Feeding Our Future: Policy Options For Establishing and Expanding School Meal Programs in Bulilima District, Zimbabwe

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Abstract: *After a prolonged decline, world hunger appears to be on the rise again. Acute hunger and poor nutrition among school-aged children has been observed to reduce their intellectual development either through psychological changes or by reducing their ability to participate in learning experiences or both. The analysis employs a mixed research methodology to inspire ideas and map a way-forward on how to establish School Feeding Programs and factors to consider in scaling up school feeding programs in Zimbabwe, acknowledging the grave impacts of hunger and food on the school going children especially at primary level. Findings from the analysis indicate that School Feeding Programs increase children's educational achievement so as to improve their potential productivity and earnings. The analysis distinguishes amongst three policy alternatives to complement and guide the National School Feeding Program/Policy (2016), which include Home Grown School Feeding, school farming for school feeding and fund-raising campaigns. Using a tailor made 'evaluation criteria' the study selects Home Grown School Feeding as a viable policy alternative for the establishment and expansion of school meal programs, as it addresses acute hunger, fosters the establishment of market linkages. The analysis acknowledges the multi-faceted nature of mal-nutrition and hunger hence proposes the complementary use of other alternatives i.e. school farming for school feeding and fund-raising campaigns. The complementary adoption of other policy alternatives aids in establishing a multi-faceted and multi-dimensional policy framework that liberates School Meal Programs to move away from food aid towards self-sustenance, an agenda which has been pushed for over the years.*

Keywords: *school feeding, mal-nutrition, public policy, food security.*

I.   Introduction

After a prolonged decline, world hunger appears to be on the rise again. According to Rael (2017:6) "in 2016, the number of undernourished people in the world increased to an estimated 815 million, up from 777 million in 2015 but still down from about 900 million" (cited in Food and Agriculture Organisation (FAO), 2018:5). The increases have resulted in a lot of panic from the international community which seeks to extinguish hunger by 2030. More alarming is the fact that the majority of the people, that are malnourished worldwide, are in Africa. The grave impacts of world hunger have for long been pushed into the limelight, this evident, as during the World Food Summit (2002) world leaders declared that, "together with terrorism, hunger was one of the greatest problems the international community has been facing" (World Food Program, 2017:9). The World Food Program (2017:17) postulates that, "targets set by the World Food Summit in 1996 for the reduction of hunger have failed, despite food production having grown faster than world population". Sanousi (2019:5) substantiates the above assessment noting that, "worldwide the trends are alarming as progress in reducing hunger in the developing world has slowed to a crawl and in most regions the number of undernourished people is actually growing, despite the fact that world food production has grown faster than world population in the past three decades".

Hunger affects millions of children, this having detrimental impacts for households, communities and nations. Hunger accounts for approximately 8 million children deaths worldwide and is regarded as a chief public health problem in third world countries, especially in sub-Saharan Africa (FAO *et al.,* 2017). Scholars and pundits have furthermore unpacked how under-nutrition in school going children affects their education. Acute hunger and poor nourishment among school-aged children has been observed to lessen their intellectual growth either through, "physiological changes or by reducing their ability to participate in learning experiences-or both, more so closely linked hunger has also been a barrier to child education" (Reuben, 2017:22). This is substantiated by Kearney (2006:12) who highlights that, "research has indicated that both acute and chronic hunger affects children's access to school, their attention span, behaviour in-class and educational outcomes". Kearney (2006:4) hence posits that, "hunger, poverty and poor education are interdependent". A common observation and proven trend is that the failure to obtain adequate meals amongst pupils' breeds' absenteeism

leading to the failure to attain an education, this in-turn permanently situating them within the poverty cycle and trap. Studies show, hungry children face challenges in remaining focused in class and cannot perform multifaceted tasks. As a result, "many school-age children in food insecure areas remain out of school" (WFP, 2017:16).

The disturbing problem of poverty, hunger and malnutrition has a ripple effect on the development of children (Dei, 2014). As a result policymakers, development practitioners and governments have stressed on the, "need to bear in mind that failure to invest in food and nutrition security, particularly for children, would retard the development of our countries in socio-economic terms" (WFP, 2017:5). This has hence facilitated the search for an all-inclusive approach to children's well-being that acknowledges that, "education, health and nutrition cannot be considered in isolation" (WFP, 2017). Amongst a vast array of strategies and policies the school meal/ feeding programme has gained mileage as one of the key strategies in combating food insecurity amongst school going children providing a pathway to improve the children's health (Tomlinson, 2007 cited in Beesley, 2014). School meal/feeding programmes provide meals to children to alleviate short term hunger and acute hunger, thus permitting them to focus on their education. McGregor *et al.,* (1998) argue that, "school feeding programmes have proven effective in encouraging enrolment, increasing attention span and improving school attendance" (cited in Beesley, 2014:11). Kearney (2006) concurs, school meals are useful instruments for buffering school children from hunger pains in the long run improving their nutrition.

II.   The Policy Problem and its Context

"Agriculture is the mainstay of the Zimbabwean economy, bankrolling 15-20% of the Gross Domestic Product (GDP)" (ZIMVAC, 2017:1). The country has, however, been faced with food insecurity challenges which are driven by multiple shocks, including climate change and economic shocks. The Zimbabwe Vulnerability Assessment Committee (ZIMVAC) (2017:2) argued that, "76% of the rural households where considered poor and 23% extremely poor, on average households spend over half of their income on food and 33% suffer from food deprivation". Even more worrying are the current statistics that indicate that, "between February and May 2019, an estimated 31% of Zimbabwe's rural population (about 2,878,957 people) required urgent action to protect and save livelihoods, reduce food consumption gaps and minimize acute malnutrition" (ZIMVAC, 2019:1). The agricultural season of (2018/2019) was marked with poor rains and dry weather that affected agriculture activities, plunging the majority of the households into food insecurity.

Dei (2014:5) argues that, "when poverty and food insecurity hits a family (household), the vulnerable members such as children become its immediate victims". The World Health Organisation (WHO) unravelled that, "malnutrition was (and still is) rife in the African continent and was affecting school age children" (FAO, 2018:2). The World Food Program (2007) highlights that amongst a long list of factors; the quality of education is significantly influenced by food shortages. "In many African countries (Zimbabwe alike) food insecurities and nutritional inadequacies have impacted negatively on a number of school going children and the quality of education provided" (Dei, 2014:13). According to Grantham-McGregor (1998) in Beesley (2014); education related problems are felt more by students from an underprivileged and economically disadvantaged background, further indicating, malnutrition drove high drop-out rates, in many countries. In a study conducted by the Zimbabwe Vulnerability Assessment Committee (ZIMVAC) (2019:2) it was gathered that, "a substantial proportion of the school children suffered from malnutrition, are stunted or experience short term hunger".

To counter food insecurity and malnutrition, the Zimbabwe government has crafted a number of policies and frameworks to aid in the improvement of the children and communities' health. These include the National School Feeding Programme of Zimbabwe (NSFP) of 2016 which was inspired by the acknowledgement that, "food support to students is a strategic investment that can make a difference to the future of all Zimbabwean learners and consequently the contribution they can make to their country" (The Patriotic, 2017). However due to financial constraints the delivery of this programme targets one province at a time, at inception it began with Manicaland, was to be followed Mashonaland East then Masvingo Province and so on (The Patriotic, 2017). The establishment of such a programme/ policy inspired the establishment of school meal programmes across the country (ad hoc school meal programmes). Other complementary policies include the Zimbabwe School Health Policy (ZSHP) which was established in cognisance and to highlight and reveal the inseparable relationship between education and health (GoZ, 2018). The policy was dovetailed with the Curriculum Framework (2015-2022) with the aim of enhancing the appreciation of health education more so, "ensuring a safe and sanitary school learning environment, disaster management and risk assessment, school based health and nutrition services, family and community health services" (GoZ, 2018:5). Another broader policy framework in existence is the Food and Nutrition Security Policy (FNSP) of Zimbabwe, which seeks to "promote and ensure adequate food and nutrition security for all the people at all times in Zimbabwe particularly

amongst the most vulnerable and in line with our cultural norms and values and the concept of rebuilding and maintaining family dignity" (GoZ, 2018:3).

The following roadmaps and policies have made staggering success in resolving the mounting nutrition problems especially amongst school age children by adopting programs that progress the nutritional status of the vulnerable community members (especially the children). One of these strategies as noted by Bundy et al., (2009) cited in Rael (2017) is that of School Meal/Feeding Programmes (SFPs) which are acclaimed globally as effective strategies for keeping children in school, hence promoting, learning and education in general. In Zimbabwe, SFPs have currently gained popularity and are implemented by a number of players which range from Non-Governmental Organisations (NGOs), private companies even individual donations, which reiterates the views of Rael (2017) who posits that, "school feeding programmes (SFPs) are implemented by governments and NGOs alike". School meal programmes facilitated an increase in children's nutritional status, raised school enrolment, improved school attendance, increased attention span and are solving community health problem especially in disadvantaged communities.

III.   Defining the Policy Problem

Zenebe *et al.,* (2018:7) posit, "school feeding programmes (SFPs) have a long, international history and have gained prominence as a commendable strategy and technique with enormous benefits for children, parents and communities as a whole". A World Bank senior health specialist notes that, "we are now at a stage where it's not whether school feeding is important; it's how to design and deliver school feeding" (WFP, 2017:6). The demand for school feeding has increased significantly over the last two decades in Zimbabwe as hunger and malnutrition continues to stalk the school aged children (especially in primary schools), this owing to multiple shocks, including climate change and economic shocks. The following view concurs with that of Rael (2017:6) who notes that, "while the practise is pervasive on the world, developing countries give SFPs prominence considering most of these nations experience financial and food crises intermittently". Despite the importance of school meal programmes a significant challenge to these programmes is that they are externally funded and start and stop based on whether there is donor funding (for example the WFP asserts that in 2015, it provided school meals in 62 countries, reaching about 17.4million children (WFP, 2017 in Rael, 2017)). In Zimbabwe a number of non-governmental organisations (NGOs) and international organisation have aided in buffering learners from hunger and food insecurity these include Hilfswerk International which feeds approximately 6,050 pupils in Chimanimani district (Hilfswerk International, 2019), TZU Chi foundation (Newsday, 2018), Mediar School Feed Programme in Gokwe and Mudzi districts feeding a total of 90 000 primary school pupils in 147 schools (Mediar, 2003). More so the government has made significant contributions towards school feeding programmes through the National School Feeding Programme (NSFP), which however scratches the surface in comparison with the situation on the ground. Reuben (2017:10) concurs with the following assessment noting that, "…as is the case in most developing countries, the major obstacle to a well-functioning school feeding programme is the lack of funding". Henceforth this necessitates the establishment of strategies and policies to expand school feeding programmes (those that are maintainable even after donor withdrawal) thus, so as to provide adequate and timely assistance, "resources must now be mobilized in response to increased needs" (Sanousi, 2019:14). The World Food Program (2007) henceforth promotes the adoption and scaling up of SFPs as these offer educational and health gains to children in extremely vulnerable situations, and in the process, boosts enrolment, curtail absenteeism and promote food security.

IV.   Purpose of the Policy Analysis

At the core of the analysis is the view, investing in the children is investing in the future. Reuben (2017:10) concurs with the following assessment noting that, "it is the children whose individual growth, development and society contribution will shape the future of the world". The following policy analysis will provide ideas and maps a way-forward on how to establish SFPs and factors to consider in scaling up school feeding programs in Zimbabwe, acknowledging the grave impacts of hunger and food on the school going children especially at primary level. The analysis attempts to aid in the establishment of a strong and suitable program that responds to a community need, a locally owned and incorporates community involvement. So as to aid in the establishment and scaling up of school feeding programmes in Zimbabwe the analysis is directed by the following objectives and research questions:

V.   Methodology and Limitations of the Study

5.1 Study Area

The study focused on Bulilima District. The district is located in the Matabeleland South Province, in the southwestern part of the country. Bulilima consists of a total of 22 wards. The district is characterized by low and erratic rainfall, according to the agricultural survey, the district falls under agro-ecological region V,

characterized by low agricultural potential. The area is prone to unpredictable and very erratic rainfall and has poor soils that are mostly sandy and infertile and a regular cycle of drought which severely restrict agricultural activities (Bulilima Rural District Council (BRDC), 2016). In an assessment conducted by the Zimbabwe Vulnerability Assessment Committee (ZIMVAC) (2019:2) it was gathered that, "one third of the children, in the district, are not able to attend school due to hunger and there are even several reported cases of primary-school pupils collapsing at school". There have been notable donations and contributions by the government and various NGOs such as World Vision, ADRA to mention but a few which however fail to cover the entire needs in the district. This hence indicates the need for the establishment and up scaling of school meal programs so as to buffer and alleviate short term hunger and invest in the school children.

5.2 Research Design

A mixed research design was utilized for this policy analysis. Haile (2019:5) indicates that, "a mixed research design not only adds to the research toolbox, it also provides an opportunity for a synthesis of traditions" (i.e. qualitative and quantitative). Henceforth for this particular policy analysis the intentions of the two strands are applied on the actual ground to seek a holistic understanding of the identified problem. "The weaknesses of one of the strands are addressed using the other strands" (Haile, 2019:5). A qualitative approach was adopted, to aid in eliciting the perceptions and opinions of teachers, school headmasters, school development committee members, ward leadership and district education officers on the impacts/ potential impacts of school meal programmes, factors that influence the success of a school meal programme and policy alternatives/options to establish and expand school meal programmes. To ensure and enhance the validity of the analysis, the research also utilized a quantitative approach, with the aim to gain a deeper understanding and a fuller description of the impacts of school meal programmes.

5.3 Study Population and Sampling

The study population comprised of primary school officials (teachers, headmasters) and school development committee member (SDC); ward leadership and district education officers (DEO) from Bulilima district. The district has a total of 60 primary schools (providing primary and some early childhood education) with a total of 16 517 pupils (BRDC, 2016). The study consisted of collecting data from a total of 50 schools in the district, randomly selected. Per school the researcher interviewed a total of 2 school staff members (preferably a senior teacher/deputy head and the headmaster), thus a total of 100 interviews were conducted. More so, the study comprised of key informants interviews (KII), thus 7 Ward Councilors (randomly selected), 7 School Development Committee (SDC) members, 6 traditional leaders (that participate or are involved in school feeding programmes), 3 District Education Officers (DEOs) and 2 Program Officers from the Department of Social Welfare, thus a total of 25 key informant interviews. The respondents were purposively selected; thus, the study utilized the purposive sampling technique, thus targeting respondents with the adequate knowledge about school feeding. This sampling technique enhanced the data collected, as the sample consists of and was biased towards those with proficiency of the topic understudy.

VI.   Evaluation of Policy Alternatives

6.1 School Meal Programs in Bulilima District

The study established the status of the School Feeding Programs in Bulilima district, with all respondents showing a significant appreciation and comprehension of what constitutes school meal programs and most responses were in line with the view of one of respondents who indicated that,
"…a School Meal Program (SMP) constitutes the provision of a meal (s) to some or all students at a school with the aim to buffer them from hunger and starvation this in turn creating an enabling environment for them to learn without disturbances" (Interview 1, 2019).

Data collected gathered that, of the 50 schools in the study sample 24 schools had school meal programs, whereas the remainder did not. This translates to 48 percent of the schools having SFP while the majority (52%) did not have (however, every school had at some point implemented school feeding programs). More so the analysis unravelled that on average the school meal programs benefitted a total of 300 pupils per school. The majority of pupils benefitting from the school feeding programs are female pupils (55%), whereas males constitute 45% of the beneficiaries, this attributed by the fact that the district has more females than males. A majority (60%) of the schools that have school feeding programs indicated they fed all pupils all year round, whereas the remainder, 40% highlighted that they faced challenges in sourcing food provisions for throughout the year hence indicating that school feeding programs where prominent during the lean season (thus these are mainly on ad-hoc basis). It was, recurring that in the cases of shortages, schools prioritised providing for the pre-school pupils. The following findings where in-line with the perceptions of the District Education Officer who indicated that,

"…school feeding programs have always existed in the district but have recently gained popularity this owing to the climatic and economic shocks the country has been facing. Though the feeding programs greatly assist a huge number of pupils they are however limited by the availability of funds for the procurement of food provisions and related services, as a result schools do not have the capacity to feed their pupils throughout the year" (Interview 2, 2019).

The analysis established that a majority of the school meal programs in the district where funded by the Government of Zimbabwe (GoZ) (95%) through the Social Welfare Department. Other funders of SFP programs include Non- governmental Organisations (NGOs) (4%), whereas religious institutions (1%) play a complementary role in school feeding (illustrated in figure 1, below). The commonly adopted type of (SFP) in the district is that of on-site (98%), whereas some (2%) do have take-home rations which are mainly orchestrated by non-governmental organisations (NGOs) and religious institutions. All schools in the district indicated that they were only able to provide a single meal (i.e. one lunch meal per day for pupils), this owing to financial constraints for sourcing food provisions and further stressing that, the single meal was however not enough especially for kids who walk long distances to and from school. In relation to this, the ward councillor for Ward 14 indicated that,

"the meal at the local school provides relief for the hungry children but these are far from enough as these kids come from resource poor families and for some the provided meals become the day's only meal)" (Interview 13, 2019).

Figure 1: An illustration of how School Meal Programs are funded in the Region
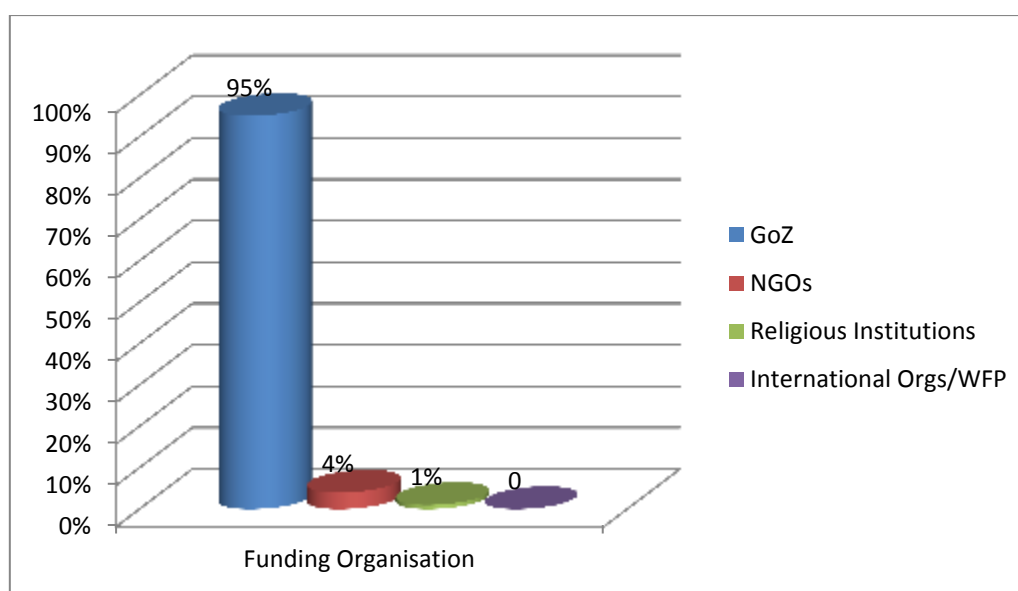
School feeding programs in the district have existed for long but with most being on an ad-hoc basis (based on the availability of resources). A majority of school feeding programs in the district were established 4-6years ago (52%), this followed by 7 and above years (30%), 1-3 years (16%) and less than a year (2%) (illustrated in figure 2). It is imperative to note that upon probing, the study gathered that, though school meal programs have always existed, these were only firmly established and consolidated subsequently following the drafting of the National School Feeding Programme of Zimbabwe (NSFP) of 2016. A program officer from the Department of Social Welfare indicated that,

"…the existence of school meal programs dates back, to decades ago, but were less coordinated. The implementation of the NSFP assisted in the creation of guiding principles and consolidation of school meal programs for fighting acute hunger in the region" (Interview 5, 2019).

**Figure 2: An illustration of Period of Inception of School Meal Programs**
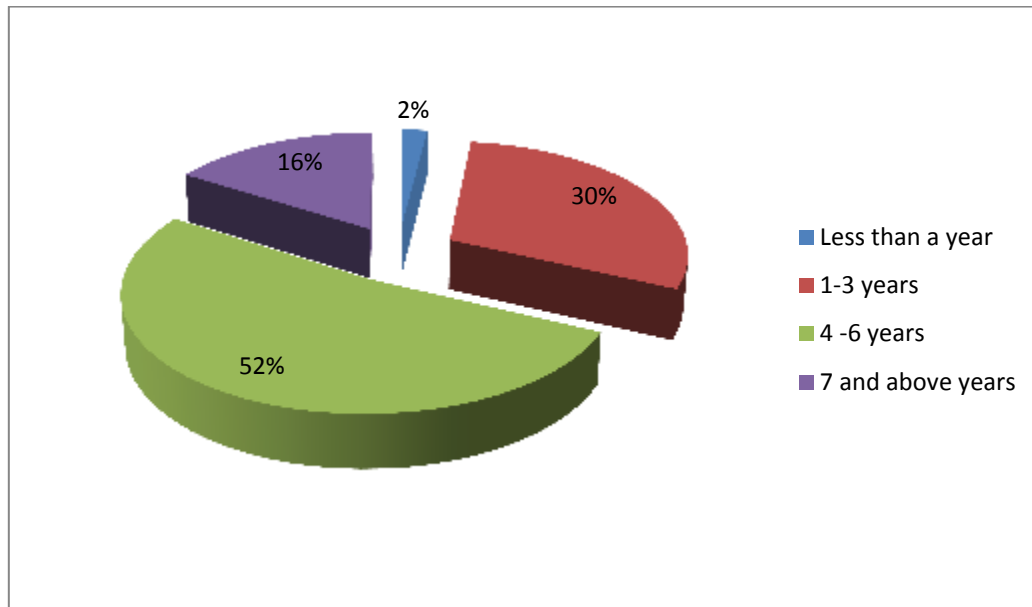
VII.   Impacts and Potential Impacts of School Feeding Programs

A number of factors have been attributed to the adoption and implementation of school meal programs in the district. The respondents aligned the widespread adoption of school meal programs in district schools to the following factors; with all respondents identifying short term hunger as a principle driver (100%), followed by droughts in the region/low agricultural production (90%), increased number of absenteeism and dropouts (75%), malnutrition related diseases (70%), long distances from schools (65%) (see figure 3, below). More so, respondents i.e. school heads indicated that all these factors were aggravated by the economic hardships that the country has been facing in the past two decades. An officer from the Social Welfare and the District Education Officer buttressed the study findings indicating that,

"…multiple stressors have driven the need for school meal programs across the country, and especially in Bulilima district; these factors include mainly droughts in the region resulting in low agricultural output leaving subsistence farmers without produce, this aggravated by the economic situation. This has had ripple effects leading to increased dropout rates and pupils not going to school, kwashiorkor and starvation" (Interview 4, 2019).

Figure 3: An illustration of Factors that have led to the implementation of School Meal Programs
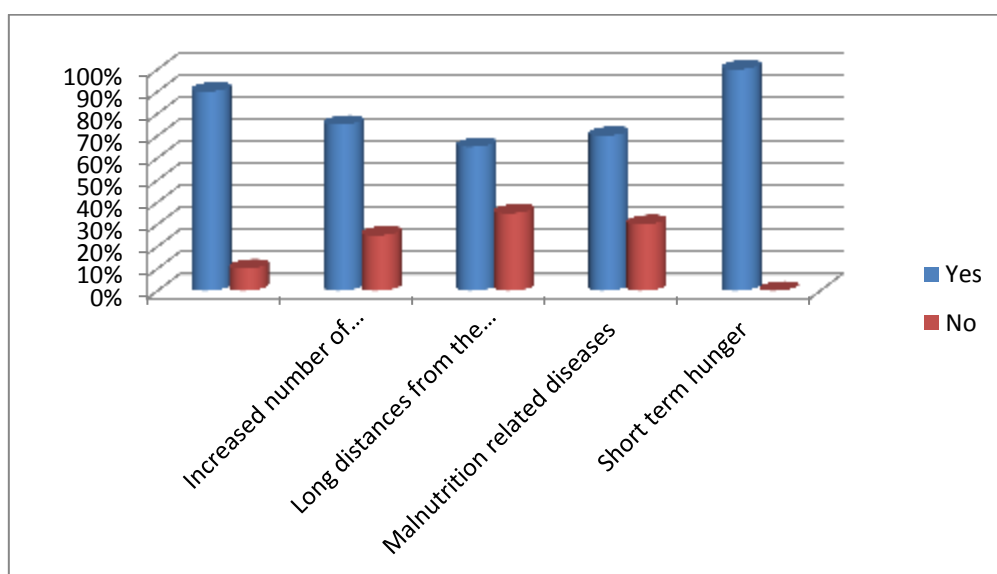
Alderman and Bundy (2012:2) argue that, "school feeding programs which provide meals at school (SFPs) or related take home rations (THRs) can improve enrolment and attendance, can address chronic hunger or micronutrient deficiencies and, by improving health or by increasing a child's focus in the classroom, can enhance learning". The study hence pursued to establish the extent to which the existing school meal programs had an impact/ or potential impact on the following factors, improved enrolment, increased attendance, retention (academic improvement), improved nutritional deficiencies, reduction of short-term hunger. Respondents (60%) indicated that school meal programs in the district had improved enrolment to a larger extent, whereas 40% argued it led to improved enrolment to a very greater extent. With regards to increased attendance, 80% attributed the programs to have led to an increase to a larger extent whereas 20% mentioned it had led to an increase to a very greater extent. Respondents indicated that it was hard to establish the causal relationship between retention (academic improvement) and the feeding programs, 50% acknowledged that school meal programs had led to academic improvements to a moderate extent whereas 50% had seen little improvement (small extent). 60% of the respondents mentioned that school meal programs had improved nutritional deficiencies to a larger extent whereas 40%, where of the view that school meal programs impact had led to improved nutritional status amongst students to a moderate extent. All respondents (100%) concurred and acknowledged that the greatest impact (or potential impact) is that of reducing short term hunger amongst pupils (Illustrated in Figure 4). One traditional leader commented,

'the program helps the school pupils with meals and this has resulted in notable changes such as improved enrolment, increased attendance this in turn leading to improved academic improvement and reduction of short-term hunger" (Interview 20, 2019).

6.2 Challenges Faced and Strategies to Enhance the Success of SMP

Respondents identified a number of challenges which affect the implementation of school meal programs this in turn affecting the program's impact and effectiveness. The majority of the respondents 80% identified financial resource shortages as a leading factor hindering the implementation of school meal programs more so limiting room for the expansion and growth of school meal programs. Furthermore, 14% indicated that they faced challenges which emanated from the lack of technical know-how in nutrition and hygiene issues, whereas 4% identified challenges related to infrastructural shortages and 2% was attributed to man-power shortages.

Figure 4: A chart showing challenges faced in the implementation of School Meal Programs
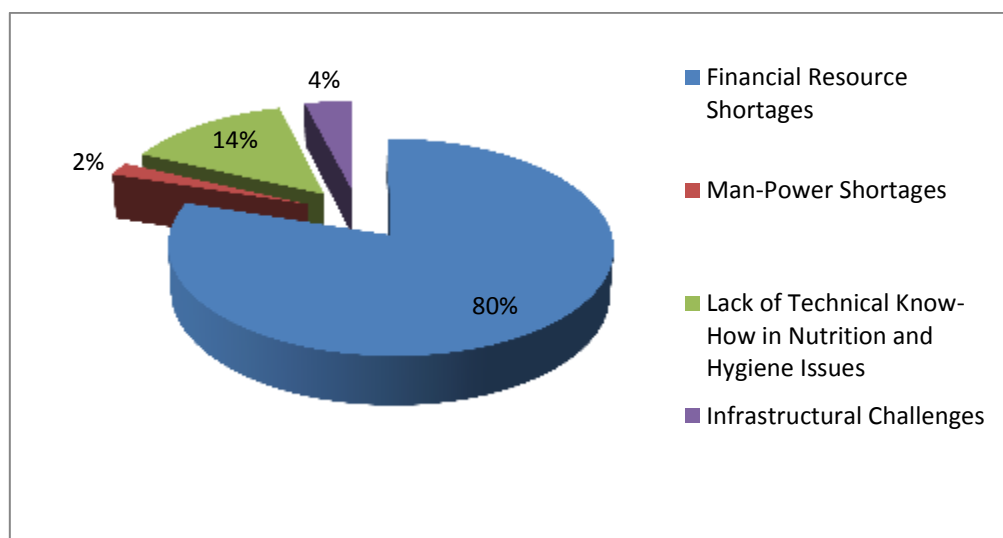
The identification of multiple-challenges that affect the implementation of school meal programs inspired the identification of strategies to enhance the success of school feeding programs. Respondents identified a number of strategies to enhance the effectiveness and impact of school meal programs. A total of 97% of the respondents identified mainstreaming the SMP into national policies and frameworks as an efficient strategy to enhance the effectiveness of school meal programs. More so, other strategies include efficient targeting (95%), stakeholder and community participation (89%), infrastructural and institutional capacity (85%), nutritional and cultural sensitivity (70%) and partnerships and multi-sectoral approach (65%). In relation to this the District Education Officer reiterated that,

"…school meal programs are faced with multi-facet problems which range from resource shortages to a lack of technical know-how on nutrition and hygiene issues this resulting in the need for a holistic approach to counter these challenges. For school meal programs to be a success the government should establish policies and frameworks that complement school meal programs, these programs should target schools or communities that are in dire need of them, more so there is need enhance community participation in these programs amongst a vast array of strategies"(Interview 3, 2019)

Figure 5: Strategies to Enhance the Effectiveness of School Meal Programs
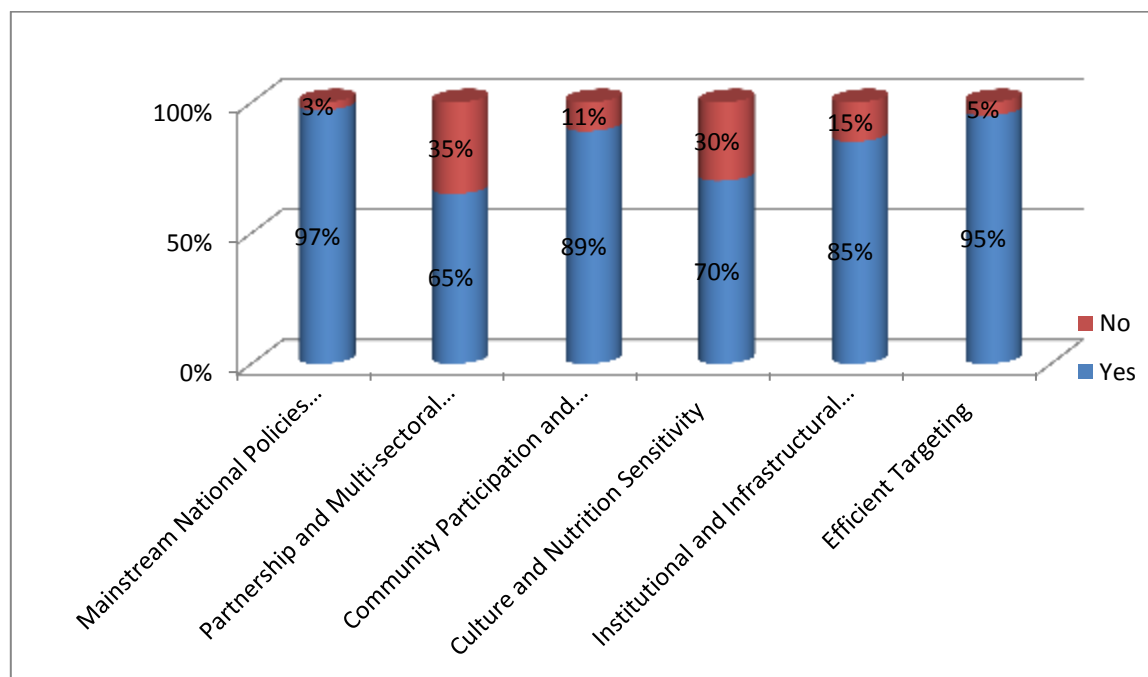
The study gathered that school meal programs in the district had a number of complementary stakeholders who contributed to the program in various ways. The key stakeholders include the community, school staff members, non-governmental organisations (NGOs) and religious institutions. The communities in the district play a pivotal role in the school meal programs as they provide support by providing/fetching firewood/fuel, fetching water, cooking the meals, serving pupils and washing the utensils. Other stakeholders such as NGOs and school staff members also chip-in assisting with technical know-how in terms of programming and planning, and with some NGOs aiding with monetary assistance. One member of the SDC substantiated and concurred with the findings indicating that,

"the community is dedicated to the program and they do work hard, they cook and even do the dishes after the meal" (Interview 10, 2019).

VIII.   Assessment of Policy Alternatives

The key objective of the analysis is to determine the status of the school meal programs in the district, at the same time providing a gate way and strategies to establish and expand school meal programs. As a result, the analysis sought to draw from the respondents possible policy alternatives to establish and expand school meal programs. The main strategies that respondents pin-pointed as policy alternatives for the establishment and expansion of school meal programs include, home grown school feeding (HGSF), school farming for school feeding and fundraising campaigns (partnerships with private sector and non-governmental organisations). The following policy alternatives were assessed using an established evaluation criterion which consists of the following factors i.e. sustainability, effectiveness, efficiency, equity, responsiveness and appropriateness.

7.1 Sustainability

With regards to the criterion of sustainability, respondents (95%) pinpointed that Home-Grown School Feeding (HGSF) is the most sustainable strategy for establishing and expanding school meal programs. School Farming for School Feeding (75%) is identified as the second most sustainable strategy, whereas the policy option identified as the least sustainable is that of fundraising (40%). Respondents highlighted that, Home Grown School Feeding is a viable policy alternative as it identifies and attempts to solve the root cause of

starvation and malnutrition by establishing links between the community and the school. This is in line with the views of the Food Agriculture Organisation (FAO) and World Food Programme (WFP) (2018:20) which note that HGSFP are instrumental as these assist, "by establishing or creating a structured demand for and strategic procurement of locally produced food; and by building synergies with complementary interventions in order to enable smallholder farmers to participate in school feeding markets". Respondents hence indicated that it is from these established structures of demand that HGSF generates it sustainability from. The following findings are in line with the views of a program officer from the Department of Social Welfare, who indicated that,

"Home Grown School Feeding (HGSF) is the most sustainable policy alternative, this owing to the fact that the following strategy harnesses resources from the community establishing a complementary bond between the community and the school. When situated in different socio-economic environment school farming for school feeding and fundraising have the capacity to sustain school meal programs, however in the district these have shown to be unpredictable and reliable in the provision of resources" (Interview 5, 2019).

This is further buttressed by a member of one of the school development committee (SDC) who opined that,
"…home grown school feeding is a sustainable policy alternative which has multiple benefits, with the main one being that it acknowledged and amplifies the 'interdependent' relationship between the community and the school. This strategy facilitates production amongst farmers as they will be assured of markets for their agricultural produce. More so, this elevates the community to take a leading role in the school feeding program, this in turn ensuring the programs sustainability" (Interview 12, 2019).

The study unknotted that School Farming for School Feeding is another viable policy alternative for enhancing the sustainability of the program. Respondents indicated that most schools had a piece of land, in which agriculture practical lessons are conducted, and with agricultural produce contributed towards the program. The study unravelled that most school produced green vegetables in their garden (mostly kale, chomouliar and cabbage) which were used to compliment food provisions which were received from the government or donations. In light of this one councillor indicated that,

"…the school gardens provide the school feeding programs with essentials such as vegetables (used as relish), this in turn means that not everything has to be bought the school can be self-reliant and produce its own food. Surplus produce can also be sold to cover up for other essentials" (Interview 14, 2019).

It is imperative to how ever note that the sustainability of school farming for school feeding is affected by the fact that the region is prone to unpredictable and very erratic rainfall and has poor soils that are mostly sandy and infertile and a regular cycle of drought which severely restrict agricultural activities. However, a majority of the respondents indicated that school farming for school feeding in the district faced a number of challenges as the schools do not have reliable sources of water for irrigation hence this impairing their productivity. More so, it was indicated that the gardens are small this in turn hindering their ability to meet the demand for the programs. A member of the School Development Committee (SDC) in one of the schools reiterates the following findings indicating that,
"…it is virtually impossible to completely rely on the gardens to drive the school meal programs, as these often face water challenges as the region is often faced with droughts this impacting negatively on production however these provide a strategy to efficiently complement school meal programs" (Interview 9, 2019).

Fundraising for school meal programs was identified as the least sustainable policy alternative this owing to the fact that, it entails placing the entire program on uncontrollable factors such as contributions and people's/ companies' generosity which more often than not is unpredictable. Respondents indicated that, seeking for funds from companies, organisations and non-governmental is not a reliable and self-sufficient strategy, as this places the entire program on uncontrollable and unpredictable factors. However, it was acknowledged that the following strategy has been resourceful in generating resources and food provisions in instances where the government through the Department of Social Welfare had failed to deliver. Emphasis was however placed on the unpredictability of the flow of resources this impacting negatively on the sustainability and effectiveness of the program.

7.2 Effectiveness

Upon probing on which policy alternative is the most effective "…. to improve enrolment and attendance, address chronic hunger or micronutrient deficiencies and, by improving health or by increasing a child's focus in the classroom" (Alderman and Bundy, 2012:2), respondents placed HGSF (90%) as the most effective policy alternative, followed by school farming for school feeding (75%) and placing fundraising (60%)

as the least effective policy alternative. The analysis unravelled that HGSF was effective in addressing chronic hunger this owing to the fact that the following policy alternative ensures a consistent supply of food provision than the other two alternatives i.e. school farming for school feeding and fundraising. It is imperative to note that the majority of respondents linked the criteria of effectiveness with that of sustainability this notable in the views of one traditional leader, who opined that,

"Home Grown School Feeding is a viable and effective policy alternative that helps with school meal programs, and has been observed to have notable benefits such fending of hunger, improved attendance and learning" (Interview 21, 2019).

7.3 Efficiency
An efficient policy alternative would be a policy that fosters the established and up scaling of school meal programs at little cost, thus efficiency is equated with economic rationality. The respondents pinpointed that Home-Grown School Feeding (HGSF) (90%) was the most efficient policy alternative, this followed by School Farming for 75% and with fundraising (60%) identified as the least efficient policy alternative. One of the key informants, a councillor from ward sixteen noted that,

"…all the three policy alternatives/strategies (i.e. home grown school feeding, school farming for school feeding and fundraising) demand financial backing but I certainly think that Home Grown School Feeding is the most efficient strategy as it has the capacity to drive school meal programs at a lower cost, accompanied by multiple benefits (Interview 16, 2019).

It is however imperative to note that one might be tempted to label fundraising as the most efficient policy alternative this owing to the fact that the resources are often generated from willing participants, however the challenge with the following alternative arises from the fact that it does not postulate a working formula as to how resources are to be utilised this impacting negatively on its efficiency. On the other hand, school farming for school feeding has been observed to be less cost efficient this attributed to the fact that despite the humongous amount of resources that can be invested, this does not translate to increase productivity as the region's regular cycle of droughts severely restricts agricultural activities.

7.4 Equity
The analysis, sought to aid in the selection of a policy alternative that is equitable, thus probing, on which alternative has costs and benefits distributed equitable distributed among the different groups. With regards to this, respondents acknowledged that, Home Grown School Feeding (HGSF) (90%) and Fundraising (90%) (as illustrated in figure 7) were strategies which ensure equitable distribution of costs and benefits, as in the spheres of HGSF the community plays a pivotal role in the production and supply of provisions whereas in Fundraising, private organisations and other stakeholders all play a pivotal role in the establishment and running of the program. One traditional leader commented,

"HGSF is a very good strategy because it ensures that communities share the burden and responsibility of the program, more so we as a community also benefit from the program and it drives community development" (Interview 22, 2019).

School Farming for School Feeding (65%) was identified as the least equitable policy alternative; this is in line the views of one of the traditional leaderships who lamented,

"It ends up being a burden to the school, if we expect it to produce for its own pupils especially considering that their niche area is delivering education, henceforth it is imperative that the burden is shared for the school meal program to be a success" (Interview 25, 2019).

7.5 Responsiveness
A responsive policy is that which satisfies the needs or values of particular groups. A total of 80% of the respondents identified HGSF a responsive policy alternative, declaring that the following alternative takes into consideration the needs and values particular groups in this instance thus, communities and pupils. School Farming for School (80%) also received a high rating, this owing to the fact that as the school takes a leading role in the establishment and daily running of the program henceforth have the power to direct the program towards satisfying their needs and values. Fundraising (60%) was identified as the least responsive policy strategy for the establishment and expansion of school meal programs. One perception from the respondents was

that, through fundraising and donations the school and its pupils become recipients hence their values and needs are not prioritised.

7.6 Appropriateness

With regards to the criterion of appropriateness it is imperative to note that respondents' views were biased towards the view that "school meals must be adapted to local needs, traditions and food habits, whilst nutrition standards must be observed" (Republic of Kenya 2016:16). In respect of this respondents identified Home Grown School Feeding (HGSF) (80%) and School Farming for School Feeding (80%) as the most appropriate strategies for the establishment and expansion of school meal programs. Respondents indicated that through HGSF, students obtain food provisions which are culturally sensitive and cultural acceptable, similarly in School Farming for School Feeding respondents observed that the school is highly likely to produce appropriate food stuffs. However, fundraising (60%) was recognized as the least appropriate policy alternative, as respondents indicated that the amount of resources generated determined the goods and services that could be obtained. Finding are reiterated by a member of a School Development Committee (SDC) who posits that,

"HGSF and School Farming for School Feeding are perceived as the most appropriate policy alternatives as communities produce and supply what is acceptable in that region or community, and ensures the agricultural production of commodities that are in line with the needs and values of the beneficiaries. The funds generated from fundraising are the sole determinant of which food commodities can be obtained; in most cases these are often culturally inappropriate or not common in that region" (Interview 6, 2019).

**Figure 6: Assessment of Policy Alternatives using Evaluation Criteria**
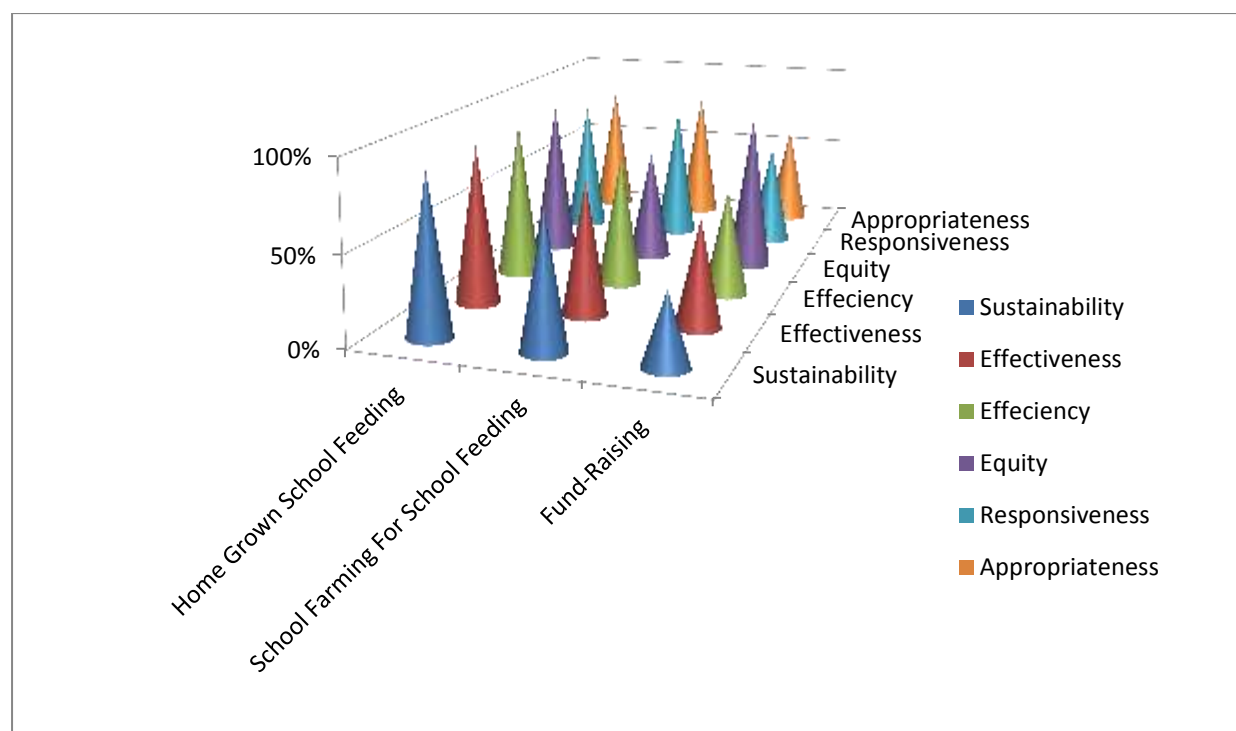
7.7 Selection of Course of Action

Using findings from the study, i.e. assessment of policy alternatives, the analysis suggests that Home Grown School Feeding (HGSF) is a viable policy alternative that can be adopted with the aim of establishing and expanding existing meal programs in the district. The following findings are substantiated by the Social Welfare Program Officer, who indicated that,

"…communities and schools favour the HGSF program this owing to its sustainability and effectiveness, this as a result places HGSF as the viable policy alternative to use for establishing and expanding school feeding programs. However, it is imperative to note that rather than utilising a single policy alternative it is a viable option to use two alternatives to complement, enhance the responsiveness and efficiency of the program" (Interview 4, 2019).

This evidently buttressed by the possible changes that the HGSF policy option/alternative would bring in the communities and district at large. Home Grown School Feeding (HGSF) was highly ranked in terms of facilitating improved enrolment, increased attendance, and retention (academic improvement), improved nutritional deficiencies and reduction of short-term hunger. The policy alternative was tipped to result in improved enrolment (90%), increased attendance (85%), retention (75%) improved nutritional deficiencies (65%) and reduction of hunger (100%) (Illustrated in Figure 8), thus averaging 83%. This followed by school farming for school feeding, which averages 76%, whereas fundraising averaged 72%.

Figure 7: Impact of the Policy Alternatives
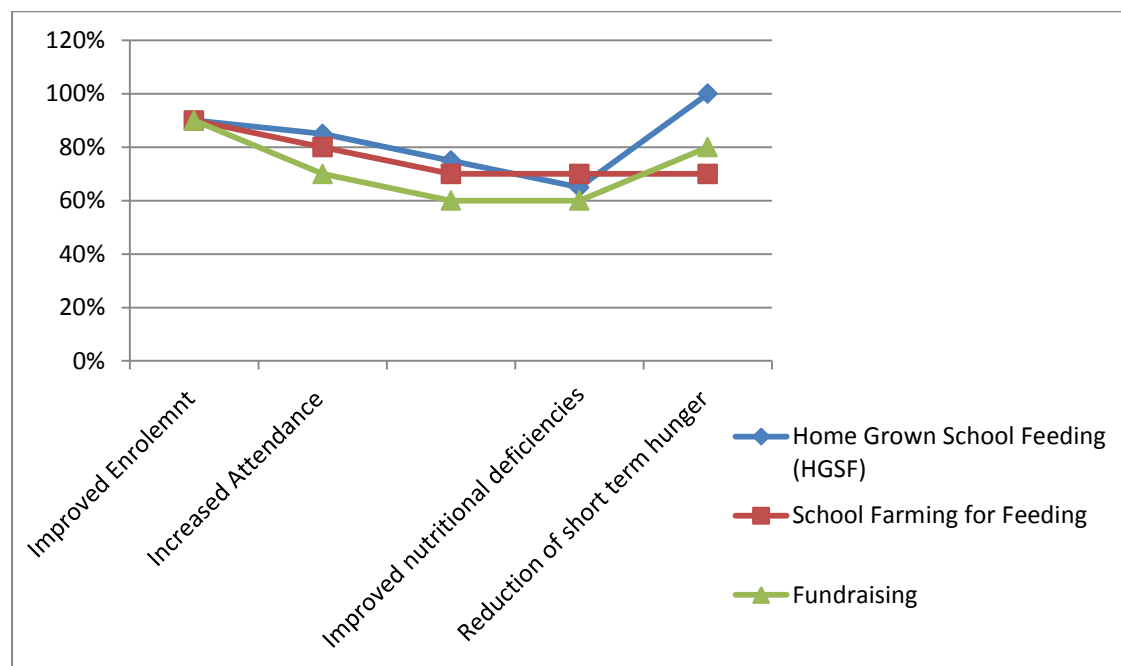
The selected policy alternative, of Home-Grown School Feeding (HGSF) can be implemented through the decentralisation of the National School Feeding Programme which is implemented by the Government of Zimbabwe through the Department of Social Welfare, to be handled by the schools. The interdependent relationship between the communities and schools is the means through which school meal programs can be established and expanded. However, it is imperative to note that, the other two policy alternatives i.e. school farming for school feeding and fund-raising can also be adopted as complementary policy alternatives to foster the success and growth of school meal programs. As opined by Wiggins (2004:6), "strengthening food security is likely to be achieved not merely by responding to temporary hunger, which can conflict with effectively addressing high levels of food insecurity over the long term; but through a combination of production, market and consumption-based interventions designed to address critical underlying factors". This hence indicates that, though home grown school feeding is a suitable policy alternative for the establishment and expansion of school meal programs, as it addresses acute hunger, establishing market linkages, it should be tailored in a flexible manner that enables the use of school farming and fundraising to meet the needs of pupils.

IX. Conclusion

Hunger and under-nutrition have the potential to erode the human capacity through irreversible and intergenerational effects on cognitive and physical development. Wide-ranging research has proved that under-nutrition affects the chances that a child will go to school, and stay in school and perform well. This necessitates the establishment of school feeding programmes, which should be undertaken to improve nutrition for school children and their educational outcomes in general, more so providing gateways through which school meal programs can be expanded. The following analysis sought to buttress the relevance and importance of School Feeding Programme (SFP) as a critical intervention which has remarkable education benefits. With other notable benefits which include improved the enrolment, increased attendance, increased retention, improved nutritional status and the general reduction of short-term hunger. The analysis distinguishes amongst three possible policy alternatives for establishing and up scaling school meal programs; these include Home Grown School Feeding (HGSF), school farming for school feeding and fund-raising campaigns. The policy alternatives

are put against a distinct yardstick/ evaluation criterion which test each option's sustainability, effectiveness, efficiency, equity, responsiveness and appropriateness.

Findings from the analysis, place Home Grown School Feeding as a viable policy alternative for the establishment and expansion of school meal programs. The following policy alternative checklists factors of the instituted evaluation criteria, thus it is the most cost-effective package of intervention in terms of returns on investment in school health, nutrition and education. Home grown school feeding is selected on the basis that it does not solemnly respond to temporary hunger, but comes with it a number of complementary advantages such as improved production, this endorsing it as strategy for market and consumption-based interventions which in turn address critical underlying factors in communities. However, the analysis acknowledges the multi-faceted nature of mal-nutrition and hunger hence proposes that the other two policy alternatives i.e. school farming for school feeding and fund-raising campaigns can be used to complement the main policy framework of Home-Grown School Feeding. Such a strategic plan corresponds with the notion which has been pushed over the last four to five years School Meal Programs (SMP) move away from food aid towards self-sustenance.

X.   Recommendations

The analysis provides vital information that can be utilized to propel the adoption of this policy alternative; however, the study further acknowledges the existence of challenges that can impair the sustainability and effectiveness of home-grown school feeding programs. The study generates the following recommendations which are specific policy recommendations:

a) HGSF programmes are intricate interventions with the prospective to connect the increased demand for school feeding goods and services to community-based stakeholders, including smallholder farmers and women's groups. Several studies have identified key benefits such as improved the dietary diversity, class attendance and nutritional status of school children, but also challenges of the HGSF programmes which need further attention, including financial constraints, food hygiene problems and wastage of academic time due to the feeding program. Thus such bottlenecks need attention, so as to propel the program towards success.

b) Learning, monitoring and evaluation are essential elements to provide regular information on malnutrition and HGSF programme performance through a range of analysis to promote their efficient and effective implementation and operation. More so, further studies on the sustainability and potential long-term impacts of the program for a better policy implication are needed. From the onset of the programme a baseline of data must be collected in order to measure previously defined target goals. Despite the popularity and widespread implementation of school feeding programmes, evidence on the impact of school feeding on school participation and nutritional status is mixed. The collected data can play an instrumental role in dismissing doubts on the effectiveness and usefulness of HGSF and school meal programs in general.

c) School management committees should scrutinize and recognize alternative financing and cost options, this could be achieved by starting income generating activities to raise funds to supplement the funds issued by government for Home Grown School Feeding. In addition, initiate advocacy campaigns in which well-wishers from the community, political leaders, NGOs and church organizations contribute funds to support the SFP. More so, head teachers, school management committee, government policy makers and all other stakeholders including NGOs and church organizations should analyse and elaborate appropriate guidelines and re-orient the food monitoring systems to include indicators of the school environment that affect the effectiveness of school meals such as lack of water and firewood.

d) Governments must utilise a multi-disciplinary and multi-stakeholder universal approach to support effective school-based nutrition programmes and policies at national and local levels. This will help promote the active involvement of parents, communities and local government in the development and implementation of school nutrition programmes. Furthermore, plans must be made to create and provide adequate infrastructure such as kitchens, storage space and security to facilitate the implementation of the school feeding programme. There is also need for other program modifications to reduce costs, such as local sourcing of inputs and the use of vouchers in lieu of the direct provision of meals, this may further the objectives of the school meal programs at lower costs.

e) The targeting of programs has to balance the twofold objectives of impartiality and proficiency. There should be efforts to include poor households whether or not there is a risk of nonattendance in school while, in the latter case, the prioritization is for the relatively smaller cohort of children who do not participate in

education opportunities, including preschool programs where they are available. Improved targeting, may find a convergence of equity and efficiency; to the degree that there is heterogeneity of impacts it is likely to show greater improvement in health and schooling among the poorest.

f) The analysis supports the continued expansion and improvement of the NSNP as a prudent policy objective; however, highlights that some caution is advisable. Assuming that school feeding increases the demand for education (through higher attendance or enrolment); it nevertheless does not increase the equitable supply of quality education. Even if learners receive a nourishing free meal at school, they will struggle to reach their full potential if the quality of education is eroded by other factors i.e. bigger class sizes and abnormal teacher-pupils ratio. This hence, validates that setting, it is a prerequisite to set some fundamentals right (i.e. class sizes and student-teacher ratios).

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