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Effectiveness of Constituency Development Funds on Poverty Reduction with Respect to Consumption and Human Capital (A Case of Hamisi Constituency)

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Abstract:

The purpose of introducing the Constituency Development Fund (CDF) was to expedite development projects for the benefit of citizens at the grass root level. This programme provides an opportunity for local population to make their decision that maximizes their welfare. It generally empowers the local community to drive their development agenda and reduce poverty. This study analyses the effectiveness of Constituency Development Funds (CDF) in reducing poverty. To this end, the paper attempts to establish impact-link between CDF funds and community welfare as explained by levels of household consumptions and development of human capital through increased incomes, improved health care and improved educational services. Using probit models to test the relationships, the findings of this study show that there exist positive and significant relationship between the dependent and independent variables implying that introduction of CDF has significantly reduced poverty as explained by the welfare elements in this paper. The study therefore concludes that government should consider increasing allocation for CDF to enhance poverty reduction efforts. This however should be tampered with effective management and control of the fund through good governance systems in order to optimize its benefits to the community.

Keywords: Constituency development funds, human capital, household consumption

1. Introduction

1.1. Background Information

The Constituency Development Funds (CDF) is one of the ingenious innovations of the National Rainbow Coalition (NARC) Government of Kenya. Unlike other development trends that filter from Central Government through larger and more layers of administrative organs and bureaucracies, funds under this program go directly to the local level and thus provide people at the grassroots the opportunity to make expenditure decisions that maximize their welfare consistent with the theoretical predictions of decentralization theory. The CDF is, therefore, an example that empowers local communities by providing fungible funds (often from the Central Government but sometimes from donor sources).

National Assembly passed the Constituency Development Funds (CDF) Act into law in 2003. In principle, this Act compels the minister for Finance to allocate not less than 2.5 percent of all collected government ordinary revenue every financial year for development programmes in the constituencies. The Act also establishes the National Constituency Development Fund Management Committee (NCDFMC), which has since been converted to National Constituency Development Fund Board (NCDFB) through the amendment of the act of 2007, and the Constituency Development Committee (CDCs) to manage the funds.

The fund aims to control imbalances in regional development and it targets all constituency level development projects, particularly those aiming to combat poverty at the grassroots. At the first instance, the CDF fund comprises an annual budgetary allocation equivalent to 2.5% of the government's ordinary revenue. A bill seeking to increase this allocation to 7.5% of government's revenue was recently passed by parliament. About 75% of the fund is allocated equally amongst all 210 constituencies. The remaining 25% is allocated on the basis of constituency poverty level. A maximum of 10% of each constituency's annual allocation may be used for education bursary scheme. CDF is managed through four committees; two of which are at the national level and two at the grassroots level.

1.2. Problem Statement

Equity considerations informed the struggle for independence in Kenya, and indeed in most African Countries during and after the colonial era. As noted in the second National Development Plan for Kenya (1966 – 1970), a specific component of the policy stance then was to achieve high and rapid growth and equal distribution of resources. The inequalities from the past were brought about due to the master-servant relationship that existed prior to independence and to date, the inequalities and regional disparities are largely among Kenyans themselves. Inequalities are manifested in different forms, notably: income, land, education, health, and infrastructure and may be defined in terms of outcomes and opportunities.

The establishment of the CDF in 2003 was intended to instil confidence in rural population. It was to involve implementing development projects at the local level. The initiative was to empower people at the grassroots level. It was to open up job opportunities for local contractors and job seekers and thus be a potential contributor to wealth and employment creation. The objective was to enable people to drive their own development agenda and as such make the process at the grassroots participatory and faster.

There are few previous studies done in this area, these include efficiency and efficacy of Constituency Development Fund by Kimenyi, a citizen report card on the constituencies development fund by the Institute of Economic Affairs and Kenya National Commission on Human Rights, The Management and Utilization of Constituency Development Fund in Kenya by Institute of Policy Analysis and Research and the CDF Social Audit Guide by Wanjiru Gikonyu. Therefore, there is limited research addressing the effectiveness of CDF on poverty reduction with respect to consumption and human capital.

1.3. Objective of the Study

The overall objective of the study is to assess the effectiveness of the Constituency Development Fund on the poverty reduction with respect to consumption and human capital.

The specific objectives are to:

- Determine the effectiveness of Constituency Development Funds on demand for education and health services.
- To assess the relationship between Constituency Development Fund and consumption.
- To make policy recommendations.

2.1 Literature Review

Good policies are central to the achievement of economic growth, it is now well established that growth requires quality institutions (Kimenyi, 2007). The empirical literature has demonstrated a positive and significant relationship between the quality of institutions and economic growth. In fact, recent advances in the economic literature suggest that institutional arrangements are the most important determinants of economic growth and development (see for example Kimenyi 2007 and Kimenyi and Mwabu 1999).

There is a positive correlation between governance and policy variables. This implies that quality of policy improves with improvements in quality of governance. According to Kaufman, a study carried out in sub-Saharan countries, South America and Middle Asia, shows that those countries with strong governance systems showed a strong and impressive economic growth and development.

One strong aspect of good governance is the issue of devolution. Devolution comes in form of empowering the people at the grass-roots with an opportunity to make decisions concerning their welfare (Oloo, 2006). Other terms used for devolution include decentralization which is a broader term. The case of CDF program involves redistribution of decision-making responsibilities for project planning and implementation from the central government ministries and department to the constituencies.

In Kenya, private returns to education generally increase with the level of education as revealed in Manda, Mwabu, and Kimenyi (2002). Human capital externality for male and a female student has a positive impact on earnings of all workers. They noted that the education should not be entirely left to the private sector because future objectives of human resources should not be entirely to the private sector. The public sector should also play a great role in education.

Studies conducted in Kenya by Atieno (2006) and Kabubo-Mariara (2003) found education to be an important factor in determining participation in the different categories of the labour market. Both studies conclude that effort to address the problem of access to the labour market should focus more on improving human capital. This is a policy presentation to address the elementary side of the Kenyan labour market in addition to the factors expected to explain labour market participation.

Mwabu, et al (1991) sought to explain the effect of the pricing reforms on health care demand in Kenya. They tested the hypothesis that user-charges were in place although the government had suspended them. They used utility maximization model. The demand model was estimated using data collected daily and weekly in selected health facilities in rural Kenya. The result showed that user charges discourage utilization of health facilities. Utilization of health services dropped by 38% after user fee were employed and managed to rise to 29% after suspension of the fees.

Alemayehu, et al (2001) in their study of poverty in Kenya at the household level found that educational attainment of the household head (in particular high school and university education) is the most significant factor associated with not being in poverty. High probability of poverty is attributed to lack of basic education. Thus, the promotion of education is central in addressing the problem of poverty. He used a binomial and polychotomous logit model in his analysis. By use of income-based estimation, they found that most influential factor of poverty status is the level of education and household size.

1.4. Overview of Literature

The empirical studies have used different methodologies and variables to establish the factors that affect health care, education, and poverty. The studies have used the regression analysis (multiple and stepwise), simultaneous equations, utility maximization models and discrete models that is probit and logit.

Previous studies have shown that availability of facilities and per capita income is associated with increased demand for health care and education. Furthermore, increased access to education and health care improves people's standard of living in terms of increased life expectancy, the population being healthy and competitiveness in the job market. This, in turn, reduces poverty levels. The above models and studies can be applied in the analysis of the effectiveness of Constituency Development Fund in the reduction of poverty. The study will attempt to incorporate Constituency development Fund as a variable determining the demand for consumer goods, education and healthcare introduced in Kenya in 2003. It is for this reason that this study seeks to incorporate constituency development funds as a variable influencing element for consumption, education, and healthcare and then determine its influence on demand for education consumption and health. The study will also link demand for consumption, healthcare, and education to poverty to determine how increased demand for health and education impacts on household welfare.

2. Theoretical Framework

To assess the effectiveness of the Constituency Development Fund on the poverty reduction with respect to consumption and human capital, utility maximization model was employed. to explain the effect of CDF funds on the demand function of a normal good. It is assumed that individuals or households satisfy their utilities from consuming physical goods and services, *ceteris paribus*. Households, for instance, aim at maximizing utility of its members. To maximize utility, it will choose the combination of x_1 and x_2 that maximize its utility.

It is assumed that consumer goods (X_1) and human capital(X_2) are normal goods, that is, they are positively related to income. Apart from price and income, there are other variables, which affected the demand for these goods. These may include advertisements, tastes of the household's expectation about future prices amongst other factors. Taste will be treated as a dummy variable and measured qualitatively. Tastes for and against will be assigned the dummy1and zero respectively.

Similarly, expectations will be treated as a dummy variable and measured qualitatively

Where expectation that prices will fall or rise will be assigned the dummy1and0 respectively

$$X_1 = f(P_1, P_2, Y, T, E) \dots\dots\dots (1)$$

$$X_2 = f(P_1, P_2, Y, T, E) \dots\dots\dots (2)$$

Where $P_1, P_2,$ and Y are as defined above, while T tastes of household E - Expectations.

At this stage, Constituency Development Fund is introduced in our model. When the demand for consumer goods is taken, the CDF is expected to release more income for consumption. If CDF funds are used on education and healthcare, this releases household incomes that would have otherwise have been spent on human capital. This income is then diverted to consumption goods. Increased consumption of consumer goods is likely to increase the household's utility and hence welfare. This may lead to a reduction of poverty.

However, poverty is a function of X_1 which is the demand for consumer goods

$$\text{Poverty} = f(X_1) \dots\dots\dots (3)$$

But poverty is not only a function of X_1 ; it also depends on other factors such as household size, level of schooling, age, livestock holding, and residence.

Hence $P = f(X_1, \text{age, residence, size of household, level of schooling, livestock holding})$ then let

$A = \text{Age}$

$R = \text{Residence}$

$S = \text{Household size}$

$E = \text{Level of Schooling}$

$L = \text{Livestock Holding}$

$$P = f(X_1, A, R, S, E, L) \dots\dots\dots (4)$$

On the other hand, CDF may increase household welfare through direct expenditure on education and healthcare. Given human capital, CDF can directly enter the demand function for X_2 so that

$$X_2 = f(P_1, P_2, Y, T, E, CDF) \dots\dots\dots (5)$$

Where CDF is measured as that proportion of Constituency Development Fund that goes to education and health in absolute figures.

Since CDF is directly spent on education and healthcare, then there is likely to be a direct relationship between human capital and CDF. Expenditure on education will make education cheaper and more accessible. Therefore, more household members are likely to get an education and improve their skills. The education and skills acquired can influence welfare in two ways: -

- Individuals with higher education tend to earn more in the labour market. This is likely to increase household income, which will reduce household poverty and therefore improve its welfare.

- Improved household skills increase household productivity. In this case, a household will be able to produce to satisfy its needs and even sell the surplus produce. Increased productivity will, therefore, help reduce household poverty and hence improve its welfare.
- Nutrition and hygiene improve among the educated household thus reducing incidences of ill health.

Another way the CDF can improve household welfare is through expenditure on health facilities and household ability to access health care. It means household will improve their health status. This improved health status will improve welfare in two ways: -

- A healthy household will improve its productivity by cutting down on the number of workdays lost due to ill health which in turn leads to improved welfare.
- Improved in household health status means that households can save the money spent on treatment. Such can be diverted to household consumption or saving. This will reduce poverty and improve welfare.

Therefore, CDF enters directly in the demand function of X_2 , which is the demand function for human capital that is education and health care.

$$X_2 = f(P_1, P_2, Y, T, E, CDF) \dots\dots\dots(6)$$

Suppose Constituency Development Fund is increased *ceteris paribus*, and then expected demand for X_2 can increase human capital which is demand for education and healthcare. Therefore, if Constituency Development Fund is increased, the demand for education and healthcare is expected to increase and these, in turn, will lead to improved household welfare as seen above thus reduce poverty. But it is known that poverty is a function of X_2 , which is demand for health and education.

$$\text{Poverty} = f(X_2) \dots\dots\dots(17)$$

Poverty is not just a function of X_2 alone but also other variables such as mean age, size of the household, residence (rural versus urban), level of schooling and livestock holding which are also important in explaining poverty.

$$P = f(X_2, \text{Age, Residence, Size of household, Level of schooling livestock holding})$$

- Let
- A = Age
 - R = Residence
 - S = Household size
 - E = Level of schooling
 - L = Livestock holding
- $$P = f(X_2, A, R, S, E, L) \dots\dots\dots(8)$$

Where P is poverty representing headcount part.

2.1. Model Specification

To analyze the effect of X_1 and X_2 on poverty the probit model is used. A probit model is a popular specification of a generalized linear model, using the probit link function. Probit models were introduced by Chester Ittner Bliss in 1935. Because the response is a series of binomial results, the likelihood is often assumed to follow the binomial distribution. Let Y be a binary outcome variable and let X be a vector of regressor. The probit model assumes that

$$\text{Pr}(y = 1 | x) = \Phi(X_i \beta) \dots\dots\dots(19)$$

Where Φ is the cumulative distribution function of the standard normal distribution. The Parameter β is typically estimated by maximum likelihood.

$$p_i^* = x_i \beta + \epsilon_j \dots\dots\dots(20)$$

Where X is a vector of X_1 and X_2 , Age, Residence, size, level of schooling, school attendance, distance to the nearest health provider, ownership, access to CDF and livestock holding.

β is unknown population parameter. Poverty, which is the dependent variable, is a discrete variable and is thus measured qualitatively as a dummy variable. 1 if the household is poor and 0 otherwise.

P_1^* is a latent variable which cannot be observed, and is linked to the observed binary variable P by the measurement equation given as

$$P_i = 1, \text{ if } P_i^* > 0 \qquad (21)$$

$$P_i = 0 \text{ otherwise}$$

Since the dependent variable is unobserved, the maximum likelihood estimation method is used which requires an assumption about the distribution of the errors. It is assumed that the error term is normally distributed with a mean of zero and standard deviation of δ^2

The probit model avoids the problem of non-normal error term and heteroscedasticity associated with Linear Probability Model. The estimated dependent variable is therefore no longer a dichotomous variable but a conditional probability which is continuous.

Using the rule in (3), we generate a probit model of the following form

$$\text{Prob}(P_i = 1) = \text{Prob}(P_i^* > 0)$$

$$= \text{Prob}(X\beta + \epsilon > 0)$$

$$= \Phi\left(\frac{x'\beta}{\delta}\right) \dots\dots\dots(22)$$

We can then derive the likelihood function

$$\text{Prob (Pi = 1)} = \Phi\left(\frac{x'\beta}{\delta}\right) \dots\dots\dots(23)$$

$$\text{Prob (Pi = 0)} = 1 - \text{prob (P = 1)} = 1 - \Phi\left(\frac{x'\beta}{\delta}\right)$$

$$L = \text{Prob (Pi = 0)}. \text{Prob (P=0)} \dots\text{Prob (P}_m = 0). \text{Prob (P}_{m+1} = 1) \dots \text{Prob (P}_n = 1 \dots\dots\dots(24)$$

$$\prod_{i=J}^{\infty} \Phi\left(\frac{x'\beta}{\delta}\right)^{P_i} 1 - \Phi\left(\frac{x'\beta}{\delta}\right)^{1-P_i} \dots\dots\dots(25)$$

We can then get the log-likelihood function.

$$I\left(\frac{\beta}{\delta}\right) = 1_n(L) \dots\dots\dots(26)$$

$$\sum \{P_i L_n [\Phi(X^\beta)] + (1 - P_i) I_n [1 - \Phi(X^\beta)]\} \dots\dots\dots(27)$$

The first part of the equation shows the probability that the household will be poor given X and it has in the interval $0 \leq \Phi(\cdot) \leq 1$. The second part shows the probability that the household will not be poor. To solve the model, δ will be normalized to one so as to talk about β . We use the maximum likelihood method to estimate β . The dependent variable and the independent variable X are as given below; 1 if the household is poor and 0 otherwise. Demand for education and health is a function of the price of consumer goods, the price of education and health, the income of the household, taste of the household, the expectation of the household and CDF. In turn, poverty is a function of X_2 . Therefore, changes in any of the above-mentioned variables will affect X_1 which will, in turn, affect poverty.

3. Data Collection, Analysis, and Discussion of Findings

This section gives the discussion of findings based on both the primary data and the KIHBS data analyzed using both the descriptive and regression analysis. The first part provides the descriptive statistics of the variables of interest while the second part is on the probit results. The results are based on the impact of CDF funds on the alleviation of poverty proxied using improved health status and education level attained. The primary data were collected using interviews and questionnaires. The population of the study consisted of households (individuals and focus groups) and the CDF Managers. Secondary data was collected from the Kenya National Bureau of Statistics.

The following is the result of the survey that was carried out to establish the impact of CDF funds on poverty reduction. This primary data was collected through interview. The study covered a total of 71 respondents. Out of this, male accounted for 50.70% while females accounted for 49.30%. 12.68% of the respondents were aged 36 years and this was the mean.

The maximum likelihood ratio (LR) was found to be 14.13%. This is an indication that all the variables observed were significant. The probability of accepting the null hypothesis was 16.7% and the explanatory variables in this model, explains 21.9% of the variations in the dependent variable as captured by the adjusted R^2 .

The table above shows that 35.21% of the respondents indicated that most projects around their areas are funded by CDF. Funds and 64.79% indicated that projects are funded through other sources. The other sources here include; churches, Non-governmental organizations and government projects.

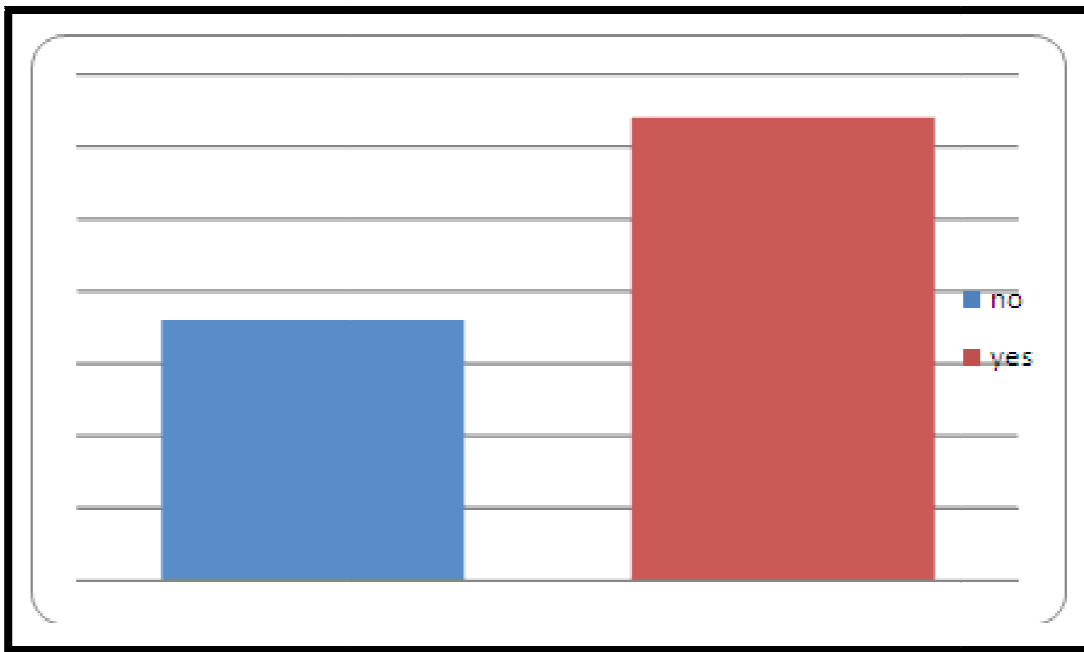


Figure 1: Perception about Ownership of the CDF Projects

Regarding ownership of CDF projects, the result from the table above indicates that 64% of the respondents have a perception that they own the CDF projects. This is a positive indicator because CDF was introduced to empower people at grassroots level in decision making and the claim to own the project, implies that they appreciate the good work that CDF IS are greatly involved in decision making.

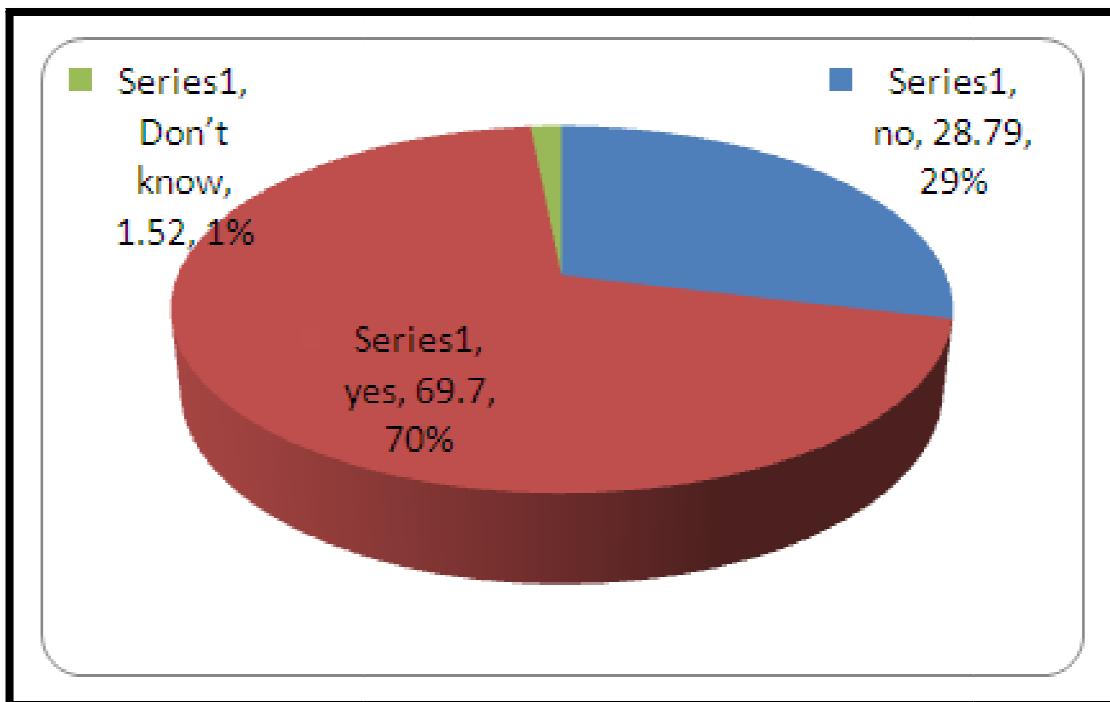


Figure 2: Savings on Specific Items

The results reveal that 69.7% of the respondents are aware of the CDF projects in Hamisi. About 28.78% are not aware of the existence of CDF. This is an indication that the awareness level is slightly high. These revelations concur with the above analysis where 64% of he responded claim to own CDF projects.

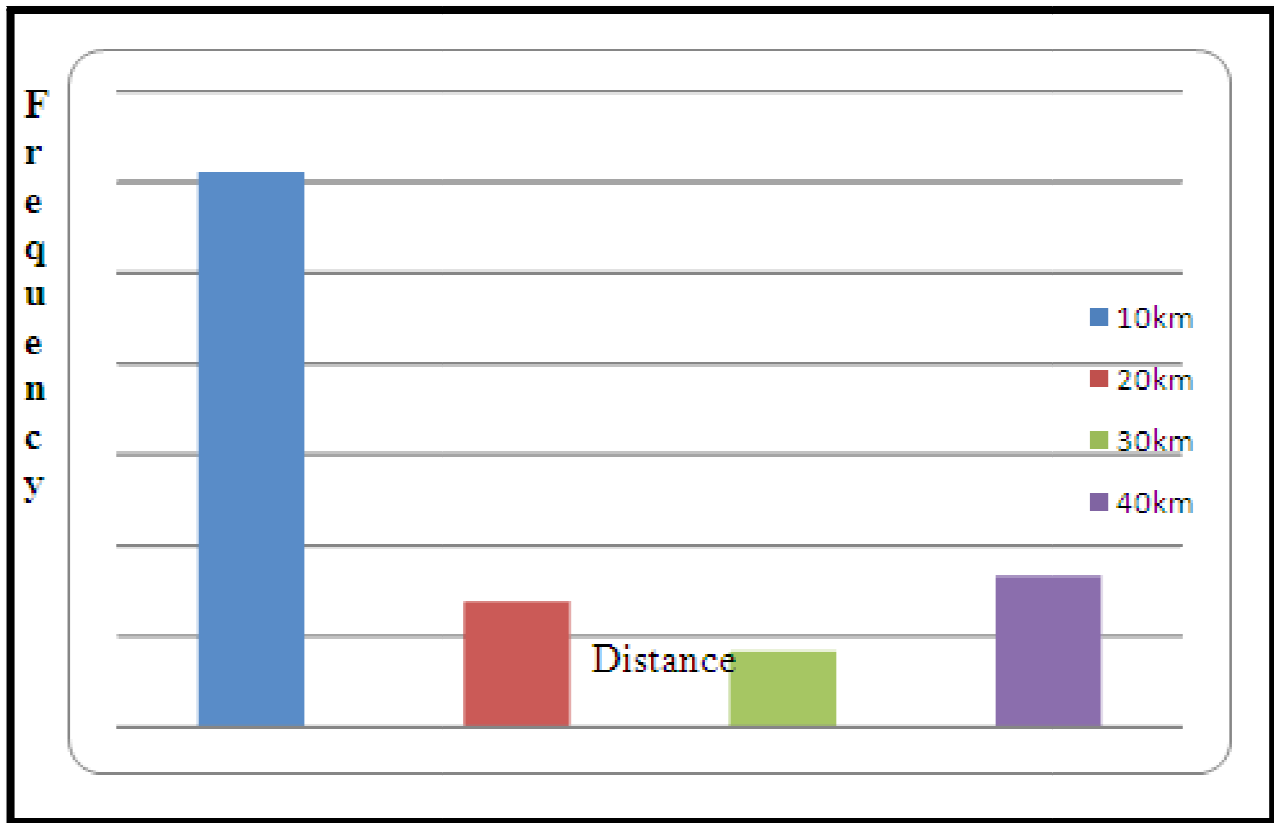


Figure 3: Distance to Nearest Dispensary before CDF Dispensary Was Constructed

The result from the table shows that majority 61.11% of people in Hamisi District lived a distance of 10 kilometres from the nearest health center before CDF health centers were constructed.

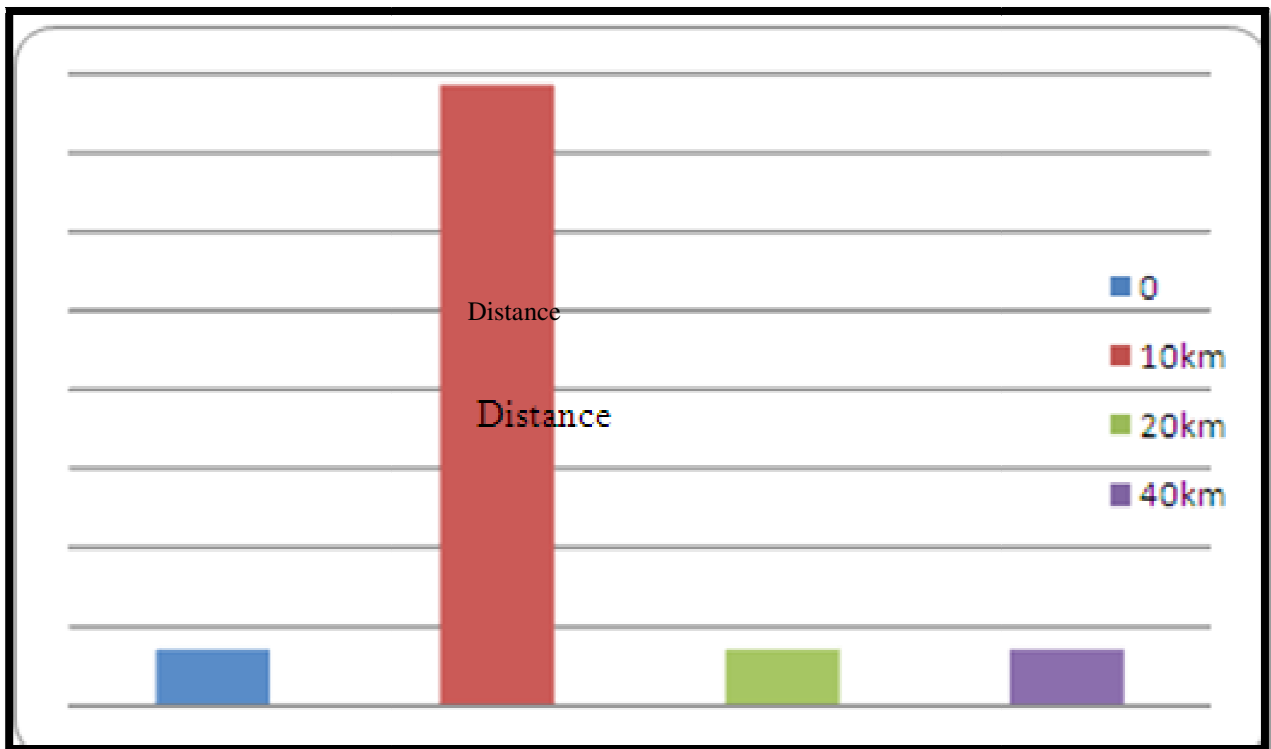


Figure 4: Distance to the Nearest CDF Dispensary

The results show that after the construction of the CDF health centers, the access to the health providers increased from 61.11% to 78.57%. This is a clear indicator that CDF contribution has increased access to health provider by a very significant margin. Majority of people live close to the health providers. The international accepted distance between health provider and the household is 7 kilometres.

	Maternity	Drugs	Ambulance	Laboratory
	%	%	%	%
No	70.91	47.27	85.45	68.52
Yes	29.09	52.73	14.55	31.48
Total	100	100	100	100

Table 1: Availability of Health Facilities in the Location

The table above reveals that 29.09% of the population have access to maternity care. This is an indicator that this facility is not well supplied in the community and therefore CDF project planners should now direct their priority towards the provision of maternity facility. 52.73% is reported to have enough drugs while 47.27% have no drugs. The table also reveals that most health providers 85.34% are supplied with ambulances. Only 14.55% have no access to ambulance services. The laboratory services are also well provided at 68.5%. The laboratory services are very critical in the provision of health services. Through this service, diseases are diagnosed and proper medication is prescribed.

	Frequency	Percentage	Cumulative frequency
No	24	45.28	45.28
Yes	29	54.72	100.00
Total	53	100.00	

Table 2: Savings on Cost with the Introduction of CDF

About 54.72% of the respondents agreed that they had made some savings on the cost of medical care with the introduction of CDF projects. However, 45.28% of the respondents had not made any savings on cost with the introduction of CDF. This is a clear indicator that the CDF contribution in the health sector in Hamisi District has led to significant reduction in the cost of medical care. This leaves the beneficiary (household) with some income that can be diverted to meet other costs such as food, clothing, transport and many others. The increased income will improve the welfare of the households hence reduced poverty.

	Drugs cost	Consultation	Maternity fee	Admission fee	Ambulance
	%	%	%	%	%
no	36.96	55.56	73.81	66.67	82.93
yes	63.04	44.44	26.19	33.33	17.07
Total	100	100	100	100	100

Table 3: Savings on Specific Items

Some specific components on which savings were made include the cost of drugs at 63.045%. The government through CDF funds seems to be providing drugs in most of the health centers. Most people are making significant savings on drugs. However, savings on components such as; consultation and maternity fee stand at 44.44% and 26.19% respectively. CDF funds should also be used to provide maternity facilities and also avail ambulances. These facilities are very critical in increasing the accessibility to health care.

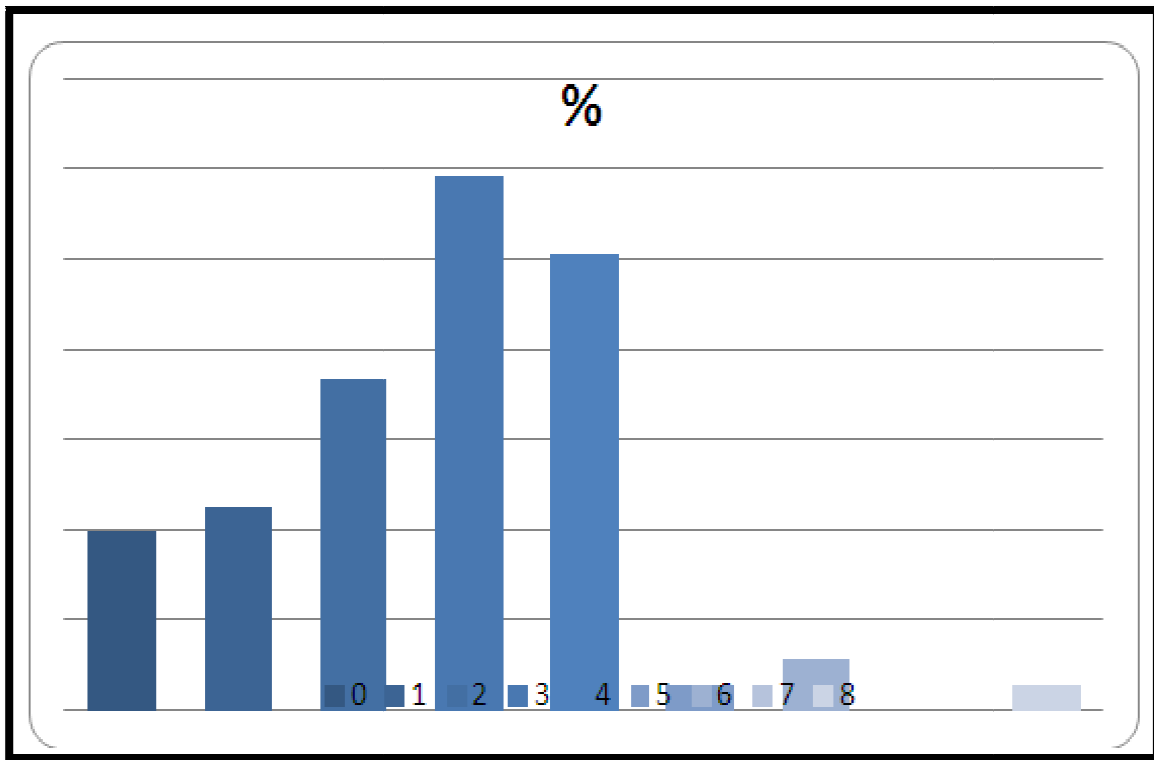


Figure 6: Number of Children Enrolled in Schools

29.58% of the families interviewed expressed that they had on average enrolled 3 children in schools. 9.86% of the respondents had no child enrolled in school. Most of the children attending school were in primary school. The possible reason could be that most of the respondents have the mean age of 37 years; most of their children are still young and probably in primary schools.

In terms of education, most people in this area value education so much that they struggle to send their children to school. Most of the children are in primary schools and very few attend tertiary institutions. The reason why there are a few numbers of people attending tertiary institutions cannot be explained. The government should make an attempt to create awareness among the youth who completes a secondary level of education on the importance of these institutions. Tertiary institutions are very critical in the development of human resource.

CDF bursary	Frequency	Percentage	Cumulative percentage.
No	57	86.36	86.36
Yes	9	13.64	100.00
Total	66	100.00	

Table 4: Persons Who Have Been Able to Access CDF

In terms of access to CDF funds, only 13.64% appeared to have access to CDF funds. Over 85% remain locked out of the fund. This is a matter of concern especially at this time when the cost of living has gone up.

CDF for fees	Frequency	Percentage	Cumulative percentage.
No	56	84.85	84.85
Yes	10	15.15	100.00
Total	66	100.00	

Table 5: People Who Use CDF Money to Pay Fees

From the table above, about 15.15% use CDF funds to pay school fees. This implies that CDF bursary funds are reaching out to very few people. The report agrees with the findings from the Kenya Integrated Household Budget Survey 2005/2006, which indicated that only 11.67% of those who applied for bursary actually received it.

Balance	Frequency	Percentage	Cumulative percentage.
No	39	60.00	60.00
Yes	26	40.00	100.00
Total	65	100.00	

Table 6: Proportion of Respondents with Savings after Spending on Basic Needs

	Frequency	Percentage	Cumulative percentage.
No	47	79.66	79.66
Yes	12	20.34	100.00
Total	59	100.00	

Table 7: Contribution of CDF towards Improved Health and Education

A large proportion of the respondents are left with some savings to spend on basic needs to better their lives. Although the proportion of savings is low at 40%, it is still quite significant. It is a revelation that people are at least making some savings despite living in hard economic times. The table below indicates that most people make their savings in the Saccos and merry-go-rounds. Very few people 7.04% save in the banks; around 3% keep their money in the house. However as indicated in the tables above and below, most people 53.52% are not making any savings.

No	Frequency	Percentage	Cumulative percentage
0	4	8.00	8.00
1	20	40.00	48.00
2	13	26.00	74.00
3	7	14.00	88.00
4	3	6.00	94.00
5	1	2.00	96.00
10	2	4.00	100.00
Total	50	100.00	

Table 8: Livestock ownership

Only 20.34% feel that the increase in income is a result of improved CDF contributions on health and education. 79.66% feel that the improvement.

Table 9: Livestock ownership

40% of the sampled persons owned 1 livestock while 2% owned only 5 livestock. This is an indicator that most people are small-scale farmers with little income from livestock. Livestock is a measure of wealth, and ownership will automatically translate into wealth.

	Frequency	Percentage	Cumulative percentage
Primary	5	7.81	7.81
Secondary	23	35.94	43.75
College	27	42.19	85.94
University	9	14.06	100.00
Total	64	100.00	

Table 9: Education Level Attained

From the table above, it can be noted that a majority of the respondent have attained a college education and secondary education.

Variable	Coefficient	Z-statistic	Marginal effects	Z-statistic
Age	-0.06411	-2.11	-.0122587	-2.07
Gender	0.677871	1.28	.1300133	1.36
Education levels	-0.10073	-0.34	-.0192622	-0.34
Nearness	0.205431	0.68	.0392832	0.69
Number of children	0.340315	2.06	.065076	1.95
Number of children attending school	-0.21587	-1.1	-.0412793	-1.08
CDF or fees	0.437745	0.71	.1001323	0.62
Number of livestock	0.062394	0.61	.0119312	0.61
Health center	0.499379	1.05	.1028303	1.02
Ownership	-0.21058	-0.45	-.0400858	-0.45
Constant	0.040859	0.02		

Table 10: Profit Estimation Results

Number of Observation	= 71
Likelihood Ratio Chi Square (10)	= 14.13
Probability > Chi Square	= 0.1670
Log Likelihood	= -25.189686
Pseudo R2	= 0.2191

The table above shows the results of regression analysis. In the analysis, the dependent variable was the CDF contribution. The independent variables were Age, Gender, Distance to the nearest health center, number of children in a household, number of children attending school, ownership of CDF and livestock ownership. The relation between age and CDF contribution was found to be negative. An increase in age by one year will reduce the probability of income from CDF contribution by 1.23%. It implies that the probability of one benefiting from CDF contribution is likely to reduce as one advance in age. In terms of gender, the analysis indicates that the contribution of CDF is likely to benefit more male than the female. The CDF fund increases the probability of increased income of male by 13% more than the female. This result may also show that there were more male respondents than females. On the education front, the probit regression results reveal that an increase in the level of education may reduce the probability of increased income from the CDF contribution by 1.9%. This indicates that people with higher education level are less likely to benefit from CDF contribution. In this case, therefore, CDF contribution is benefiting more people with less education. This corresponds to the CDF objective of increasing the access to education and health provider amongst the poor to bridge the inequality gap between the poor and the rich. This may reduce poverty.

The average number of children in a household is three. An increase of one child in a family will increase the probability of income from CDF contributions by 6.51% higher. This implies that households with a higher number of children are more likely to benefit from CDF contribution than households with less number of children. Allocation of CDF funds is made based on the high level of poverty exhibited in households. The number of children is an indicator of poverty. People with a large number of children are less likely to send all of them to school due to reduced income levels hence, they are likely to seek sponsorship from well-wishers which includes CDF contributions.

The mean number of children attending school stood at 3. An increase in attendance by one will reduce the probability of income from CDF contribution by 4.13% lower. This implies that CDF funds are not enough to cater for everyone who is in need and therefore, large numbers of children are less likely to benefit from CDF contribution if the population of those attending school will remain high. This analysis agrees with the report from Kenya Integrated Household Budget Survey 2005/2006. The analysis of the report indicated that out of those who apply for CDF sponsorship, only 1.67% received the actual sponsorship. A large number of students are left out.

The mean distance from the nearest CDF build health center is 1.08 kilometers. When the distance from the health center is reduced, the probability of income increasing as a result of good health raises by 3.9%. When the CDF funds are used to construct many health centers, this may lead to improved health and this could reduce poverty through increased income. People who are healthy are likely to put in more hours of work and this may increase income. The results of this empirical analysis are in total agreement with the analysis from the Kenya Integrated Household Budget Survey which also indicated that majority of the Kenyan 91.5% seek healthcare from hospitals (public and private) and only 8.5% seek medical attention from other unconventional health providers. This is a clear indicator that the distance of the health center from the location of the household has significantly reduced.

The analysis also indicated that the average number of people (children) benefiting directly from CDF funds through payment of fee is insignificant. However, the income of the households whose children benefit from CDF contribution through fee payment is likely to increase by a probability of 10.01% higher. This implies that CDF contribution is likely to increase the

income of the household through payment of school fee. This may reduce poverty on the account that the income that would have otherwise been used to pay school fees, can now be used to buy food, clothes and other basic needs.

The average number of livestock owned by most households is 2. An increase in livestock by one unit will increase the probability of income from CDF contribution by 1.19% higher. It is well known that livestock is one of the measures of wealth and an increase in livestock would translate into increased wealth and this may significantly reduce poverty. This analysis agrees with the report from Kenya Integrated Household Budget Survey (KIHBS) of 2005/2006 that indicated that the mean number of livestock owned by household is 2. However, KIHBS report indicated that only 37% of those who livestock have attended school and that only 13% of those attending school are likely to sell their livestock to pay school fee.

4. Conclusions

The general knowledge about the existence of CDF projects is very high. Majority of the people in Hamisi 69.7% are aware of the presence of CDF projects in their areas. About 64.1% have confidence that they own most of these projects. This is a very important indicator because one the most critical objectives of the CDF fund or rather devolved funds was to empower the citizens at the grass root to be able to make their own decision and make expenditures that maximize their welfare. However, the number of people who have access to CDF.

Majority of the people in Hamisi have a greater access to the health provider. Most of the households 61.11% live closer to the nearest CDF built health provider. In the survey, it was observed that most of the CDF built health providers were mainly the dispensaries. However, some of them are not in operation yet. The number of people seeking health care from government-owned facilities and private facilities has increased to 78.57%. The research has also indicated that most of these health providers offer a wide range of services, which includes the provision of drugs, maternity services, and Ambulance services among others. The analysis reveals that provision of drugs was the most important service offered by most health providers (63.04%) and that majority of these health providers do not have ambulances and maternity wards. Most households interviewed 54.72% do agree that they have made savings on the medical costs. They expressed a lot of satisfaction. The little income saved can be used to improve their welfare and hence reduce poverty. The above findings are very critical in as far as CDF contribution is concerned.

Most children in Hamisi District about 95.1% are attending school. Majority 70.34% are in primary schools and a very small number 1.23% is attending tertiary institutions. The analysis has revealed that about 15.15% of the responded use CDF funds to pay school fees. This finding is confirmed by the analysis made from Kenya Integrated Household Budget Survey of 2005/2006, which indicated that about 11.67% of the households benefited from CDF school bursary funds. This number is too insignificant compared to the number of people who need this kind of assistance. Most of the respondent about 42.19% had a college education and about 35.94% had secondary education. Those with university education accounted for only 14.06%. These statistics indicate that the level of education in Hamisi District is high with about 92.19% of people with post-primary education.

About 95.52% of the households have the number of children ranging from 1 to 6. However, the average number is about 3 children. This is a very important indicator as it reflects the size of the family that is important is the measurement of poverty levels. Most of the children to school. The findings have also revealed that people are making some savings. About 40% make savings either in banks, Saccos, in the house and in the merry go round. Majority save in Saccos and merry go round. This is a very important finding as it implies that the levels of investments may also be slightly high. With investment in place, wealth will be created and this may reduce the level of poverty. However, a majority of people 53.52 do not save. This implies that many are surviving below the poverty line.

Majority of the households 80% owns 3 livestock. Out these, 20% own 1 livestock. The ownership of livestock is an indicator of wealth. When a household has a large number of animals, he/she is deemed wealthy. Therefore, the level of livestock ownership in this district indicates that people are not extremely poor. The finding above reveal that CDF contribution has to some little extent, improved the livelihood of the households Some of the areas that have recorded positive effects includes; access to a health provider, improved savings, livestock ownership and increased school attendance. However, the extent of the impact is so insignificant. Furthermore, the effect is still in its latent stage as most of the projects are still in their initial stages and the fact that CDF is a new social-economic phenomenon; just having started in the year 2003.

5. Summary

The main aim of this study was to establish the effectiveness of CDF in alleviating poverty through enhanced education standards and improved access to health facilities. To this end, both secondary data (KIHBS) and primary data were used. The results revealed that despite the government trying to raise the fund towards the improvement of living standards of the vast majority, civic education is still lacking and quite a large population is yet to get to terms with CDF and how it operates. The study made use of the probit model to ascertain the probability with which the lives of Vihiga residents could be improved as a result of CDF. This was analyzed against both the demographic and socioeconomic characteristics of the residents of Hamisi District. Estimated probit results revealed that; gender, education, number of livestock owned, knowledge of the existence of CDF funds and distance from the health center are positively related to the CDF contribution. Whereas, age, level of education reached and ownership are negatively related to the CDF contribution.

5.1. Policy Recommendation

Adoption and acceptance of CDF initiative by all could help improve lives of many. However, the achievement of this goal depends on the knowledge ability of the population on their role in CDF management and its operations. By so doing, they would be able to engage those mandated to run the fund and could be in a position to ensure that there is both transparency and accountability in the way the fund is run. Channelling the CDF funds towards public goods like hospitals and schools would raise the disposable incomes of the vast majority following their reduced expenditure on school fees and hospital. Proper management of those savings would ultimately improve their living standards especially if the money is directed towards profitable projects that would earn them some income.

With the building of CDF schools, enrolment would go up and this would improve the human capital, which is very vital for sustenance and transfer of knowledge to the future generations. The CDF contribution towards education requires enhancements. The proportion allocated for the CDF bursary fund is very inadequate is not reaching the needy. Majority of those in need of this bursary funds are from poor families and if they are not assisted at this point. Some funds should also go into improving the quality of education offered. There are a lot of inefficiencies in education that needs to be corrected. This fund should also be used for infrastructural improvement in such areas as the expansion of classrooms, improvement in the quality of science equipment and other physical facilities. This will help enhance the quality of education in Hamisi Districts. It has also been observed that this District does not have many students attending college/tertiary institutions.

The government through CDF should intervene by putting up more polytechnics and colleges. This must be accompanied by a comprehensive public campaign to create awareness on the importance of these institutions. The tertiary institutions provide the basic skills to individuals and this is very necessary for the building of human capital that is required for the development of this nation.

Health providers must also be provided with enough facilities such as drugs, ambulances, maternity wards and administrative documents such as admission forms. It was noted the area hard hit was mainly the absence of ambulances and maternity wards. The CDF committee should first consider the availability of these services before putting up a health institution. The question of staffing was of great concern. Most of the clinics and dispensaries build from CDF funds, were greatly understaffed. Most of them had a few nurses and other paramedics but without Doctors. The CDF committee should make the availability of a Doctor or a well-qualified nurse as a matter of priority before erecting a clinic or dispensary. Some of the bottlenecks that may hamper the access to health providers such as poor roads should be ironed out. CDF should allocate some funds towards repair and construction of feeder roads leading to these health facilities to enhance access.

More banking institutions must be introduced in the area. This follows the revelation that most of the savings are made in Saccos and merry - go - rounds. With the increasing income due to CDF contribution, there is, therefore, a strong need for banking institutions. In addition to that, civic education on financial management needs to be enhanced People needs to be educated to embrace banking as an important economic activity. This will strengthen their capacity to access credit and enhance investment leading to improved livelihood hence reduce poverty.

The government through the ministry Finance should increase the budget allocations to the CDF from the current 2.5% to more than 10%. This will ensure that CDF committee has enough revenue to meet its budget. Some of the projects are stalled due budget constraint. Furthermore, increased budget allocation to the CDF will increase its capacity to reduce poverty.

6. References

- i. Alemayehu, G., NiekElejong, Mwabu, G. and Kimenyi, M.S. (2001) Determinants of Poverty in Kenya: Household Level Analysis. KIPPRA, Discussion Paper No. 9.
- ii. Amemiya, T. Qualitative Response Model: A Survey Journal of Economic Literature, 1981, p.1488.
- iii. Assie – Lumumba, N. (2005), Cost and Financing of Basic Education and Participation of Rural Families and Communities in Third World Countries. SAGA working paper, New York: Cornell University.
- iv. Atieno, R. (2006) "Female participation in the Labour Market: The case of the informal sector in Kenya." Research Paper 157. African Economic Research Consortium, Nairobi Kenya.
- v. Card. And Krueger, A. (1996), Labour Market Effects of School quality: Theory and Evidence; National Bureau of Economic Research; working paper 5450.
- vi. Kenya National Bureau of Statistics (2004), "Who and Where are the poor"? A constituency level Profile Volume II. Government Printer.
- vii. Cheenea, G. Implementation in Developing Countries, Beverly Hills: Sage and Rondineili, D.A. (1983). Decentralization and Development Policy.
- viii. Chweya, L. (2006), "Constituency development funds: a critique", The African Executive, 7-14 June, Nairobi.
- ix. Francis P. and R. James. (2003), Balancing Rural Poverty Reduction and Citizen Participation: The contraction of Uganda: Decentralization program world Development Vol. 31, No. 2, PP. 325 -37.
- x. Geda, A., NiekDejong. G. Mwabu and M.S. Kimenyi (2001). Determinants of Poverty in Kenya: Household-level Analysis. KIPPRA Dip No. 9.
- xi. Gesami; R.K (2000); Health Care Financing in Kenya: An Empirical Analysis, Ph.D. Thesis, University of Nairobi.
- xii. Government of Kenya: Economic Recovery Strategy for wealth and Employment Creation (2003-2007).
- xiii. Government of Kenya (1998). Master Plan on Education and Training, 1997 -2010, Nairobi: Government Printer.

- xiv. Government of Kenya (1996), Welfare Monitoring Survey 11, 1994 Basic Report, Nairobi.
- xv. Government Printer.
- xvi. Hallman, K. (1999). Child Health Care Demand in a Developing Country. Unconditional estimates from the Philippines, International Food Policy Research Institute, FCND Discussion Paper No. 70.
- xvii. Heller, P.S. (1982). A model of demand for medical and health services in Peninsular
- xviii. Malaysia Social Science and Medicine; Vol. 16pp. 267-28
- xix. Hill, K.G. Cego, B. and M. Mahy (2002) Childhood Mortality in Kenya. An examination of trends and determinant in the late 1980s to mid-1990s, John Hopkins University.
- xx. Ikiria, G.K (1997). `Economic Restructuring and Poverty in Kenya'. In Njuguna N. and W.Owino (Eds.) From Sessional Paper No.10 to Structural Adjustment: Towards Indigenizing the Policy Debate. Nairobi: Institute of Policy Analysis and Research.
- xxi. Kabubo-Mariara J. (2003) "Wages Determination and the Gender Wage Gap in Kenya: An evidence of Gender Discriminations" Research Paper 132. Africa Research Consortium Nairobi, Kenya.
- xxii. Kaufmann. Kraay, A., and Pablo (2000). Governance Matters: From Measurement to Action: Finance and Development: A quarterly magazine of IMF. Washington DC.
- xxiii. Kimalu, P.K.N. Nafula, D.K. Manela, G. Mwabu and Kimenyi, M.S. (2001). Educational Indicators in Kenya. KIPPRA WP NO. 4.
- xxiv. Kimalu, P. N. Nafula, D.K. Manda G. Mwabu and Kimenyi, M.S. (2002) Situational Analysis of Poverty in Kenya. KIPPRA WP NO.8.
- xxv. Kimenyi, M.S (2007) Institutional Infrastructure to Support "Super Growth' in Kenya; Governance Thresholds Reversion Rates and Economic Development.
- xxvi. Laplague, P., Warshall, P. and Stone, S. (2001), The Role of Technology in Determining Skilled Employment: An Economywide Approach," Productivity Commission Staff Research Paper, Aulufo, Canberra.
- xxvii. Maglad, N. (1998) "Female Labour supply in Sudan" Special Paper No. 30. African Economic Research Consortium, Nairobi, Kenya.
- xxviii. Mapesa, M. Kibua, N, (2006) An Assessment of the Management and Utilization of the Constituency Development Fund in Kenya. Institute of Policy Analysis and Research.
- xxix. Mingelt, A. and J.P. Tan (1996). The Full Social Returns to Education: Estimates based on countries economic growth performance. Human Capital Development Working Paper No. 73. World Bank, Washington.D.C.
- xxx. Ministry of Education, Science, and Technology (2005-2010): Kenya Education Sector Support Programmes (2005 – 2010): Delivering Quality Education and Training to All Kenyans
- xxxi. Musgrave A. and P. Musgrave (1982). Public Finance in Theory and Practice, Tokyo: McGraw-Hill Kogakusha Ltd.
- xxxii. Mwabu, G. Kimenyi, M.S. P. Kimalu N. Nafula and D.K. Manda (2002). Predicting Household Poverty: a Methodological note with a Kenyan Example. KIPPRA DP NO. 12.
- xxxiii. Mwabu et al (2000). Poverty in Kenya: Profile and Determinants. University of Nairobi and Ministry of Finance and Planning, Nairobi.
- xxxiv. Njeru, E, and J. Orodho (2003) Education Financing in Kenya: Secondary School Bursary scheme implementation and challenges, IPAR DP / 035/2003, Nairobi: Institute of Public Policy Research and Analysis.
- xxxv. Oloo, A. (2006), Devolution and Democratic Governance: Option for Kenya 40p. ISBN 9966-948-44-9. (<http://www.ipa.orke/dp77abstract,PDF>)
- xxxvi. Oyugi N. L., G. Mwabu and W. Maasai (2000), "The Determinants of Poverty in Kenya," African Journal of Economic Policy 7(1) 47-64.
- xxxvii. Republic of Kenya (2003) Constituency Development Fund act, Nairobi: Government Printers.
- xxxviii. Republic of Kenya (2006). Constituency Development Fund Annual Report for 2004/05: National Management Development. Nairobi: Government Printer.
- xxxix. Republic of Kenya (1995). District Focus for Rural Development Nairobi: Kenya Government Printer.
 - xl. Republic of Kenya, Ministry of Education. The Kenya Institute of Education. Strategic Plan year 2006 – 2010.
 - xli. Republic of Kenya, National Development Plan (2002 – 2008) Effective Management for Sustainable Economic Growth and Poverty Reduction. Government Printer.
 - xlii. Society for International Development (2004). Pulling apart: Facts and Figures on Inequality in Kenya. Nairobi: Society for International Development.
 - xliii. Solow, R.M. (1957), 'Technical Change and the Aggregate Production Function,' Review of Economics and Statistics, August 1957.
 - xliv. Wanjiru, K. (2008). The Constituency Development Fund Social Audit Guide:
 - xl. Open Society Initiative of East Africa (OSIEA), Nairobi.