Impact of Cash Transfers on Poverty Reduction towards Achieving Sustainable Development Goals among Female-Headed Households in Siaya County, Kenya.

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ABSTRACT

Poverty rate is still high among developing economies; 8 years post adoption of the Sustainable Development Goals (SDGs) agenda of 2030. Cash transfers have popularly become one of the ways to support implementation of SDGs. This study focused on the Inua Jamii-CT programme whose principal objective was to establish the impact of cash transfer on poverty reduction towards achieving SDGs among female-headed households in Siaya County. The study was founded on the Household Welfare Theory where household welfare is best measured in terms of income and consumption decisions of the household. The study targeted the 109,680 female-headed households in Siaya County. The Yamane formula arrived at a sample of 399 households. A correlational design was adopted and 377 respondents realized. An analysis of descriptive statistics of respondent household demographics revealed that 214 of the households receive cash transfers against 163 who don't. The average household expenditure was on food and farm inputs. The female-head was averagely 49 years old, 52.2% were of good health and 85.7% had reached only primary level of education. The household had a mean of 5 members. 51.7% of the female-heads belonged to a social group. 41.4% of the female-head earned their income from farming and 36.3% from small businesses. A binary logit regression model determined that cash transfer, income, household consumption were significant predictors of SDGs among FHHs in Siaya County with P values of less than 0.05. The R^2 of 0.3 showed a 30% goodness of fit for the model. The coefficients of cash transfer and income are β_1=-0.935 and β_2=- 0.689 respectively, hence, increasing cash transfers and income reduces poverty. There was a negligible relationship between household consumption and SDGs β_3=0.0004. Conclusion was drawn that CT was significant in the achievement of the SDGs. The study recommends a targeted programme design to ensure more income generating activities and good farming practices.

Keywords: Cash transfer; Sustainable Development Goals; Poverty reduction; Female-headed households.

INTRODUCTION

Poverty denies one access to basic human needs hindering quality living standards vital for significant economic development (Dauda, 2017). The eight inter-dependent Millennium Development Goals were established by UN member states in 2000 to exterminate poverty & hunger among other targets (Wysoki?ska, 2017). The MDGs focused mainly on developing countries and were heavily funded by developed countries. Upon their expiry in 2015, 17 Sustainable Development Goals were adopted (Morton, Pencheon, & Squires, 2017). The SDGs include zero poverty, good health, zero hunger. Statistics from the 2018 Borgen Project show that despite great progress in eradicating poverty, 1 in every 10 people is still living below a dollar a day globally. Further, Andrea (2017) notes that the realization of the zero-poverty target by 2030 needs a better strategy that will reach all poor households in rural areas and prevent those that have emerged out of poverty from relapsing. Gendererd poverty is real and women are more likely to be affected by resource constraints than men (Julka & Das, 2015). Sustainable Development Goals can be supported through social protection of vulnerable groups by cash transfers. Boccia, *et al.*, (2016) define cash transfers as initiatives that provide income to the poor to reduce their economic vulnerability and create an enabling environment to flourish from birth to old age. In the Philippines, the *Pantawid Pamilyang Pilipino Program* conditional grants boasts of a yearly poverty reduction rate of 1.4% (Amerjaphil, San-Pedro, & Mildred, 2018). Migwi (2017) found that cash transfer given to urban poor women in Nairobi, Kenya enabled them to save and invest towards achievement of other SDGs not just reducing poverty. The ailing elements of social protection in the society set the stage for the enactment of Kenya's social transfer policy. The Orphans and Vulnerable Children Cash transfers was therefore introduced in 2004 guided by the constitution which accords every Kenyan the right to basic needs and social security (Constitution of Kenya, 2010). The objective was to sustain orphans and vulnerable children (Omolo, 2017). The pilot program was rolled out among 500 households in former Kwale, Nairobi and Garissa districts with each beneficiary receiving Kshs.500 monthly and later extended in 2006, to non-pensionable old persons who are more than 65 years of age in 2007, Persons Living with Severe Disability-CT in 2010 and finally became a universal programme in 2017. Currently, about 1,094,372 households are supported across the 47 counties with beneficiaries receiving 2,000 shillings per month up from Ksh.1500 in 2010 (Omolo, 2017). Increased income also promotes women to the center of decision-making in the household and improves their livelihoods (Lawless, et al., 2019). Literature on cash transfers and sustainable development goals give varied views though pointing to the same outcomes. In Uganda, Blattman, Fiala, & Martinez (2020) used randomized evaluation of the impact of social grants on young people of 16-35 years old and determined that cash grants stimulated them to acquire skills and kick-start self-employment. Haushofer and Shapiro, (2016) through a randomized clinical trial, observed households' responses to unconditional transfer programs in Kenya. The evidence revealed that there was a more notable footprint on female recipients. Continuing studies by WHO emphasize that to achieve the SDGs; environmental protection, social inclusion and economic growth are the key dimensions to focus on. The Inua Jamii Cash Transfer Programme which is the umbrella for the OVC-CT, OP-CT and PWSD-CTis the largest and most universal CT-program in Kenya. The Annual Progress Report of 2004/2005 observed that poverty rate in Kenya has been declining for the past 15 years but cannot still be ignored. Extreme poverty was reported among 17% of the population with an overall 46.8% being below the poverty line. Cash transfer was introduced in 2004, and ten years on, the annual progress report 2014/2015 showed the poverty line at 36.1% of the population. The monthly pay out has also not been reviewed since 2010 to account for the high cost of living and population pressure. The report signals program design challenges, technical and financial issues hampering implementation and insufficient statistics for more coverage and inclusion of beneficiaries especially in the rural areas for better efficiency of the programme in achieving SDG -2030 agenda which came into inception in 2015.The focus of this study was on the Inua Jamii cash transfer program as a meanse to steadily reduce poverty among female-headed households in Siaya County using a correlational design to interrogate the impact the cash transfer had on achieving sustainable development goals 1 (zero poverty).

- **Research Objectives**

The main objective of this study is to establish the impact of cash transfer on poverty reduction towards achieving sustainable development goals among female-headed households in Siaya County, Kenya.

- **Research Questions**

Does cash transfer have significant effect on reducing poverty among female-headed households in Siaya County?

- **Research Hypothesis**

H_0: Cash transfers have no significant effect on poverty reduction in female-headed households in Siaya County.

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- **Scope of the study**

The area of study was the six sub counties of Siaya County and data collected from female-headed households across the county.

- **Conceptual Framework**

The conceptual framework illustrates that cash transfers as a form of social assistance to vulnerable individual households provides income to the beneficiary to protect them from further vulnerability (Devereux & Sabates Wheeler, 2004). It influences their decision on consumption and expenditure. The study expects that providing cash transfer to the female-headed household will reduce poverty by increasing income and consumption. The Household Welfare theory assumes that consumption is a function of various physiological characteristics of the recipients and environmental factors. By connecting selected research questions and theory, the study is built on the hypothesis that providing regular cash transfers to vulnerable female-headed households can potentially reduce absolute poverty.

Fig.1 Conceptual framework

Independent variables **Dependent variables**

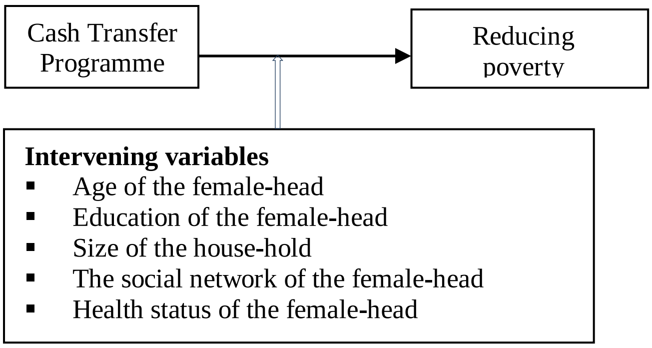

Fig.1 Conceptual framework
Source; (Researcher, 2023)

LITERATURE REVIEW

The study adopted house welfare theory that is based on household consumption and investment based decisions.

- **Household Welfare Theory**

The theory was proposed by Deaton in 1989. The theory assumes that the basic decision making unit about consumption and investment in society is the household. A household with K individuals consume X bundles of goods of prices P hence the Kth individual consumes nk goods, $Xk=(Xk1,,Xknk)$ with prices $Pk=(Pk1,\ldots,Pknk)$ as postulated by (Chavas, Menon, Pagani, & Perali, 2018). Most public policies that aim to reduce poverty assume that household income and accumulation of household assets is an adequate indicator of household welfare. The household as an individual consumer spends some resources on goods and services to maximize utility against a budget constraint (Shikur, 2020). This theory is therefore relevant in this study as it considers expenditure data and dwelling of the household as macro-determinants of household welfare. These are the variables that are used to target vulnerable households to benefit from social and economic intervention programmes such as cash transfers. The intervention injects income into the household which increases demand for goods and services. When demand and consumption increased within the household, production also increased and there was a resultant economic growth (Devereux, 2016).

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- **Empirical Literature on Cash Transfers and Poverty among Female-Headed Households**

In Mexico, Orozco & Gammage (2017) working paper examined over 150 cash transfer related literature. The main concern was girls and women in households who are at risk of forced labour, poverty, lack of education, health care or gender abuse. The study aimed at evaluating the effect of the cash transfer programmes on the livelihoods of the women and girls. The results indicated that inter-generational cycle of poverty is broken especially among the girl children. This cash tranfer empowered women through employment and provided sustainable solution to poverty. The programs also provided solution to child-care and social service through suitable employment related service to women. Ths action is to reduce women's poverty and distribute the care of children to both men and women. Similar programs are seen in Chile, India, Mexico, Brazil and South Africa. Fultz & Francis (2013) carried out a desk-based review on cash transfers on women's poverty and economic empowerment in South Africa, Mexico, Brazil, and India. They showed that cash transfers reduce extreme gender poverty gaps by enabling women to save and invest in assets that offer more sustainable income. Panel study by (Martinez, Cummings, & Vaaler, 2015) across seven Sub-Saharan countries established that one dollar transferred to a beneficiary spurs an extra 0.27 to 1.52 of local income which increases demand for local products creating an expansionary effect on the economy. Beneficiaries multiply the cash received and inject it into the local economy.

Migwi (2017) explored the idea of cash transfers in poverty alleviation by conducting a case study in the slum area of Nairobi and reported that the women were able to create economic opportunities which gave them a sense of independence and authority; this reduces social discrimination and directly influences the realization of SDGs. Blattman, Fiala & Martinez (2020) confirmed that cash grants stimulated the youth to acquire skills and transformed poor women in Northern Uganda by increasing household spending and child care investment. In Kenya, Haushofer and Shapiro, (2016) randomly collected evidence on the household response to the unconditional transfer program and demonstrated that although there was increased general well-being of recipients; the recipient's gender was not significant. These studies support cash transfers as reliable social protection against poverty. They however employ randomized control trials which may not always impersonate real-life treatment situations. This study intends to put the hypothesis to test through a correlational design to allow analysis of relationships among variables in a single study and test the degree and direction of the relationship between cash transfers and poverty reduction among female-headed households in Siaya County.

METHODOLOGY

A correlational design was suitable for the study because the study aims to establish whether there increasing cash transfers will have any significant effect on reducing poverty among female-headed households in Siaya County (Peteros, Columna, Etcuban, Almerino, &Almerino, 2019). Siaya County was the area of study. The county consists of six sub-counties, thirty wards, and has a population density of 392.6/km^2. Siaya County has an approximate population of 993,183 people as per the 2019 national census with a total of 240,000 households. The target population of the study was the 109,680 female-headed households in the county. An appropriate sample size was determined using the Yamane formula (Chaokrom thong & Sintao, 2021).

n=109680/ (1+109680(.052)

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$n=399$

Where, n =Sample Size N = population (109680 FHHs) e =level of precision at 95%

Multistage sampling ensured that respondents were fairly represented (Campbell, et al., 2020). Siaya county has 6 sub counties. Out of the six sub counties, 13 households from each of the 30 wards and 4 more each from the larger wards of Rarieda and Gem made up the sample of 399 households. Primary data was collected using structured interview schedules with standardized, closed-ended questions (Jayaratne&Jayatilleke, 2020). This tool capacitates the interviewer to ask the same questions in the same order and collect information uniformly from respondents. The use of both quantitative and qualitative data helps to overcome the weakness of either tool. The instrument for data collection was accompanied by an introductory letter obtained from the University and personally handed to the participants. A preliminary visit to the social services office was done to declare the intention to serve the research instrument and to get to know where to locate the targeted female-headed households. Test-retest reliability was achieved through a pilot test of 25 respondents in the West Uholo location to note the consistency in responses and time taken to respond. The area has similar characteristics to the study population. Respondents who took part in the pilot were not part of the final study. Internal reliability of how well the test measures the variables of interest was measured using the Cronbach alpha formula whereby a value of 0.7 and above was acceptable (Pandey & Pandey, 2021). Face validity was determined through expert opinions from resourceful persons in the field of economics (Shrotryia&Dhanda, 2019). Content validity conducted through analysis of common attributes from the theoretical framework of the topic. Convergent validity was measured by correlating findings from this study with similar studies.

- **The Econometric Model**

The study's main objective was to establish the impact of cash transfer on poverty reduction towards achieving Sustainable Development Goals among Female-Headed Households in Siaya County, Kenya. A binary logit regression model was applied to analyze the binary categorical values 'yes' or 'no' hence its suitability rather to a linear regression. Logit regression is a probability model with two mutually exclusive and exhaustive categories in the dependent variable that estimates the probability of an event occurring. The logit function is expressed as;

$\text{Logit}(pi) = 1/\ (1+ \exp(-pi))$ where,

$\ln(pi/(1-pi)) = \beta_0 + \beta_1 X_1 + \ldots + B_K X_k$

therefore, the main objective model is,

$\text{Prob}\ (Y_{\text{zero poverty}}=1|X) = \beta_0+\beta_1 X_{\text{Cash transfer}}+ \beta_2 X_{\text{Income}}+ \beta_3 X_{\text{consupmtion}}+ ei\ldots$ (1)

Estimating the logit model determined the probability that the female-headed household is not poor upon receiving cash transfers controlled by the household's demographics.

FINDINGS

A response rate of 377 (94%) out of the targeted 399 respondents was realised and adopted for analysis. According to Mugenda and Mugenda (2003), a response rate above 80% is termed as excellent for further statistical analysis.

Table I. Descriptive data of household demographics

Variable	Results
Mean Age of Female-Head	49 Years
Percentage of Female-Heads That Reached Primary Education and Below	85.7%
Percentage of Female-Heads That Reached Secondary Education	10.3%
Percentage of Female-Heads That Reached Tertiary Education	4.0%
Mean Size of The Female Headed Household	5
Percentage of Female-Heads With Health Issues	52.8%
Percentage of Female-Heads Belonging to a Social Group	51.7%
Percentage of Female-Headed Households That Receive Cash Transfer	43.2%
Percentage of Female-Headed Households That Don’t Receive Cash Transfer	56.8%
Percentage of Governmental Source of Cash Transfer	22.5%
Percentage of Non-Governmental Source of Cash Transfer	20.7%
Percentage of No Source of Cash Transfer	56.8%
Percentage of Female-Heads Getting Their Source of Income From Farming	41.4%
Percentage of Female-Heads Getting Their Source of Income From Small Business	36.3%
Percentage of Female-Heads Getting Their Source of Income From Employment	5.0%
Percentage of Female-Heads Getting Their Source of Income From Casual Labour	17.3%
Mean of Female-Headed Households’ Monthly Food Expenditure	Ksh.6407
Mean of Female-Headed Households’ Monthly Farm Input Expenditure	Ksh.4240
Mean of Female-Headed Households’ Monthly Health Care Expenditure	Ksh.267
Mean of Female-Headed Households’ Monthly Fuel Expenditure	Ksh.353
Mean of Female-Headed Households’ Monthly Clothing Expenditure	Ksh.417

From the results tabled above,the average age of the female head was found to be 49 years. Kenya’s current life expectancy is 65 years; this could imply a low productivity age for the should-be breadwinner. 85.7% of the female-head had reached primary level or below as the highest education level due to poverty, ignorance and poor exposure. Low literacy level can affect the individual’s employability and overall social and economic decision-making. Most households had an average of five members against 3.9 as per the 2019 census showing no much variation. The table also indicates that 52.8% of the household heads had recurring or permanent health issues which could imply constant health care costs. Poor health can also limit economic participation and further worsen non-beneficiaries. Beneficiaries might have to use part of the money to cater for these costs instead of investing or purchasing other needs. 51.7% of the female-heads had membership in atleast one social group where they do mostly weekly table banking and merry-go rounds. Beneficiaries of cash transfers are able to save part of their pay-out and access credit in case of an emergency or investment opportunity. Social networks provide a sense of belonging which has emotional and mental benefits.

- **Effect of Cash Transfers on Reducing Poverty Among Female-Headed Households in Siaya County**

In order to establish whether cash transfers can contribute to reducing poverty, the source of income of the female-head and monthly household consumption was observed. It was found that 41.4 % of the female-heads got their source of income from selling their produce. The second source of income was engaging in small businesses such as kiosks, selling thrift clothes, hair salons, tailoring among other trades and crafts.

17.2 % of them engaged in casual labour from time to time and only 5.0% had steady employment. The monthly consumption of the FHH revealed food expenditure as the highest consumption item with an average cost of Ksh. 6,407, bearing in mind that the Inua Jamii cash transfer gives a monthly pay-out of only Ksh. 2,000 per household. Purchase of farm inputs costed most households Ksh. 4,240 shillings per month. Health care, fuel and clothing had the least expense. The low health care costs could infer that households are benefiting from the National Health Insurance Fund reducing the health care budget. Some individuals however, tend to postpone or ignore seeking medical attention unless they got worse. Generally, monthly expenditure for the female-headed households was Ksh. 11,684 with a standard deviation of Ksh. 3,025 showing a rather high variation from one household to another.

- **Inferential Data on Cash Transfer on Poverty Reduction among Female-Headed Households in Siaya County**

H_0: Cash transfers have no significant effect on poverty alleviation among female-headed households in Siaya County.

Table II: Logit Regression Model

Zero Poverty		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1	X_Cash_Trans	-1.586	.459	11.933	1	.001	.205
	X_Income	-.686	.267	6.587	1	.010	.503
	X_Consump	.0004	.000	19.320	1	.000	1.000
	Constant	-.493	.574	.739	1	.390	.611
Variable(s) entered on step 1: X Cash Trans, X Income, X Consump.							
-2Log likelihood =169.003 Cox & Snell R Square =0.178							
Nagelkerke R Square =0.281							
Chi-Square (3) =41.166							
Sig. = 0.000							

The logit model results were given as;

Prob $(Y_{zeropoverty}=1|X)^{=}$ -0.493-1.586$X_{Cash\ transfer}$-0.686 $X_{Income+}$ 0.004$X_{consupmtion}$

Cash transfer, income and household consumption are all significant predictors of achieving the sustainable development goal 1 of zero poverty. The Nagelkerke R^2 of 0.281 shows a goodness of fit of 28.1% for the model and 71.9% of variation attributed to other factors. The negative coefficients of both cash transfer (β_1=-1.586) with P value of 0.01 and income (β_2=-0.686) with p value of 0.01 indicate that increasing the two variables did significantly reduce the likelihood probability of a household being poor. However, consumption coefficient (β_3=0.0004) shows anegligible relationship between poverty and consumption. The findings were anticipated and agree with those by Bastagli et al. (2016) who reported that cash transfers can reduce short-term poverty and provide a reliable and predictable income in the long run. Wray &Croy (2015) also found that cash transfers promote economic and social development when coordinated with appropriate rural development strategies. The null hypothesis was rejected and alternative hypothesis was accepted given P values being less than 0.05. Cash transfers therefore have a significant effect on reducing poverty among female-headed households in Siaya County.

- **Mann-Whitney U Test**

The Mann-Whitney U test was conducted to show any significant difference between female headed households that receive cash transfers and those that do not. The suitability of this test is supported by the fact that the dichotomous nature of variables. This test allows us to compare the two sample groups which were of different size (CT=163, No CT=214).

Table III: Mann-Whitney U Test

	Source of Income	Consumption
Mann-Whitney U	13446.000	14815.500
Wilcoxon W	25074.000	40240.500
Z	-3.770	-2.201
Asymp. Sig. (2-tailed)	.000	.028
Grouping Variable: Cash Transfer		

The results demonstrated that receiving cash transfers significantly affects the household's source of income ($P=0.000<0.05$), household consumption ($P=0.028<0.05$). Eligible female-headed households that received cash transfers are indeed better off due to the increased income than those not receiving. Vulnerable female-headed households are highly dependent on cash transfers in order to achieve Sustainable Development Goals. There is therefore a significant difference between beneficiaries and non-beneficiaries.

CONCLUSIONS

This study's main objective was to analyze Impact of Cash Transfers on reducing poverty as a means of achieving Sustainable Development Goals Among Female-Headed Households in Siaya County, Kenya**.** The study concluded that cash transfers had significant impact on reducing poverty hence can help to achieve the agenda 1 of SDGs of Zero poverty by 2030.

RECOMMENDATIONS

The study recommends that in order to further reduce poverty, the conditional cash interventions should target income generating activities than direct consumption. The cash transfer seemed to be spent on immediate consumption especially food. Financing entrepreneurship and farming which are the main source of income and spending will not only sustain the income sources but also enhance food security and reduce the expenditure on food. Resultantly, tackling poverty and hunger concurrently. The cash transfers have better yielding effects when reliable and predictable.

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