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FACTORS INSTRUMENTAL TO SUSTAINABILITY OF PROJECTS IN KENYA: A CASE STUDY OF OPARANYA MOTHER CARE KAKAMEGA COUNTY

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ABSTRACT

A project is considered to be sustained if it continues to deliver a high level of benefits after the donor ends major financial, managerial, and technical support. Politically instigated projects face challenges of sustainability due to the politician's occupancy period in the elected position. A big percentage of these projects end up failing and others pick at a slow rate. The study assessed factors that contribute to sustainability of county project. The case study for this research was the Oparanya Care system, a program dubbed Afya Ya Mama Na Mtoto in Kakamega County that was developed with an aim of reducing the high infant and maternal mortality rate and other cases associated to poverty that mostly cause death to women and children during and after child delivery. The research design used was cross-sectional evaluation survey that evaluates a specific case study. The target population for this study included the project implementers and project beneficiaries. Data analysis and presentation of findings was carried out using statistical software's including SPSS and Microsoft Excel. The quantitative data was presented in form of pie tables. Correlations for the variables were done and results presented in a tables. From the findings, the effect of the economic pillar could be seen from the increase in employment opportunities and also increase in the government revenue due to the cascading effect of the community having more income leading to increase in purchasing power. The program had reduced the maternal mortality rate as well as improved the community health and safety. Nevertheless the project is still on going and the county still has plans to increase the number of facilities. Further analysis disclosed that majority of the stakeholders who influence the project sustainability more were the community. The correlation coefficient (R) between the independent variables and project sustainability showed a positive relationship. Consequently, based on the given data the study concludes that the Economic, Social and Resource pillars have a positive effect on the sustainability of projects.

Key Words: *Economic, Social, Resources, Sustainability of Projects in Kenya, Oparanya Mother Care Kakamega County*

Introduction

(Ostrom, 2010) defines sustainable development as a process of growth which meets the needs of the present, as perceived by all concerned and maintained over a long period after project inputs have ceased, without compromising the ability of current and future generations to meet their needs. Talking about community empowerment cannot be separated from the efforts for sustaining the Development. (Sianipar, Yudoko, Adhiutama, & Dowaki, 2013) says that Community members become the main business party in a community empowerment project, so the sustainability thoughts can also be traced from business perspective. Such businesses desired to change the world through social, environmental, and economic values which are called together as the "triple bottom line". Understanding sustainable development and its goals is the first step to learning what we can do to make it happen.

Community projects are intended to transform the economic wellbeing of the locals leading to poverty reduction. The sustainability of these projects is a great concern since most of the projects are politically instigated. It is for this reason that project implementers face continuous internal and external pressures from project donors, the taxpayers and the entire community at large. A project is believed to be sustainable if it continues to provide some level of benefits after the donor terminates major financial, managerial, and technical support (Limo, 2013). Various studies have been conducted to measure sustainability, as research in this area expands, approaches to measuring project sustainability are gradually becoming more sophisticated, which has generated a more detailed understanding of the antecedents, contributors, and processes central to an application of sustainability principles. Politically instigated projects face challenges of sustainability due to the politician's occupancy period in the county. A big percentage of these projects end up failing and others pick at a slow rate. How then can we ensure these projects continue long after they are gone? What factors contribute to sustainability of projects? The study assessed factors that contribute to sustainability of county projects. The case study for this research was the Oparanya Care system, a program dubbed Afya Ya Mama Na Mtoto in Kakamega County that was developed with an aim of reducing the high infant and maternal mortality rate and other cases associated to poverty that mostly cause death to women and children during and after child delivery (Pronto International, 2013). The project software is under continual improvement to fit user and customer needs. This study aimed at assessing the mechanisms of sustainability of the project with the following specific objectives; to evaluate the economic aspect as an instrumental factor to sustainability of projects, to investigate the social effect as an instrumental factor to sustainability of projects and to assess the influence of resources as an instrumental factor to sustainability of projects. The study contributes greatly to facilitators of Community Based Projects (CBPs) bringing out issues brought forward by different stakeholders and lastly will give recommendations on how the community based development projects can be made sustainable after phasing out donors.

Literature Review

Theoretical Frame Work

In precise perspective, sustainability means the ability to sustain some entity, outcome, or process over time. Theories of sustainability attempt to highlight and incorporate social responses to environment and cultural problems. These theories of sustainability raises unambiguously basic question: can human activity successfully maintain itself and its goals without exhausting the resources on which it depends? According to (Boucekkine, de la Croix, Gosseries, 2008), sustainability involves

two types of issues; one, sustainability insists on the importance of perpetuity, of not endangering the ability of the Earth or of humankind to go ahead with existing. Secondly, it embodies a concern as to the intergenerational route to be followed by our societies and raises questions like will the future generations be able to have the same level of consumption? Are we going to transfer the earth in a worst state? Is growth in whichever of its forms sustainable at all? According to (Makau, 2014), it took quite a number of years of intensive work to reach a global consensus on the elements of sustainable development, it was finally achieved in 1995 at the World Summit on Social Development. The explanation brought together what is popularly known as the three e"s; environment, economy and equity. (Mancini Marek, 2004) comes with a framework containing seven major elements of sustainability: leadership competence, effective collaboration, understanding the community, demonstrating program results, strategic funding, staff involvement and integration, and program responsivity. They say that these elements are primarily within the control of program leaders and stakeholders, but a program could have limited life because of factors outside its control such as state or local budget shortfalls or the emergence of other programs and organizations. Debates of sustainability aspire to sort out different opinions, with this regard the evaluation policies and components of sustainable development should be researched.

Empirical Review

Sustainable neighborhoods need to be a central concern of community development (Ahmad Talib, 2014) says. Necessary community empowerment and a sense of community is an idea of sustainable development. It is one of the major points of the Millennium Development Strategy. (Mancini Marek, 2004) notes that though community-based programs are significant in the service delivery system, in many communities most of them lack awareness of sustainability. He says that a sustained program preserves a focus consonant with its original goals and objectives, with the individuals, families, and communities it was originally planned to serve. Majority of studies done on community development (Ayuku, 2013) have evidently revealed the deficiency of interest in government initiatives to spearhead development. According to (Githinji,2013), the principle of community development is popular participation. He goes on to say that popular participation deals with broad issues of social development and the creation of opportunities for the involvement of people in political, economic and social life of the nation. Thus in this way it prepares a way for community participation , a concept which connotes the direct involvement of ordinary people in local affairs such as building of roads, schools, or election of local and civic leaders.

Economic Pillar

Community development is an organized intervention that gives communities better control over the conditions that affect their lives. It provides ways of facilitating and providing sustainable livelihoods in communities and in addition ensures a country's economic growth. The Economic impacts of a project are effects on the level of economic activity in a given area (Weisbrod Weisbrod, 1997). In these they study looks at three two factors; tax benefits and reinvestments. Together, their effects can be thought of as the "ripple effect" of the initial change in economic activity, for instance across all economic sectors per each new job created directly or per each dollar increase in earnings or business sales (Morgan, 2010).

According to (Cavanagh, Frame, Lennox, 2006) the link between the taxes generated by the project and the social benefits arising from the use of those

taxes. He says that the taxes are spent in diverse areas such as health, education, housing etc. The social benefit arises from the tax spend in each area. The tax spend in each area is then multiplied by the pertinent factor to obtain the social benefit. In (Morgan, 2010) view, changes in economic activity can lead to predictable variations in local government revenues and expenditures. Economic growth can boost public revenues, but it also can increase costs in the form of expanded public services. From a local government fiscal perspective, a new business hiring more employees or a new housing development creates a ripple effect that can have significant budgetary implications.

When people are capacitated they are able to regenerate money from that little income. For instance just a single purchase of goods and services from local suppliers supports the employment of staff at those firms and empowers those firms to purchase additional inputs from their suppliers situated further down the supply chain. Additionally, the company's employees earn salaries and wages, some of which they will spend on local goods and services in a wide variety of industries. That spending supports workers in those firms who also will spend portions of their incomes locally, and so on. With this logic a typical economic impact analysis approximates the total impact of a change in economic activity as the sum of effects on three different levels.

Social Pillar

The communal support and acceptability, community commitment, societal cohesion is very important for sustainable development. According to (Aras , Crowther, 2008), social conditions and cultural beliefs contribute to a community's sense of engagement in the health of women and children. Changes to attitudes and behaviors are challenging to implement, incentivize, sustain, and measure. Though Social Equity is often hard to quantify, measures which evaluate income, employment, literacy, access to housing and health care among many others, are both available and useful. A myriad of different meanings are attached to the term "social." There are also difficulties regarding the identification of "purely" social issues, as considerable overlaps exist across SD's three pillars. This overlap is particularly pronounced with respect to the economic and social pillars (Thin, Lockhart, Yaron, 2002) with many issues, most notably employment and unemployment, deemed relevant to both dimensions .Despite these circumstances, the literature points to certain policy concerns that have been identified as "social" within the overall SD framework. These have been variously described as social categories; social themes ; social dimensions; social indicators and the social realm (Murphy, 2012).

Many projects play a significant role in employment creation and income generation. In the view of (Brief, 2015), there is an extensive consensus among many actors who are concerned with sustainable development. These includes the United Nations (UN), the International Labor Organization (ILO), and the International Co-operative Alliance (ICA). They all agree that the cooperative enterprise is the type of organization that is most suited to addressing all dimensions of reducing poverty and exclusion. As Cooperatives help reduce poverty it is important they identify economic opportunities for their members; empower the disadvantaged to defend their interests; provide security to the poor by allowing them to convert individual risks into collective risks; and mediate member access to assets that they utilize to earn a living. Globally more than 100 million jobs exist in cooperatives, as cited by the ICA. Together with small and medium-sized enterprises, cooperatives are the most significant sources of new employment. While global data on cooperatives' contributions to

creating employment needs improvement, available country evidence is quite compelling (Brief, 2015).

According to the British Columbia Round Table on the Environment and Economy, socially sustainable communities are able to: Achieve and maintain personal health: physical, mental and physiological; Feed themselves adequately; Provide adequate and appropriate shelter for themselves; Have opportunities for gainful and meaningful employment; Improve their knowledge and understanding of the world around them; Find opportunities to express creativity and enjoy recreation in ways that satisfy spiritual and psychological needs; Express a sense of identity through heritage, art and culture; Enjoy a sense of belonging; Be assured of mutual social support from their community; Enjoy freedom from discrimination and, for those who are physically challenged, move about a barrier-free community; Enjoy freedom from fear, and security of person; Participate actively in civic affairs.

(Fithian, Powell, 2009) defines culture "as the whole complex of distinctive spiritual, material, intellectual and emotional features that characterize a community, society or social group. It includes not only arts and literature, but also modes of life, the fundamental rights of the human being, value systems, traditions and beliefs." They also emphasize cultural resources to include all of the tangible and intangible heritage and living cultural elements of a community. In the view of (Nurse, 2006), cultural resources are renewable. This is extremely valued in the current economic and environmental crisis. A renewal of the sustainable concept is of a special kind. This is welcome to ensure that the sustainability concept does not lose momentum capability. Development and skills training are determinants of successful developments. For a project to realize its objectives, the guidelines of the project cycle must be vigorously implemented. According to (Tilbury , Mulà, 2009) ,cultural diversity is evolving within and across communities. Ideally cultural diversity changes over time and is shaped by human mobility and aspirations. Few policies reviewed acknowledge that evolving nature of cultural diversity requires preservation of cultural traditions to ensure sustainability.

Resource Pillar

According to (Baxter et al., 2003), the resource usage indicators attempt to capture the key value of the resources used during the lifetime of the project. In (Githinji, 2013) view, sustainable community development requires local economic development to enhance community life, by using the local talents and resources of the local community. According to (Hawkins, 2006), resources (whether people, equipment, materials or consumables) are a key aspect in managing any business. They also offer a wide range of opportunities in a balanced sustainable approach. People may be the most significant asset a company has. The organization/company must then know how they are deployed for this affects them as individuals and also the operating costs. (Hawkins, 2006), also adds, travelling is tiring, time-wasting and costly but business travel does not seem to abate. Technology allows greater flexibility for home working but commuter traffic remains congested; balanced approach could reduce travel and improve personal performance. In this case efficient equipment is a major consideration. Development in a community as (Tafara, 2013) notes, has been understood as a collective process of cultural advancement, it involves creativity interpreted in the broadest sense. This contributes to changes in people's lives and long term developmental benefits for a community. It is in relation to this that (O'Hara, 2002) adds that cultural development in a community incorporates a huge range of activities that give communities the

opportunity to tell their stories, build their creative skills, and be active participants in the development of their culture.

Consumable resources (or non-renewable) are not constrained on a periodic basis but rather have a limited consumption availability for the entire project. Sustainable development requires assimilating communities to ensure acceptance. It also requires that local economic development supports community life, using the local talents and resources of the local community. In the view of (Nikkhah , Redzuan, 2010), capacity building is an approach to development not a set of pre-determined activities. There is no single way to build capacity. In regards to sustainability, capacity building has been identified in much sustainable development policy as one of the key strategies for increasing the potential towards sustainable development (Nikkhah , Redzuan, 2010) . According to (Beyene, 2012), community participation, technology selection, site selection, demand receptiveness, construction quality, population and training are some of the pre-implementation factors. He also cites the post-implementation factors as the technical support, community satisfaction, institutional and financial management, training and willingness to sustain community projects. All these contribute to an efficient sustainable development.

The significance of infrastructure to a community is comparable to the foundation the human skeleton plays in the general structuring, functioning and health of the body. Economically (Fay, Toman, Benitez, Csordas, 2011), says infrastructure is costly, involves significant upfront capital for benefits that are spread over time, and is afflicted with complications with cost recovery. The improvement of community infrastructure is a critical means of increasing physical links between poor rural communities and the outside world (Bhandari, 2009). The corporate evaluation attributed the sustainability 'problems' with infrastructure to a number of institutional and technical factors. It found that donors often implement infrastructure projects with unjustifiable rush, forgoing rigorous institutional analyses and, in some cases, prematurely accepting government assurances that project interventions will be adequately maintained once in place. The evaluation concluded that, in many infrastructure projects, officials are motivated to achieve physical and financial targets and place little significance on facilitating a sense of community ownership. Finally, it observed a frequent mismatch between the technical standards of infrastructure projects and the human, social and financial capital available at the community level to operate them beyond project completion.

Sustainability of Projects

Sustainability (Oino, Towett, Kirui, Luvega, 2015) say is the likelihood that a project shall continue long after the external support is withdrawn. Subsequently, while thinking of project sustainability, three things must be born in mind; the community, project results and external assistance. A project is sustainable if the beneficiaries are capable on their own without the assistance of outside development partners, to continue producing results for their benefit for as long as their problem still exists. Globally, billions of shillings have been spent in communities to improve the living conditions of the people. The concept of sustainability can be seen within time and changing social, economic and political contexts. Sustainability is reflected in the capacity of the community to handle change and adapt to new situations says (Williams, 2003). A project that is seen as worth sustaining today may not be so in future.

(House, 2007) says sustainability is affected by a number of issues, including those internal to communities and their dynamics, those influenced by the project design and factors external to the particular context. (Oino et al., 2015) add that despite vast amounts of money spent on implementation of projects in Kenya, poor sustainability is depriving them from the returns anticipated from these investments. A number of factors are attributed for the poor project sustainability. Some factors are simple and others are quite complex. Some are within the control of the project management, while others come as external threats. In an another view, (Perkins et al., 2011) says sustainability is considered to be a multi-faceted, continuous and cyclical process of organizational change that has four major objectives: continuing project activities within the funded organization, sustaining benefits for the intended stakeholders, maintaining the capacity of a collaborative structure, and maintaining attention to the issues addressed by the program.

The definition of sustainability emphasizes the aspect of future orientation as a fundamental component. This care for the future implies, among other things Economic, Social, environmental and resource factors. When talking about the economic factor (Ostrom, 2010) says it implies that adequate local resources and capacity exist to carry on with the project in the absence of outside resources. (Karanja, 2013) says adequate finance is a key resource in a project, without which it cannot operate and so the resource should be given the attention it deserves if projects have to survive. Financial planning he says involves setting objectives, assessing assets and resources, approximating future financial needs and making plan to achieve monetary goals. He opines that one systematic approach for achieving effective management of project is through financial planning, budgeting and that sustainability of any project lies in effective financial management right from the implementation stage to post implementation phase.

The resource factor for sustainability of projects is equally very important for project sustainability. (Choi-Fitzpatrick, Schooley, Eder, Lomeli, 2014) say occasionally, a project ends and resources suddenly decline, causing further imbalance. In the view of (Tafara, 2013), culture is gradually emerging out of the realm of social sustainability and being recognized as having a separate, distinct, and integral role in sustainable development. Within the community development field, culture is broadly defined as the whole complex of distinctive, spiritual, material, intellectual and emotional features that characterize a society or social group.

According to different studies, the dimensions of sustainability which are effective in promoting duration of a project are yet to be fully understood. The fundamental requirement to achieve sustainability is a dynamic balance in different factors. Modest improvements in the economic status of those who are claimed to be the beneficiaries of different community projects and programs either government or privately sponsored, is yet to be quantified. In addition the indication that beneficiaries have managed to break out of self-reproducing spirals of impoverishment is minimal. Even people helped by successful projects still remain poor (Alan Rick, 2011). It is in this context, plus having found minimal literature related to the topic of research in the selected area of study, there is a gap and thereby seek to explore the factors that affect sustainability of county projects in Kenya.

Research Methodology

The research design used for the study was a cross-sectional evaluation survey that evaluates a specific

case study. The target population for this study included the all the 72 project officers who represented the sponsors and implementers. In addition the project beneficiaries were 30,000 mothers. The sampling technique used was stratified random sampling. The stratified random sampling design involved the dividing of the population into mutually exclusive or homogenous groups and then drawing random samples from each group (Kumar R, 2005). Sampling was used to secure a representative group which enabled the researcher to gain information about a population according to (Mugenda, 2003)

Since the target population was > 10000. The sample size was adjusted accordingly as shown below

$$n = \frac{Z^2 p q}{d^2}$$

$$n = \frac{1.96^2 \times 0.5(1-0.5)}{(0.05)^2}$$

N was therefore equal to 384

Hence, all the individuals who were affected by the Oparanya Mother Care project and its implications were represented by the selected sample. The data collection tool that was used for the study was the questionnaire. It blended open ended a closed ended questions. The data was collected by a research assistant. Questionnaires were dropped and picked. For those who could not read and write questions were orally administered and interpreted for the respondents to understand. The data enumerator then filled questionnaire. The data was collected over a period of one month to meet the requirements of cross-sectional survey.

Validity was determined by the use of face validity and content validity. Face validity tests whether the questions appeared to be measuring the intended constructs. The content validity tested whether all the important aspects of the constructs were measured. This was done by first testing the instruments on 10% of the target population and reviewing the findings. The responses were tested using the Cronbach alpha which is a measure of internal consistency. It is considered to be a measure of scale reliability.

A pilot study was conducted where the content validity and reliability of the questionnaires were tested. The validity was enhanced through discussion of the questionnaire contents with three randomly selected project officers and three project beneficiaries. The reliability was tested through statistical package for social sciences (SPSS) and Cronbach alpha correlation coefficient was used to satisfy the reliability tests. The pilot study helped in correcting the questionnaire. It was discovered that the age brackets did not capture all respondents therefore the study included an age bracket of 10 – 17 years. It was noted that even young girls as old as 15 years had children. Secondly, the questionnaire included questions on environmental effect as one of the pillars of sustainability. However it was noted that the Oparanya care program had little or no effect on the environment. After the corrections and additions were made to the questionnaire, the Cronbach alpha (α) reliability tests of each of the variables was as follows: 0.9 for Economic pillar, 0.850 for social pillar, resource pillar 0.802 and finally sustainability at 0.782. For each of the independent variables α, was greater than 0.7; this conforms to (Chang, 2005), that a minimum of 0.7 value for α is acceptable for a research instrument, hence the acceptance of the research instrument as valid for this study.

The data processing operations that were carried out included data editing/ cleaning and classification. The obtained data was analyzed using both qualitative and quantitative techniques. Descriptive statistics was used for the analysis of the collected data, and this included parameters such as measures of central tendencies and the measure of dispersion. Inferential data analysis techniques such as regression and correlation

analysis were also used to analyze the collected data. Data analysis and presentation of findings were done using statistical softwares including SPSS and Microsoft Excel. These softwares aided in the generation of suitable graphs, charts and tables which were used in presentation of the research findings.

Regression analysis was used to test the relative relationship between the independent and dependent variables. The data collected from the field was captured using Statistical Package for Social Sciences (SPSS) version 21 and Microsoft Excel (2013). The final report was prepared based on the findings.

Research Findings and Discussion

The analysis is of two types namely; descriptive statistics and inferential statistics. Descriptive analysis was used to describe the data and mainly involved frequency distributions, calculation of mean and standard deviation. On the other hand inferential analysis involved correlation and regression analysis to find the relationship various variables. A total of 384 questionnaires were dispatched. 72 of these targeted project officers whereas 312 questionnaires were sent out to the project beneficiaries. A total of 323 questionnaires were returned. According to Dixon (2012), a response rate of 50% was adequate while a response rate greater than 70% was very good. This agreed with that a 50% response rate is adequate, 60% good and above 70% very good. This therefore implied the response rate of 84.1% was very good.

7.1% of the respondents were between the age of 10- 17. This was from the county documents. Further a cross tabulation was done to confirm the number of beneficiaries in this category. The beneficiaries were 257 spread across all age brackets. It was noted that there were 23 beneficiaries in the age bracket of 10-17. Meaning there were some really young mothers involved in the project.

Role of Economic Pillar in Sustainability of Projects

Economic sustainability is used to define strategies that promote the utilization of socio-economic resources to their best advantage. In this study, economic benefits of projects such as employment, increase in investments and overall project benefit were tested. One of the highest rated response was increase in employment at 3.98 translating to 79.6%. An increase was also noted in government revenue at 72.2%. The two could be associated with the community having more income leading to increase in purchasing power. This is in corroboration with (Morgan, 2010) who says that the effects can be thought of as the “ripple effect” . An initial change in economic activity, for instance new job created directly increase in earnings moreover, when people are capacitated they are able to regenerate money from that little income.

78.3% agreed that the program has increased investment opportunities in the area. These findings corroborate with the (Morgan, 2010) who opines once people are capacitated they are able to regenerate money from that little income. Additionally, the company’s employees earn salaries and wages, some of which they will spend on local good-s and services in a wide variety of industries. That spending supports workers in those firms who also spends portions of their incomes locally, and so on. With this logic a typical economic impact analysis approximates the total impact of a change in economic activity as the sum of effects on three different levels. The mothers are not restricted on how to spend the money, but they are advised to buy milk and food for their children and themselves (Oketch and Amadala, 2015). However some commented they have reinvested the money and opened up small business which in turn gave them some source of continuous income.

A qualitative question on the respondents' opinion on the source of funds for ensuring project continuity was put forward. The Table 1 below explains the results

Table 1: Plans are put in place to ensure project continuity

What plans are put in place to ensure project continuity								
		Sirikali/ Government	Corporate support	Donors	Harambee/ fundraisers	Chamas	No response	Total
Category	Project Sponsor	12	14	3	-	-	-	29
	Project Implementer	19	9	4	5	-	-	37
	Project Beneficiary	95	1	44	43	27	47	257
Total		126	24	51	48	27	47	323

39% of the respondents felt that the government/sirikali should engage in the project through funding the county to ensure its continuity. 75% of those who thought the Government should support the initiative were the project beneficiaries. This could be attributed to the fact that government/serikali should support every community project. However, 48.3% of the project sponsors felt that the corporate world could come in handy, through corporate social responsibility.

Role of Economic Pillar in Sustainability of Projects

The contribution of the project in social perspective was evaluated. The reduction of maternal and newborn mortality and morbidity continues to be a great challenge in most developing countries Kenya included. It is specifically for this reason the project was conceptualized. All the project sponsors thought the program had reduced the maternal mortality rate. More than half of the project implementers that is 59.5% also agreed with the statement. However only 40.2% of the beneficiaries felt that the program had decreased mortality rate. The expectation of the project beneficiaries could have been so high, it is possible the pregnant women together with their families anticipated for a healthy pregnancy, a safe delivery, and a normal healthy babies. However some may have lost their babies at child birth others may have miscarried. According to the program (Oketch and Amadala, 2015) reported that the national average of safety deliveries stood at 56%. The community well-being and their safety was also tested in this study. Because apart from ensuring mother-child safety during delivery, the project aimed to ensure the two will be taken care off even after delivery. 69.3% of all the respondents were in agreement with the statement. The Oparanya care cash transfer programme aims at encouraging women to attend antenatal clinics and deliver safely in hospitals. During the clinics the mothers are advised on the type of foods to wean the children, about balanced diets. The children are vaccinated in the process. It was noted that majority of the children before the programme were malnourished and sickly. This agrees with the British Columbia Round Table on the Environment and Economy, socially sustainable communities are able to: Achieve and maintain personal health feed themselves adequately (Environment, Economy, and (Canada), 1994).

Role of Resource Pillar in Sustainability of Projects

According to the literature sustainable community development requires local economic development

to enhance community life, by using the local talents and resources of the local community. This research sought to understand if the Oparanya project had any effect on communities' way of like. 71.4 % agreed that the project delivered tangible resources. (Oketch & Amadala, 2015) says that the project targeted two health facilities in each sub county which was used to offer the required services. However the project has not realized its set goals in terms of resources. Nevertheless the county still has plans to increase the number of facilities in each of the 12 sub-counties from two to four to save mothers in remote villages from walking long distances to reach health facilities for services.

Further a cross tabulation to establish more on the proper community empowerment was done to find out how different category of the respondents agreed to this statement. The respondents from all the categories agreed at 87.6% that lack of proper community empowerment can affect project sustainability. These findings relate to a speech delivered by the First lady of Kakamega County that, "Small things in life like encouraging a daughter to find her dreams and helping her achieve them; appreciating the efforts and helping a woman at home; equal treatment of children either boy or girl; making them believe in themselves and increase their self-esteem and self-confidence by letting them make important decisions that are relevant in their lives. It is necessary to make a woman feel safe inclusive of other considerate gestures shown to women at the basic unit called family. This will impact the society positively and tremendously more than any lofty women's day celebrations will.
She adds that whenever the relevant ward administrators and MCA's are effectively sensitized it becomes easier to spread the information to higher levels. Schools, institutes and all the academic centers get better placed to acquire the sensitization. Consequently, in every health facility located in all the sub-counties, the health workers should always endeavor to talk about reproductive health matters. The distribution of reproductive health issues differs extensively in the sub-counties and therefore based on the statistics then much has to be done."(Priscillah Oparanya, 2016)

Stakeholder Influence on Projects

The study found out that stakeholders play a vital role in CBPs. From the findings it was seen that majority of the respondents felt that sponsors influence at 71.5%, Government at 63.4% and community at 74.2%. The community represented a higher percentage. This could be accredited to the fact that they are the ones receiving aid; and that it's their actions that will determine project success or failure. In addition, the sponsors provide the funds so they have a great stake in the project. (Karanja, 2013) says adequate finance is a key resource in a project, without which it cannot operate and so the resource should be given the attention it deserves if projects have to survive. The government too plays a key role because it provides the platform for the projects to run.

Regression Model between Sustainability of Projects and Role of Economic, Social and Resource Pillars

The fitted regression model is of the form

$$y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3$$

Where

y is the dependent/outcome variable that is the sustainability of projects

x_1 is the role of the economic pillar.

x_2 is the role of the social pillar

x_3 is the role of the resource pillar

β_0 is the intercept, the value of the dependent variable when all independent variables are set to 0.

β_1, β_2 and β_3 are the coefficients of x_1, x_2 and x_3 respectively.

The Analysis of Variance (ANOVA) table for the regression model is shown in Table 4.19

Table 2: Analysis of Variance (ANOVA) table for the Regression Model

Model	Sum of Squares	Degrees of freedom	Mean Square	F	Significance
Regression	32.313	3	10.771	76.743	< 0.001
Residual	44.631	318	0.14		
Total	76.944	321			

Table 2 shows that the regression model is significant with a p value < 0.001. The coefficients indicate that the correlation coefficient (R) between the independent variables and project sustainability is 0.648 which is a positive relationship. The coefficient of determination (R Square) of 0.42 indicates that the model can explain 42% of the variations or changes in the dependent variable of project sustainability. In other words Economic Pillar, Social Pillar and Resource Pillar can explain 42% of changes in project sustainability in Oparanya care System.

Therefore the results indicate that the model is statistically significant with the three independent variables affecting the dependent variable at a level of significance of 0.001. Consequently the research fails to accept the null hypotheses and conclude that Economic Pillar, Social Pillar and Resource Pillar have a positive effect on the sustainability in Oparanya care System.

Table 3: The fitted regression model

Unstandardized Coefficients			Standardized Coefficients		
	B	Std. Error	Beta	t	Significance
(Constant)	1.768	0.131		13.521	< 0.001
Economy	0.235	0.022	0.451	10.506	< 0.001
Social	0.287	0.026	0.471	10.962	< 0.001
Resource	0.033	0.021	0.067	1.554	0.120

The fitted regression model is therefore:

$$y = 1.768 + 0.235x_1 + 0.287x_2 + 0.033x_3$$

Where Y is the dependent variable (Sustainability), X_1 is Economic Pillar, X_2 is Social Pillar, and X_3 is Resource Pillar. According to the regression equation, taking all factors constant at zero, Sustainability will be 0 out of 5. The data findings also show that a unit increase in Economic pillar will lead to a 0.235 increase in sustainability; a unit increase in Social pillar will lead to a 0.287 increase in sustainability, a unit increase in Resource pillar will lead to a 0.033 increase in Sustainability.

Conclusions

Based on the findings, it was concluded that Economic, Social and Resource pillars all affect the sustainability of the project. Adherence to sustainability indicators; integration of economic, social aspects, integration of short term and long term aspects can enhance sustainability of the project more. The economic pillar and the social pillar had a higher impact. They both deal with social needs therefore it is necessary to engage both citizens and community partners to plan and act in response to these needs which will lead to the overall well-being of the whole community. Realizing project sustainability is not a short term assignment, but a continuous process because community based projects are sophisticated

therefore requiring composed management skills. Empowerment in terms of information, skills and resources is a fundamental aspect for sustainability of these projects. Institutions managing project implementation from the community to the national or international levels need to be well facilitated economically and socially. The CBP (Oparanya Mother Care) has empowered the community through health education and monetary terms. This per the findings has consequently changed people's lives and has added long term developmental benefits to the community. The aim of the project was to help the mother and the child but from the findings the entire community has benefited from the same. However, more stakeholder involvement is necessary to ensure that the project can run even after the funding is over. Generally the studied variables are instrumental to the sustainability of projects and if well observed they contribute highly to the mutual benefit of all the stakeholders involved in the project implementation.

Recommendations

Economic sustainability involves making sure the project is successful, but also that its operations do not create social or environmental issues that would harm the long-term attainment of the set goals of the project. Secondly, since the transactions are carried out through MPESA (an application for money transfer using mobile phones), the county government could come with an agreement with the mobile phone company-Safaricom that as part of Corporate Social Responsibility it could donate a certain percentage per transaction towards the project.

Resources (whether people, equipment, materials or consumables) are a key aspect in managing any project. They offer a wide range of opportunities in a balanced sustainable approach. People are the most significant asset in any project. The organization/company must then know how they are deployed for this affects them as individuals and also the operating costs. Secondly, consumable resources (or non-renewable) are not constrained on a periodic basis but rather have a limited consumption availability for the entire project, therefore efficient utilization is crucial.

The social aspect of sustainability focuses on balancing the needs of the individual with the needs of the group. The social pillar helps social agencies and residents to raise awareness about social needs and to engage both citizens and community partners to plan and act in response to these needs. The end result improves the well-being of the whole community. Though social equity is often hard to quantify, measures which evaluate income, employment, literacy, access to housing and health care among many others, it is both available and useful. With this, the study stresses the importance of balancing the needs of the individual with the needs of the project in full access to effective health care, housing, food, and education services which are essential prerequisites for full participation in cultural, social, and economic activities.

Areas for Further Research

This study has appraised the Oparanya Care Project when it is still running. Therefore a further study can be done after the Oparanya Mother Care Project has been completely executed to evaluate whether the project is still sustainable. The study variables only accounted for 42% of the factors instrumental to the sustainability of the project. A more detailed study can be conducted to establish the other factors that contribute towards sustainable projects.

REFERENCES

Ahmad, M. S., and Talib, N. B. A. (2014). Empirical investigation of community empowerment and sustainable development: quantitatively improving qualitative model. *Quality & Quantity*, 1–19.

Aras, G., and Crowther, D. (2008). Governance and sustainability: An investigation into the relationship between corporate governance and corporate sustainability. *Management Decision*, *46*(3), 433–448.

Ayuku, L. M. (2013). *The Influence Of Devolved Funds On Sustainability Of Community Development Projects In Kenya: A Study Of Embakasi Constituency*. University of Nairobi.

Baxter, T., Bebbington, J., Cutteridge, D., and Harvey, G. (2003). The Sustainability Assessment Model (SAM): measuring sustainable development performance. *Offshore Europe*, *2*(5).

Beyene, H. A. (2012). *Factors Affecting the Sustainability of Rural Water Supply Systems: The Case of Mecha Woreda, Amhara Region, Ethiopia*. Cornell University.

Bhandari, H. (2009). Sustainability of rural development projects.

Boucekkine, R., de la Croix, D., and Gosseries, A. (2008). ARC Project: Sustainability.

Brief, A. P. (2015). Cooperatives and the Sustainable Development Goals.

Cavanagh, J.-A. E., Frame, B., and Lennox, J. (2006). The sustainability assessment model (SAM): measuring sustainable development performance. *Australasian Journal of Environmental Management*, *13*(3), 142–145.

Choi-Fitzpatrick, J., Schooley, J., Eder, C., and Lomeli, B. (2014, December 4). A Resource Guide for Enhancing Potential for Sustainable Impact [Text]. Retrieved May 20, 2015, from https://usaidlearninglab.org/library/resource-guide-enhancing-potential-sustainable-impact

Environment, B. C. C. on R. and, Economy, B. C. R. T. on the E. and the, and (Canada), N. R. T. on the E. and the E. (1994). *Local Round Tables: Realizing Their Full Potential : a Report on the Canadian Experience with Multi-stakeholder Processes*. National Round Table.

Fay, M., Toman, M., Benitez, D., and Csordas, S. (2011). Infrastructure and sustainable development. *Postcrisis Growth and Development: A Development Agenda for the G*, *20*, 329–382.

Fithian, C., and Powell, A. (2009). Cultural aspects of sustainable development.

Githinji, C. M. (2013). *Factors affecting sustainability of community based projects a case study of Mutomo District of Kitui County*. Kenyatta University.

Hawkins, D. E. (2006). *Corporate Social Responsibility: Balancing Tomorrow's Sustainability and Today's Profitability*. Palgrave Macmillan.

House, S. (2007). How to make wash projects sustainable and successfully disengage in vulnerable contexts. *Action Contre La Faim (ACF)*.

Karanja, G. M. (2013). Influence of management practices on sustainability of youth income generating projects in Kangema District, Murang'a County, Kenya.

Kumar, R. (2005) *Research Methodology A Step-by-step Guide for Beginners, 2nd edition*, Pearson Education, Australia.

Limo, K. L. (2013). *Assessment of Predictors of Sustainability in Community Development Projects. A Survey of CDF Funded Projects Nyeri Town Constituency, Kenya*.

Makau, E. M. (2014). An investigation into the effects of informal individualisation of unregistered community land on community land rights. Case study: Ikutha district in Kitui county.

Mancini, J. A., and Marek, L. I. (2004). Sustaining Community-Based Programs for Families: Conceptualization and Measurement*. *Family Relations*, *53*(4), 339–347.

Morgan, J. Q. (2010). Analyzing the Benefits and Costs of Economic development projects. *Community & Econ. Dev. Bull.*, *7*, 1, 12.

Mugenda, O. (2003). Mugenda. A.(2003). *Research Methods: Quantitative and Qualitative Approaches*.

Murphy, K. (2012). The social pillar of sustainable development: a literature review and framework for policy analysis. *Sustainability: Science, Practice, & Policy*, *8*(1), 15–29.

Nikkhah, H. A., and Redzuan, M. (2010). The role of NGOs in promoting empowerment for sustainable community development. *Journal of Human Ecology*, *30*(2), 85–92.

Nurse, K. (2006). Culture as the fourth pillar of sustainable development. *Small States: Economic Review and Basic Statistics*, *11*, 28–40.

Oino, P. G., Towett, G., Kirui, K. K., and Luvega, C. (2015). The Dilemna in Sustainability of Community-Based Projects in Kenya.

Oketch, A., and Amadala, B. (2015). in Kakamega to hospitals. Retrieved September 8, 2016, from http://webcache.googleusercontent.com/search?q=cache:GM5veUTxpGMJ:www.ipsos.co.ke/NEWBASE_EXPORTS/IFMIS/150916_Business%2520Daily_12,%252013_a18a2.pdf+&cd=1&hl=en&ct=clnk

Ostrom, T. K. (2010a). Considering sustainability factors in the development project life-cycle: a framework for increasing successful adoption of improved stoves.

Ostrom, T. K. (2010b). Considering sustainability factors in the development project life-cycle: a framework for increasing successful adoption of improved stoves.

Perkins, D. F., Feinberg, M. E., Greenberg, M. T., Johnson, L. E., Chilenski, S. M., Mincemoyer, C. C., and Spoth, R. L. (2011). Team factors that predict to sustainability indicators for community-based prevention teams. *Evaluation and Program Planning*, *34*(3), 283–291.

Priscillah Oparanya. (2016). H.E. PRISCILLAH OPARANYA THE FIRST LADY KAKAMEGA COUNTY.

Pronto International. (2013). Launch of “Linda Afya ya Mama na Mtoto” project in Kenya | PRONTO International. Retrieved September 20, 2016, from http://prontointernational.org/launch-of-linda-afya-ya-mama-na-mtoto-project-in-kenya/

Santos, J. R. A. (1999). Cronbach’s alpha: A tool for assessing the reliability of scales. *Journal of Extension*, *37*(2), 1–5.

Sianipar, C. P. M., Yudoko, G., Adhiutama, A., and Dowaki, K. (2013). Community empowerment through appropriate technology: Sustaining the sustainable development. *Procedia Environmental Sciences*, *17*, 1007–1016.

Tafara, A. C. (2013a). *Factors influencing sustainability of rural community based water projects in Mtito Andei, Kibwezi sub-county, Kenyatype or paste your content here*. University of Nairobi.

Tafara, A. C. (2013b). *Factors influencing sustainability of rural community based water projects in Mtito Andei, Kibwezi sub-county, Kenyatype or paste your content here*. University of Nairobi.

Thin, N., Lockhart, C., and Yaron, G. (2002). Conceptualising socially sustainable development. *Department for International Development (DFID), UK and the World Bank*.

Tilbury, D., and Mulà, I. (2009). *Review of Education for Sustainable Development Policies from a Cultural Diversity and Intercultural Dialogue: Gaps and Opportunities for Future Action*. Paris, UNESCO. http://unesdoc. unesco. org/images/0021/002117/211750e. pdf.

Weisbrod, G., and Weisbrod, B. (1997). Measuring economic impacts of projects and programs. *Economic Development Research Group*, *10*.

Williams, M. (2003). *Sustainable development and social sustainability*. Hull, QC: Strategic research and analysis, department of Canadian heritage. Reference: SRA-724.