate related disasters, these occurrences make daily life hard for people households which are already poor. Kenya National Drought Management Authority (NDMA, 2015) puts Turkana County poverty index at 94.3% affecting 481,442 people.

Pastoralism is the main source of livelihood in the study area, which is usually vulnerable to the impacts of drought. With death of livestock as a result of climate related disasters households have always relied on humanitarian aid. The area is located in the remote periphery of Kenyan boarder with Ethiopia and South Sudan coupled with low government investments. This has added to create food security vulnerabilities in the area.

Table 2: Causes of Food Insecurity

Causes of Food Insecurity	Frequency (n = 424)	Percentage (%)
Conflicts and Insecurity	112	26.5
Climate shocks and Natural hazards	256	60.6
Economic crises	52	12.3
Others	4	0.6

Coping Strategy to food insecurity

With frequent disasters accelerating food insecurity in the study area, coping strategies employed by households include: Relying on less preferred and less expensive food, borrowing of food from relative and friends, limit portion size at meals, restricting consumption by adults for small children to eat as well as reducing number of meals eaten in a day (Table3).

Table 3: Household Coping Mechanisms to Food Insecurity

Coping strategy	Never	1-2 days/week	3-6 days/week	Daily
	Percentage of households			
Rely on less preferred and less expensive food	1.7	44	39	15.3
Borrow food or rely on help from relative (s) or friend(s)	10.8	55.6	33	0.7
Limit portion size at meals	4	48.5	38	9.4
Restrict consumption by adults for small children to eat	10	51.5	38.5	0
Reduce number of meals eaten in a day	7.4	48.8	38.1	5.7

Table 3 indicates that less preferred and less expensive food as a coping strategy was the most frequently used by majority of the residents 1-2days per week (44%), 15.3% use it daily, 39% use it 3-6days per week and only 1.7% do not use this as a food insecurity coping strategy. Borrowing or relying on help from relatives or friends is mostly used 1-2 days per week (55.6%), 33% borrow food 3-6days per

week, 0.7% use this strategy daily and 10.8% never borrowed food as a coping strategy.

Limiting portion size at meals is another coping strategy mostly used 1-2 days per week by Turkana County residents (48.5%). 38% of the residents used this strategy 3-6 day per week, 9.4% limit portion size at meals daily and only 4% never used this as a coping strategy. On the other hand,

restricting consumption by adults for small children to eat is used 1-2 days per week by the residents (51.5%). 38.5% used this strategy 3-6 day per week and only 7.4% never used this strategy. Majority of the households reduce meals eaten in a day 1-2 days per week to cope for food insecurity (48.8%). 38.1% used this strategy 3-6 day per week, only 5.7% use this strategy daily and 7.4% never used this food insecurity coping strategy. These coping strategies employed by households have always been short term and in most cases households in Loima ended up in hunger. The households have always relied on humanitarian aid which traditionally has always been inform of food aid.

Social Safety Net Programmes in Loima Sub-County

Due to unsustainability nature of relief food, the government of Kenya through International partners initiated social safety nets to build on the traditional relief food response strategy to disasters. Turkana is among the ASAL counties in which the hunger safety net programme (HSNP) was piloted and initiated. Other social protection initiatives in Kenya include Orphans and Vulnerable Children Cash Transfer Programme (CT-OVC), the Older Persons Cash Transfer Programme (OPCT), People living with Severe Disabilities Cash Transfer Programme (PWSD-CT) and the Urban Food Subsidy Cash Transfer Programme (UFSTCT).

The results indicated that only 14.4% (60) of the respondents had enrolled in a social safety net programs while the remaining 85.6% (356) were not enrolled in any social safety nets programmes. To understand the components of social safety net programmes better in the study area, respondents were asked to respond to questions relating to the programmes (Table 4). The items were based on a 5-point Likert scale ranging from 5 = Strongly Agree, 4 = Agree, 3 = Neutral, 2 = Disagree, and lastly 1 = Strongly Disagree.

Table 4: Social Safety Nets

Statements	Mean	Standard Deviation
The cash for the elderly caters for all my household needs	2.34	1.05
The relief food items I get sustains us till the next distribution	2.31	0.99
The in-kind transfers help me to be more food secure	3.06	1.17
The amount of cash given is enough for my basic needs including food purchases	2.40	1.10
The period for transfers coverage is enough for my household	2.47	1.05
The targeting process was fair and transparent	3.01	1.11
There were no inclusion and exclusion errors in the registration and targeting process	3.17	0.97
The transfers are quite often provided on a timely basis	3.15	1.26
The local markets are functioning and all items are found	2.44	1.14
As a result of cash injection into the local markets there were no serious inflation rates	3.22	1.06
Composite mean	2.76	0.39

Table 4 shows that the respondents generally disagreed with most of the statements on social safety nets. In particular, when asked whether cash for the elderly caters for all household needs, a mean of 2.34 was returned with a

standard deviation of 1.05, this indicates that the respondents feel the amount of cash disbursed for the elderly is not sufficient to cater for all the household needs. To check whether the relief food caters for the respondents until the next distribution, the responses gave a mean of 2.31 with a standard deviation of 0.99 to show that they disagreed with the given statement. The respondents also disagreed with statements on amount of cash being enough to cater for basic needs including food purchases, the period of coverage being enough for households, and local markets are well functioning posting means of 2.40, 2.47 and 2.44 respectively. Respondents were however, not sure or neutral on statements regarding in-kind transfers helping them be food secure with a mean of 3.06(1.17), fairness and transparency in the targeting process with mean 3.10(1.11), lack of inclusion and exclusion errors in the targeting process with mean 3.17(0.97), timely provision of transfers with mean 3.15(1.26) and lastly the effect of cash injection on local markets inflation with mean 3.22(1.06). All the statement put together gave a combined mean of 2.76 and a standard deviation of 0.39 for social safety nets, indicating that respondents were not sure on statement regarding social safety nets in general. The results clearly indicate institutional, political and sustainability factors affecting performance of social safety net programmes.

According to hunger safety net programme report (Hurrell and Sabates-Wheeler, 2013) the main objective of social safety net is to cushion the community against disaster impacts as well as ensuring strengthening of livelihoods to minimize overreliance on relief food by the poor households. With reference to this background, the study sought to understand the impact of social safety net on building resilience through livelihoods diversification for enhanced food security, results are presented in Table 5.

Table 5: Impact of Social Safety Nets on Livelihoods

Impact	Frequency (N=416)	Percentage (%)
Low	193	46.4
Fair	192	46.2
High	31	7.5

Table 5 shows that almost an equal number of the study respondents felt that social safety nets had a low and fair impact on their livelihoods and resilience to food insecurity with frequencies of 46.4% (193) and 46.2% (192) respectively. Only a paltry 7.5% (31) of the respondents felt that the social safety nets programs had a high impact on their livelihoods and resilience to food insecurity. Challenges faced by the respondents with regard to social safety nets programmes in the study area include physical accessibility, low amounts disbursed, frequent delays in disbursements as well as inclusion and exclusion errors.

Food Security Situation in Loima Sub County

With reference to food availability, local food market was important in availing food in the study area. Food in the local market was mainly imported from other Counties in Kenya and bordering agricultural rich countries such as Uganda. Foods available in the local market included: cereals, vegetables, oil, sugar, dairy products, poultry products, as well as meat. However, lack of purchasing power especially during drought hindered food

access in majority of the households.

To further understand the magnitude of the food security status in the sub-county, a number of in-depth questions were posed to the respondents. They were asked to state their level of agreement or disagreement with the various statements on food (Table 6). A scale of: Never, Rarely, Sometimes, Often, and Always was used to understand the magnitude of food security/ food insecurity among the study households.

Table 6: Statements on magnitude of Food Security/Food insecurity

Statements	Mean	Standard Deviation
In the past month, how often did you or any HH member go to sleep at night hungry?	4.15	1.13
In the past month, how often did you worry that your HH would not have enough food?	4.05	1.13
In the past one month how often has your household disposed of productive assets to meet basic needs such as food?	3.30	1.14
In the past one month how often has the household relied on food assistance from external sources?	4.14	0.93
In the past one month how often do you rely on market as the main source of food	3.32	1.01
Composite mean	3.792	1.068

Results on Table (6) indicate that on average the respondents indicated that sometimes they had to sleep hungry at night within the past one month (mean=2.65, SD=1.13), they worried that their household would not have enough food (mean=3.05, SD=1.13), their household had to dispose of productive assets to meet basic needs such as food (mean=2.80, SD=1.40), their household relied on food assistance from external sources (mean=3.14, SD=0.93) and they relied on market as the main source of food (mean=3.32, SD=1.01).

Food Consumption Score

Food consumption scores were calculated for the households in the study using the food consumption frequency and the weights for each food categories. The food consumption score was categorised in poor (1-21), borderline (21.5-35) and acceptable (>35) (Table 7).

Table 7: Household Food Consumption Score

Food Consumption Status	Percentage (%)
Poor	48.97
Borderline	29.23
Acceptable	21.79
Total	100

According to the result in Table 7, 48.97% of the households in Loima Sub-County have poor food consumption status with only 21.79% having acceptable food consumption status. This can be attributed to high poverty index exacerbated by high prevalence of food insecurity, drought and conflict. The pastoralism form of livelihood in Loima is frequently affected by droughts, flash floods, cattle rustling and livestock diseases. With effect on livelihoods, households remain depending on relief food for their survival. Sometimes relief foods received are less

nutritiously dense food with low kilocalorie thus majority of the households recording poor food consumption status.

Dietary Diversity Score

Dietary diversity score showed that cereals and oil formed the main part of households’ staple daily diet in Loima Sub-County. Fruits, vegetables and fish were least consumed. Other food consumed in the study area include dairy products, and meat (Table 8).

Table 8: Main Diet Consumed

Food Group	Percentage (%)
Main Staples (Cereals and oil)	49 %
Dairy products	12%
Meat/Fish	27%
Vegetables	9%
Fruits	3%
Total	100

From Table 8, high consumption of cereals and oil is attributed to the relief food supplied to the community. Loima is in a drought stricken area thus relief food is among the strategies used to support food security in the study area. Low consumption of fruits and vegetables can be explained by the harsh climatic condition that does not favour growing of fruits and vegetables. However, from the FGDs, members stated that these products were available in the local market although their prices were unaffordable to most of the locals.

Correlation between social safety nets and performance of food security projects

To find the link between social safety net programmes and performance of food security projects a correlation analysis of the variables was conducted to check the direction and magnitude of the relationship. The results of the correlation analysis are presented on Table 9.

Table 9: Correlation between Social safety nets and performance of food security projects

		Amount of cash transfers	Quantity of food transfers	Mediating features
Performance of food security projects	Pearson Correlation	0.0807	0.3083*	0.219*
	Sig. (2-tailed)	0.1004	0.000	0.000
	N	420	420	420

Table 9 shows that both quantity of food transfers and mediating features are positively and significantly correlated with performance of food security projects in Turkana County since their p-values are less than 0.05. In terms of the magnitude, mediating features is weakly correlated but quantity of food transfers is moderately correlated. Amount of cash transfers is not significantly correlated with performance since its p-value is greater than 0.05. As correlation does not imply causation, a regression analysis was conducted to verify which variable causes performance. To this, study hypothesis was tested.

Hypothesis

H₀: Social safety nets do not significantly influence the performance of food security projects.

Regression model

The mathematical model that was used for testing the null hypothesis was as follows:

Social safety nets = f (food security projects)

$$Y = f (X_2, \epsilon)$$

$$Y = \beta_0 + \beta_2 X_2 + \epsilon$$

Where

Y = Performance of food security projects

X₂ = Social safety nets

β₀ = Constant term

β₂ = Beta Coefficient

Social safety nets programmes were measured using three variables; Amount of cash transfers (ACT), Quantity of food transfers (QTF) and Mediating features (MF). Using ordinary least squares model, the data was regressed and results presented in Table 10:

Table 10: Regression on Social Safety Nets and Performance of food Security Projects

Model Summary				
Model	R	R square	Adjusted R Square	Std. Error of the Estimate
	0.203	0.1817	0.1757	0.75465
Predictors: (Constant) ACT, QTF, MF				

ANOVA					
Model	Sum of squares	Df	Mean Square	F	
Regression	52.09	3	17.36	30.49	0
Residual	234.64	412	0.57		
Total	286.72	415			
Dependent Variable: Performance of Food Security Projects					
Predictors: (Constant) ACT, QTF, MF					

Coefficients					
Model	Standardized Coefficients		Unstandardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3.415	0.169		20.24	0
Amount of cash transfers	0.471	0.067	0.513	7.06	0
Quantity of food transfers	0.381	0.067	0.423	5.69	0
Mediating features	0.217	0.074	0.259	2.95	0.003

Table 11: Summary of Hypothesis Testing - Results

Objective	Hypothesis	Results	Resulting Model	Conclusion
To determine the extent to which social safety nets influences performance of food security projects in Turkana County, Kenya.	Social safety nets have a significant influence on the performance of food security projects in Turkana County, Kenya.	Adjusted R ² = 0.1757 F = 30.49 P = 0.000 < 0.005	Y = 3.415 + 0.471ACT + 0.381QTF + 0.217MF	Reject the null hypothesis

6. Discussion of Findings

Results shows that there was a statistically significant relationship between social safety nets and performance of food security projects. In respect of this, the study concluded that social safety nets programmes have significant influence on the performance of food security projects in Loima Sub County. Social safety net variables analyzed for this study include: amount of cash transfers, quantity of food transfers as well as mediating features. The results show that all the three study variables had weak positive correlation with performance of food security projects in Loima Sub-County.

From Table 10 it is observed that r = 0.203, an indication that there was a weak positive correlation between social safety nets and performance of food security projects in Loima Sub County. The adjusted R² = 0.1757 implied that social safety nets explained 17.57% of the variation of performance of food security projects while the other percentage was explained by other variables different from social safety nets. All the variables of social safety nets were statistically significant since their p-values were less than 0.05.

The implication for this was that amount of cash transfers, quantity of food transfers and mediating features were important explanatory variables for performance of food security projects in Loima Sub County. In terms of the magnitude, amount of cash transfers was the superior variable with a Beta coefficient of 0.471, followed by quantity of food transfers with Beta of 0.381 and finally mediating features with a Beta coefficient of 0.217.

The composite indicator of social safety nets was statistically significant the F –Statistic, (F = 30.49) had a p value of less than 0.05. This was an indication that there was a statistically significant relationship between social safety nets and performance of food security projects. In respect of this, the null hypothesis that was being tested was rejected and conclude that social safety nets programmes have significant influence on the performance of food security projects in Loima Sub County. This is illustrated by the following summative equation and summarized in Table 11.

$$Y = 3.415 + 0.471ACT + 0.381QTF + 0.217MF$$

Where:

- Y = Performance of food security projects
- ACT = Amount of cash transfers
- QTF = Quantity of food transfers
- MF = Mediating features

With reference to amount of cash transfer, the findings of this study corresponds with literature on hunger safety net programme in arid and semi-arid counties of Kenya which show that on average beneficiaries used to receive 4,900 Kenya Shillings which is approximately \$50. The amount was received after every two months which means beneficiaries went home with \$ 25 every month, coupled with high rate of inflation the amount seems unsustainable for building resilient livelihoods. Studies have shown that the transfer helped households to purchase consumable goods but did not increase the ownership of productive assets

(Merttens et al. 2013). On their analysis of hunger safety net programme in Kenya, Merttens et al., (2013) discovered that the pilot program had reduced poverty significantly: beneficiaries were 10% less likely to fall into the bottom national decile of wealth. However, there was no significant increase in dietary diversity or improvement in child nutrition. Households were able to retain livestock, though they do not seem to have accumulated non-livestock assets.

Loima is located at the periphery Arid and semi-arid boarder of Kenya, food availability is influenced by several factors among which include climatic and related disasters as well as poor infrastructure. During droughts the food market system usually collapse thus the favourable social safety net programmes initiated entail food aid. This explains why quantity of food received was more significant on food security in the area. However, study studies have shown that food aid approach is short term and does not promote opportunities for households to find sustainable means to become less vulnerable and more capable to establish and maintain livelihoods (Thakur, 2009, (FAO, 2015). This explains the need by the government of Kenya to invest in infrastructure such as roads, water, electricity and markets to act as stimuli for development in the study area. Such investments will create an avenue for livelihood diversification from the traditional pastoralism hence reduced overreliance on relief food.

Mediating features that influenced social safety net programmes on food security in the study area included: targeting mechanist, institutional coordination of the programme as well as both local and national politics. From the study findings, sometimes targeting of beneficiaries was faced with irregularities of inclusion and exclusion errors for example as people who were not poor and who did not meet the selection criteria were sometimes selected. There was evidence of involvement of political leaders in influencing locations and sometimes selection and distribution process. Other mediating features that need to be addressed by implementing institutions include: lost or stolen of payment token, an agent refusing to pay out the full cash grant amount, excessive distance to the pay point as well as death of a beneficiary. These mediating feature explain the need for the adoption of grievance mechanisms for social safety net programmes in order to address the fundamental features. Oversees Development Institute (2013) in their study on “beneficiary and community perspectives on the Basic Social Subsidy Programme in Mozambique” found out that when rights based approach was included in the cash transfers, participants felt empowered and safe to raise concerns without fear of their beneficiary status being in jeopardy. They also developed entitlement to social assistance support rather than viewing cash grants as a gift.

7. Conclusions

Based on the findings, the study concludes that social safety nets have influence on community resilience and performance of food security projects in Loima Sub County. More specifically, the following conclusions are made:

- a) Although social safety nets programmes were helping to cushion against short term food shortages in the

study area, they were not sufficient to cover every vulnerable household.

- b) The amount of cash transferred helped vulnerable households to purchase consumable goods but did not enhance livelihood diversification through ownership of productive assets.
- c) The study area experienced frequent failure of market systems due to frequent disasters as well as underdevelopment of infrastructure. The local markets were not fully functional and remained fragile and vulnerable to climate and economic shocks. The transfers often created a spike in prices due to demand outstripping supply. Thus social safety net if not linked with other development programs for market support is insufficient to address community resilience and food insecurity in long-term.

8. Recommendations

Based on the findings of the study, the following recommendations were made:

- a) With the study findings clearly showing weak positive correlation between the amount of cash disbursed and performance of food security, there is need to redesign the approach for the cash disbursed to be used only as incentive for households to involve in other livelihoods to boost food security and not for direct consumption. This will motivate households to accumulate other non-livestock based assets hence build their resilience capacity to food insecurity during droughts and other common hazards in the area.
- b) The study findings indicated a weak distorted market in the study area during drought which makes the cash transfer ineffective thus overreliance on humanitarian food aid. The study proposed investment of infrastructure such as roads, electricity, water and modern market facilities to act as a catalyst for food market development through growth and expansion of trade.
- c) Mediating features such as loss of payment token, an agent refusing to pay out the full cash grant amount, excessive distance to the pay point as well as death of a beneficiary hindered successful implementation of the programme. The study therefore recommends adoption of both top-down as well as bottom-up approaches in designing grievance management mechanisms. This will help in understanding of unique households’ challenges with reference to the program implementation hence they will feel part of the program and not mere beneficiaries.
- d) Regular market assessments to determine the amount of transfers is key to ensure commodity price stability as well as improve the livelihoods of the local people. Timeliness of the transfers needs to be strengthened and beneficiary targeting must be open, transparent and inclusive as much as possible.

References

- [1] Alderman, H and Hoddinott, J. (2007). Growth promoting social safety nets. Available at www.ifpri.org/sites/default/files/publications/oct63ch2_0.pdf.

- [2] Alderman, H. and Yemtsov, R. (2013). How can safety nets contribute to economic growth? <http://wber.oxfordjournals.org/content/early/2013/05/31/wber.lht011.full.pdf+html>.
- [3] Brunson, J. (2017). Maternal, newborn, and child health after the 2015 Nepal earthquakes: an investigation of the long-term gendered impacts of disasters. *Maternal and child health journal*, 21(12), pp.2267-2273.
- [4] Chitonge, H. (2012). Social protection challenges in sub-Saharan Africa: 'rethinking regimes and commitments'. *African studies*, 71(3), pp. 323-345.
- [5] De Silva, S. (1982). The political economy of underdevelopment. London: Routledge & Kegan Paul.
- [6] Dercon, S. (2002). Income risk, coping strategies and safety nets. *The World Bank Research Observer* 17(2), pp. 141-166.
- [7] Desai, R. M. (2007). The political economy of poverty reduction: Scaling up antipoverty programs in the developing world. Washington, DC: The Brookings Global Economy and Development.
- [8] Devereux S. (2002), Can social safety nets reduce chronic poverty? *Development policy review*, 20 (5), pp. 657-675.
- [9] Devereux, S. and Cipyryk, R. (2009). Social Protection in Sub-Saharan Africa: A Regional Review.
- [10] Devereux, S., Baulch, B., Hussein, K., Shoham, J., Sida, H., & Wilcock, D. (2004). Improving the analysis of food insecurity: Food insecurity measurement, livelihoods approaches and policy: Applications in FIVIMS: Food Insecurity and Vulnerability Information and Mapping Systems (FIVIMS) Secretariat, Food and Agriculture Organization of the United Nations.
- [11] Devereux, S., Sabates-Wheeler, R., Tefera, M., and Taye, H. (2006). "Ethiopia's Productive Safety Net Program (PSNP): Trends in PSNP Transfer within Targeted Households (Final Report)." Institute of Development Studies. <https://www.ids.ac.uk/files/PSNPethiopia.pdf>.
- [12] Ellis, F., Devereux, S., and White, P. (2009). Social Protection in Africa. Cheltenham: Edward Elgar.
- [13] FAO (2015). The state of food insecurity in the world. Meeting the 2015 international hunger targets: taking stock of uneven progress. Available at <http://www.fao.org/3/a-i4646e.pdf>.
- [14] Fitzgibbon, C. (2014). HSNP Phase II Registration and Targeting Lessons Learned and Recommendations.
- [15] Food and Agriculture Organization. (2000). The state of food insecurity in the world. Rome, Italy: FAO.
- [16] Garcia, M. and Moore, C.M.T (2012). The Cash Dividend: The Rise of Cash Transfer Programs in Sub-Saharan Africa. Washington: The World Bank.
- [17] Gentilini, U. and Omamo, S.W. (2011). Social protection: exploring issues, evidence and debates in a globalizing world. *Food Policy*, 36(3), pp. 329-340.
- [18] Heale, R., and Twycross, A. (2015). Validity and reliability in quantitative studies. *Evidence-based nursing*, ebnurs-2015.
- [19] HelpAge International (2006). Social Cash Transfers for Africa: A Transformative Agenda for the 21st Century. Intergovernmental Regional Conference Report, Livingstone, Zambia, 20-23 March 2006.
- [20] Hurrell, A. and Macauslan, I., 2012. The political implications of cash transfers in sub-Saharan Africa: shaking up the social system. *Public management review*, 14(2), pp. 255-272.
- [21] Hurrell, A., and Sabates-Wheeler, R. (2013). Kenya Hunger Safety Net Programme Monitoring and Evaluation Component: Qualitative Impact Evaluation Final Report: 2009–2012. Oxford: Oxford Policy Management.
- [22] Hurrell, A., and Sabates-Wheeler, R. (2013). Kenya Hunger Safety Net Programme Monitoring and Evaluation Component: Qualitative Impact Evaluation Final Report: 2009–2012. Oxford: Oxford Policy Management.
- [23] Ikiara, G.K., (2009). Political Economy of Cash Transfers in Kenya. Available at: <http://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/5749.pdf>.
- [24] ILO and WHO (2009). The Social Protection Floor. Geneva.
- [25] International Livestock Research Institute (ILRI, 2009). Expanding livestock insurance Coverage in Turkana County.
- [26] Kabare, K. M. (2015). Social Protection in Kenya: The Use of Cash Transfer Programmes in Progressively Addressing Poverty and Vulnerability. Unpublished Master's Thesis Linnaeus University, Sweden.
- [27] Kareithi, J.N. (2010), "Declining social capital and vulnerability to livelihood risks in Turkana district, Kenya". *Journal of the Institute of African Studies*, Vol. 11, pp. 33-46.
- [28] Khan, S. and Arefin, T, M. (2013). Safety Net, Social Protection, and Sustainable Poverty Reduction: A Review of the Evidences and Arguments for Developing Countries. *IOSR Journal of Humanities and Social Science* 15 (2), pp. 23-29.
- [29] Khuda, B. (2011). Social Safety Net Programs in Bangladesh: A Review. *Bangladesh Development Studies*, XXXIV (2): 87-108.
- [30] Lipton, M. (1997) 'Editorial: Poverty – Are there Holes in Consensus?' *World Development* 25(7), pp.1003-7.
- [31] Maxwell, S and Smith, M. (1992). Household food security: A conceptual review. Available at http://www.ifad.org/hfs/tools/hfs/hfspub/hfs_1.pdf.
- [32] Mertens, D. M. (2014). Research and evaluation in education and psychology: Integrating diversity with quantitative, qualitative, and mixed methods. Sage publications.
- [33] Mertens, F., Hurrell, A., Marzi, M., Attah, R., and Farhat, M. (2013). "Kenya Safety Net Programme Monitoring and Evaluation Component."
- [34] Moges, A. G. (2013). The political economy of poverty reduction. *International Journal of African Development*, 1(1), 19-39.
- [35] National Drought Management Authority (2015). The Hunger Safety Net Programme. Available at: <http://www.hsnp.or.ke/index.php/component/content/article?id=33>.

- [36] Nino-Zarazua, M., Barrientos, A., Hickey, S. and Hulme, D., (2012). Social Protection in SubSaharan Africa: Getting the Politics Right. *World Development*, 40(1), pp. 163-176.
- [37] NSSF Kenya, (2015). Overview of NSSF. Available at: <http://www.nssf.or.ke/about>.
- [38] Opiyo, F.E.O., Wasonga, O.V and. Nyangito, M.M (2014). Measuring household vulnerability to climate-induced stresses in pastoral rangelands of Kenya: Implications for resilience programming. *Pastoralism: Research, Policy and Practice* 4(10): 1–15.
- [39] Overseas Development Institute (2013). Beneficiary and community perspectives on the Basic Social Subsidy Programme in Mozambique: Transforming Cash Transfers. Available at: <http://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/8313.pdf>.
- [40] Pradhan, Hannan, A. Mohd, S. sulaiman, J. (2013) 'An investigation of social safety net programs as means of poverty alleviation in Bangladesh' , *Asian Social Science* 9(2), pp. 139-148.
- [41] Slater, R. and Dana, J. (2006). Tackling Vulnerability to hunger in Malawi through market based options contracts: implications for humanitarian agencies. Humanitarian Exchange 33, ODI, London.
- [42] Sophie, S. and Katsushi S. (2019) Does the Hunger Safety Net Programme reduce multidimensional poverty? Evidence from Kenya, *Development Studies Research*, 6:1, 47-61, DOI: 10.1080/21665095.2019.1582347.
- [43] Thakur, S.G., Arnold, C. and Johnson, T. (2009). Gender and Social Protection: Promoting Pro-Poor Growth. Available at: <http://www.oecd.org/dac/povertyreduction/43280899.pdf>.
- [44] Thomas, J. R., Silverman, S., and Nelson, J. (2015). *Research methods in physical activity*, 7E. Human kinetics.
- [45] UNDP (2014) Human development report, Available at <http://hdr.undp.org/sites/default/files/hdr14-report-en-1.pdf>.
- [46] Watson, D.J. and Bisbergen, J.V. (2008). Livestock Market access and opportunities in Turkana Kenya. ILRI research report 3, 106, Nairobi, Kenya.
- [47] World Bank (2013). Environmental and Social Systems Assessment of the Kenya National Safety Net Program for Results.
- [48] World Bank (2016). World Development Indicators 2016. Washington, DC: World Bank. Last Accessed April 9, 2020. <http://data.worldbank.org/data-catalog/world-development-indicators>.
- [49] World Bank. (2015). The state of social safety nets 2015. Washington, D.C.: The World Bank.