

**PERCEIVED FACTORS INFLUENCING THE IMPLEMENTATION OF HOME-
GROWN SCHOOL FEEDING PROGRAMME IN PUBLIC PRIMARY SCHOOLS
IN TURKANA CENTRAL SUB-COUNTY, KENYA**

BY

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DECLARATION


This research project is my original work and has not been presented for a degree or any examination in any other university or for any other award.

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This research project has been submitted for examination with my approval as the university supervisor.


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DEDICATION

This research project is dedicated to my family who have been a constant source of support, encouragement and love that have sustained me during post-graduate school and throughout my life. I am truly thankful for having them in my life. I also dedicate this work to my lecturers who have tirelessly equipped me with invaluable skills and knowledge over the post-graduate study period.

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ABBREVIATIONS

ASAL	Arid and Semi-Arid Lands
FAO	Food and Agriculture Organization
HGSFP	Home-Grown School Feeding Programme
IPC	Integrated Food Security Phase Classification
MoA	Ministry of Agriculture
NMK	Njaa Marafuku Kenya
NEPAD	New Partnership for Africa Development
NDMA	National Drought Management Authority
PAA	Programma de Aquisição de Alimentos
PNAE	Programma Nacional de Alimentação Escolar
SFP	School Feeding Programme
SDGs	Sustainable Development Goals
USDA	United States Department of Agriculture
UNESCO	United Nations Educational, Scientific and Cultural Organization
WFP	World Food Programme

ABSTRACT

Turkana County has experienced increased levels of hunger due to food insecurity, famine, and poor economy. The hunger has greatly affected school enrolment, attendance and progression rates of learners especially in public primary schools. This is because the children cannot concentrate in class on an empty stomach. Due to the poor economy, many families in Turkana cannot fend for themselves. Home grown school feeding programme endeavors to realize several goals especially attainment of education goals and promotion of the local economy. This study sought to establish the perceived factors influencing the implementation of home-grown school feeding Programme in public primary schools within Turkana Central Sub- County, Turkana County, Kenya. The study was guided by the following objectives: to establish the extent to which agricultural development influences the implementation of home-grown school feeding programme in public primary schools in Turkana Central Sub- County. The study was guided by the implementation theory and the social choice theory. This study used the descriptive research design. The target population consisted of the national government ministry of education, agriculture and treasury and national planning. In addition, it consisted of county representatives from ministry of education, agriculture, treasury, county education steering group, 17 local farmers (large and medium scale), head teachers of 33 primary schools in Turkana Central who are beneficiaries of the school feeding Programme and direct school feeding implementing organization, Mary's Meals. The study adopted the census sampling method since the respondents were few. A structured questionnaire was chosen as a tool for collecting data. The filled questionnaires were checked for completeness at two levels where the researcher verifies that questionnaires are completed before the final verification. This was done to ensure that any anomalies detected are corrected immediately before the questionnaires are taken from the respondents. The researcher conducted statistical Analysis through IBM SPSS Statistic 27 Analysis software. The data generated from the questionnaires was coded and entered into the SPSS. Quantitative data was analyzed using descriptive statistics of means, percentages, standard deviation. Multiple regression analysis was worked to determine relationship among the variables and extent of the relationship that exists. The study found that the programme has a variety of agricultural produce to choose from, and the programme has reliable access to a stable market for its agricultural products. Further, the study found that the budget constraints limit the effectiveness of the feeding programme, funds are allocated based on the specific needs of the programme. The study established that the local supply chain did not ensure the timely delivery of necessary resources, and the programme did not actively promote cultural inclusivity and diversity. The research however found that there are no active steering or lobbying groups advocating for the programme. The research concluded that agricultural development had the greatest effect on the implementation of home-grown school feeding programme in Kenya, followed by culture, then stakeholder partnerships while availability of funds had the least effect to the implementation of home-grown school feeding programme in Kenya. The study recommended that the local farmers should focus on diversifying the crops they grow locally for the feeding initiative. Providing training and resources for local farmers involved in agriculture is crucial to achieving this goal. To address challenges related to the supply chain, efforts should be made to improve the logistical coordination of locally sourced food, ensuring timely delivery to the schools.

CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

The current statistics as of 2021 state that approximately 957 million people across 93 countries do not have enough food to eat (UN World Food Programme, 2021). Of the 957 million people, 66 million are school-aged learners who go to school every day hungry, with 23 million representing Africa. As one of the sustainable interventions/measures against world hunger, poverty and education attainment, the School Feeding Programme (SFP) has been used as a tool to promote education and reduce hunger. Over the years, SFP has been instrumental in realizing the full circle effect i.e., learners receiving education and at the same time at least one hot meal a day at their place of education. This has led to the achievement of core education goals such as; increased enrolment, attendance, performance and progression (Mary's Meals Impact Report, 2014).

The realization of these core education goals has created a need for governments and SFP implementing partners, especially in developing countries, to explore different modalities of ensuring sustainable and consistent delivery of SFP to learners. One of the identified modalities is the Home-Grown School Feeding Programme (HGSFP) which this study shall be focusing on. The HGSFP employs the approach of sourcing quality food from local smallholder farmers to promote the local economy while also considering food accessibility & acceptability, nutrition, timely food delivery and sustainability of the entire supply chain among many other benefits (WFP, 2009).

The current home-grown school feeding (HGSF) model is anchored on the Brazil Food Acquisition Programme model, Programme de Aquisição de Alimentos (PAA), which was launched in 2003 under the Zero Hunger Strategy (The Brazil Learning Initiative for a World without Poverty, 2013). The PAA Programme operates on two main fronts: promoting access to food and supporting family farming. The focus is on the producer end where, the PAA purchases products directly from family farmers, waiving bidding requirements and, on the consumer end where it donates these products to people under food and nutrition insecurity and to aid beneficiaries of social assistance network entities, food and nutrition facilities (public subsidized restaurants, community kitchens and food banks) and other institutions (FAO, 2014).

The successful implementation of PAA in 2009 prompted the government of Brazil's National School Feeding Programme, Programme Nacional de Alimentação Escolar

(PNAE) to introduce HGSFP where 30% of the food was to be purchased from smallholders (The Brazil Learning Initiative for a World without Poverty, 2013). The success of PNAE using this model informed many other governments and organizations to embrace the home-grown school feeding model.

In 2003, African governments in collaboration with WFP decided to pilot a school feeding Programme that sourced food locally from smallholders in 12 countries. These countries included Kenya, Cote d'Ivoire, Ghana, Mali, Tanzania, Zambia, Malawi, Senegal, Nigeria, Uganda, Mozambique, and Ethiopia (NEPAD, 2023). These pilots were launched by NEPAD as part of promoting food security and rural development under pillar 3 of the Comprehensive Africa Agricultural development Programme.

Globally and to date, Brazil is one of the countries that continues to successfully implement sustainable homegrown school feeding Programme mostly anchored on the 30% procurement from local farmers. The country has been able to come off the hunger map in such a short period of time implementing the model (Martial De-Paul Ikounga 2016). The success of this model has prompted many African countries to conduct a benchmark in the country and pilot the Programme in their countries (NEPAD, 2003).

Among the 12 pilot countries in Africa highlighted above, Ghana has been reported to be the most successful country in implementing HGSFP in the continent (NEPAD, 2022). This is due to two main identified models of implementation; the “Bottom Up” approach and State level procurement. The “Bottom Up” approach is anchored on local ownership and draws strength of existing community-based institutions such as school management committees and village groups to manage the HGSF. The state-level model is operated at the national level where it relies on contractors and traders for food procurement (WFP, 2005).

In Kenya, the World Food Programme handed over the responsibility of feeding learners to the government in 2009. The implementation takes 2 forms; the home-grown school feeding whose objective is to improve education, smallholder farmers and nutrition, and Njaa Marufuku Kenya (NMK) which capitalizes on the agricultural expertise present within the Ministry of Agriculture. The NMK Programme provides support to school meals over a three-year period within the target schools where funding is provided for: 100% of the children to be fed in the first year; 75% of the children to be fed in the second year; and 50% of the children to be fed in the third year (WFP, 2018).

Turkana County has experienced increased levels of hunger due to food insecurity, Famine, and poor economy. The hunger has greatly affected school enrolment, attendance and progression rates of learners especially in public primary schools. This is because the children cannot concentrate in class on an empty stomach. Due to the poor economy, many families in Turkana cannot fend for themselves. Home grown school feeding Programme endeavors to realize several goals especially attainment of education goals and promotion of the local economy.

1.2 Problem Statement

Research shows that 80% of Kenyans live in rural areas and practise farming as a source of income. The rural areas normally face adverse effects of poverty characterised by chronic water shortages, poor quality land and farming equipment (FAO, 2023). These challenges have greatly contributed to the country's food insecurity. Of the 80% of Kenyans, 30% live in the Arid and Semi-Arid Lands (ASAL) areas. In the recent reports on food insecurity, counties in the ASAL areas like Turkana have been reported to suffer the brunt of drought and food shortages leading to the status of food security being ranked as a crisis with Integrated Food Security Phase Classification (IPC) ranging between 3 – 5 (NDMA, 2022).

Since the HGSFP aims to link the school feeding Programme with the local farmers, the implementation of the model in Arid areas like Turkana has been criticized (Langinger, 2011). In Turkana, the majority of the people practice pastoralism (livestock herding of cattle, sheep, goats, and camels) as their main source of livelihood. Farming is not common due to the characteristics of the land and the number of times the county receives rainfall. Therefore, if it is to go by the definition of HGSFP, it can be deduced that the model is not realistic and achievable in Turkana.

Local studies done on HGSFP are limited. Langinger (2011) conducted a study evaluating the success of the model. In her study, she was able to highlight the challenges limiting the success of the model in ASAL areas. She highlights that according to research (USDA, 2009), most rural communities in the ASAL do not have the capability to produce and supply the huge demand for food.

It has been noted that to bolster the supply side of HGSFP, strong collaboration between governments and other partners are needed. Otherwise, it is safe to say that the supply model passes as a local procurement project other than a local production project. The latter is the suitable approach if the government wants to realize the sustainable implementation of the

HGSFP model. Other challenges highlighted by Langer (2011) underscores that rural farmers are located far away from key agricultural inputs such as water, fertilizer, pesticides, and seed. Further, there is inadequate large-scale storage facilities, lack of access to affordable bank credit and inability to transport bulk harvests (MoA, 2010).

In Turkana, there have been efforts by WFP and other organizations to introduce farming in some parts of the county. Although the intention is good, the characteristics of the land, cultural diversification, and the dire shortage of water in addition to the challenges highlighted above have made the effort to be futile. The farming project has only succeeded in very few parts of the county where farming is on a small scale not able to meet the demand of approximately 600 public primary schools. The local communities have been pushing for the inclusion of meat in the meal budget to involve pastoralists who comprise the bulk of the economic activity in the county (USDA, 2009).

The HGSF is a great model. However, there is a need for policymakers to redefine it to include the context of the 47 counties in Kenya. If the model aims to promote the local economy and achieve HGSFP sustainability, then considerations should be made to incorporate the largest food production of a county into the model. The Ministry of Agriculture (MoA) needs to provide more support in the form of rural farming grants, infrastructure (roads, storage facilities, accessible inputs), encouragement of indigenous plant and animal husbandry, and sustainability reeducation (Finan, 2010). Failure to consider the above by the government of Kenya may result to failure of the Programme leading to increased school dropout rates, limited progression rates, hunger and poor local economy.

1.3 Research Objectives

This study sought to establish the perceived factors influencing the implementation of home-grown school feeding Programme in public primary schools within Turkana Central Sub-County, Turkana County, Kenya. The study was guided by the following objectives:

- i. To establish the extent to which agricultural development influences the implementation of home-grown school feeding programme in public primary schools in Turkana Central Sub-County.
- ii. To establish the extent to which availability of funds influence the implementation of home-grown school feeding programme in public primary schools in Turkana Central Sub-county.

- iii. To assess how culture influences the implementation of home-grown school feeding programme in public primary schools in Turkana Central Sub-county.
- iv. To examine how stakeholder partnerships influence the implementation of home-grown school feeding programme in public primary schools in Turkana Central Sub-county.

1.4 Value of the Study

The study report might be useful to various stakeholders, especially the national government, Ministry of Education and Agriculture. It might be useful in the proper planning and implementation of sustainable home-grown school feeding Programme which in turn translates to promotion of local economy, increased food security, reduced poverty rates and attainment of the educational goals. The findings might also be incorporated in the development of the policy frame works that guides implementation of the school feeding Programme. The national and county government might find the study important as it may form a basis for policy formulation and implementation.

Various school feeding implementing partners might benefit from the study as well. The understanding of the determinants of sustainably implementing home-grown school feeding Programme would enable implementers to come up with relevant strategies that would ensure increased project sustainability.

The community members might benefit from the study. They might benefit in that they will understand the factors affecting implementation of home-grown school feeding Programme which would enable them to ensure that they reduce the negative factors for increased benefits from the projects. The findings of the study were important to researchers and scholars. It might be used by students carrying out academic research for references purposes and as well as the business community for coming up with practices for development project. The study might form a basis for further research on sustainability school feeding programme.

The benefit and success of this research study if well implemented would bring about positive impact in various fields including but not limited to; Education, Agriculture and Future Research. In education, it would encourage more children to come to school. In agriculture, it would promote local trading hence boost the local economy and community empowerment and in future research, it might be utilized for purposes of learning. Overall, this impact would translate to the realization of the Sustainable Development Goals (SDGs).

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter reviewed the literature relating to the statement of the problem outlined in the previous chapter with a particular focus on the main variables of the study in relation to the factors influencing the sustainable implementation of the homegrown school feeding Programme. The parameters investigated included agricultural development, availability of funds, culture, and stakeholder partnerships. It also expounded on the theoretical and conceptual framework of the study illustrating the relationship between different variables of the study.

2.2 Theoretical Perspective

The study was guided by the implementation theory which is anchored on the social Choice theory. The two theories go hand in hand as they provide information on the need for collectiveness in implementing and achieving success in social goals that directly impact a community. The researcher was keen on analyzing the sustainable implementation of home-grown model using these two theories, which from the submission above, it is clear that the current model can only be implementable other counties other than arid and semi-arid lands (ASAL) like Turkana County unless the model is reviewed to accommodate the ASAL context and government, and other key stakeholders invest and get involved from the inaugural stage.

2.2.1 Implementation Theory

The implementation theory by Hurwics (1960) focuses on three main concepts which include the environment in which our Programme operates in, the social objectives we want to achieve, the mechanisms in which our Programme operate in and the equilibrium which aims to achieve harmony between the environment, social objectives and mechanisms. In this study, the researcher appreciates the need of the government and other school feeding Programme to study the environment in which they intend to implement the home-grown model. It is important to understand the different dynamics in play to ensure sustainable implementation. The researcher further analyzes and appreciates that the social objectives of the home-grown school feeding Programme should realistically align to the mechanism of the model of the implementation.

In Turkana for example, the social objective of boosting the local economy through the home-grown model can be achieved if the menu component is revised and key stakeholders are involved right from the model design.

2.2.2 Social Choice Theory

The social Choice theory goes hand in hand with the implementation theory. The Social Choice theory is by two scholars namely, Frenchman Nicolas de Condorcet (1743–1794) and the American Kenneth Arrow (1921–2017). The theory appreciates the need for collective decision procedures and mechanism to employ. It is incorporating a cluster of models and results concerning the aggregation of individual inputs (e.g., votes, preferences, judgments, welfare) into collective outputs (e.g., collective decisions, preferences, judgments, welfare). The central questions in this in relation to our study are; how a group of individuals can choose a winning outcome e.g., policy and how can a collective arrive at a coherent collective preference or judgements on some issues on basis of people preference.

The correlation this theory has with the research study is on the need of government and other school feeding payers involving/including direct stakeholders and beneficiaries in Programme design and policy formulation. For example, in Turkana County, the main source of livelihood is livestock farming. However, the national school meals strategy focusses on maize and beans as the menu. The implementation of the menu has been anchored on home-grown school feeding model which aims to promote the local economy by purchasing food from the local farmers.

2.3 Empirical Review

2.3.1 Sustainable Implementation of the Home-grown School Feeding Programme

The Home-Grown School Feeding Programme (HGSFP) is a vital tool aimed at providing nutritious meals to learners while also strengthening local agriculture and economies. Sustainable implementation of the Home-grown School Feeding Programme requires a multi-faceted approach that involves economic, social, and environmental considerations. By prioritizing these factors and continuously assessing and adapting the Programme, it can have a lasting positive impact on both the well-being of school children and the communities it serves (WFP, 2021).

Various strategies and factors that are useful in ensuring sustainable implementation have been identified they include the following: local sourcing, capacity building, infrastructure

development, monitoring and evaluation, community engagement, diversification of food sources, nutritional education, public-private partnerships, financial sustainability, social inclusion, environmental sustainability and policy support.

The usefulness of incorporating the above factors has been highlighted by various scholars as a comprehensive approach to sustainable implementation to the home-grown school feeding Programme. The researcher has also highlighted in this study the countries which have sustainably implemented the home-grown school feeding Programme while considering the above factors.

2.3.2 Influence of Agricultural Development on Sustainable implementation of the Home-grown School Feeding Programme

As highlighted in the background of this study, the home-grown school feeding Programmes (HGSFP) aim to achieve two key aspects: promotion of education and agriculture in a community. Bundy et al. (2009); Espejo et al. (2009); Kiamba (2013) also asserts the same through their theory of the home-grown school feeding Programme which highlights the nature of HGSFP that links education through school feeding to agricultural development. The scholars argue that, unlike school feeding Programmes (SFP) whose main aim is to target learners, the HGSFP targets both learners and farmers. Their argument demonstrates that a successful implementation of HGSFP in a region can only be achieved if agricultural practice is robust.

Brazil through their model Programme de Aquisição de Alimentos (PAA) which was launched in 2003 under the Zero Hunger Strategy also supports the two linkages. The PAA Programme operates on two main fronts i.e., promoting access to food and supporting family farming (The Brazil Learning Initiative for a World without Poverty, 2013). The focus is on the producer end where, the PAA purchases products directly from family farmers, waiving bidding requirements and, on the consumer end where it donates these products to people under food and nutrition insecurity and to aid beneficiaries of social assistance network entities, food and nutrition facilities (public subsidized restaurants, community kitchens and food banks) and other institutions (FAO, 2014).

Globally and to date, Brazil is one of the countries that continues to successfully implement sustainable homegrown school feeding Programme mostly anchored on the 30% procurement from local farmers. The country has been able to come off the hunger map in such a short period of time implementing the model (Martial De-Paul Ikounga 2016). The

success of this model has prompted many African countries to conduct a benchmark in the country and pilot the Programme in their countries (NEPAD, 2003).

In Africa, Ghana has been reported to be the most successful country in implementing HGSFP in the continent (NEPAD, 2022). This is due to two main identified models of implementation; the “Bottom Up” approach and State level procurement. The “Bottom Up” approach is anchored on local ownership and draws strength of existing community-based institutions such as school management committees and village groups to manage the HGSF. The state-level model is operated at the national level where it relies on contractors and traders for food procurement (WFP, 2005).

In Kenya, the World Food Programme handed over the responsibility of feeding learners to the government in 2009. The implementation takes 2 forms; the home-grown school feeding whose objective is to improve education, smallholder farmers and nutrition, and Njaa Marufuku Kenya (NMK) which capitalizes on the agricultural expertise present within the Ministry of Agriculture. The NMK Programme provides support to school meals over a three-year period within the target schools where funding is provided for: 100% of the children to be fed in the first year; 75% of the children to be fed in the second year; and 50% of the children to be fed in the third year (WFP, 2018).

In Turkana County, agriculture is known to be the main livelihood in Turkana County, where it is practiced for both subsistence and commercial purposes. About 25% of the county’s population derives their livelihoods from agriculture (Turkana County Government, 2018). Most of the county’s income (67%) comes from livestock, while 4% from crop farming, and 3% fish farming (Turkana County Government, 2018). The crop farming does not do well due to the harsh weather conditions since the county is known to receive a very limited number of rainfalls in a year. The limited rainfall has forced the community to practice livestock farming where they move from one place to the other in such pastures. Fishing is also known as a source of livelihood. However, the scale is only at 3% not sufficient for the county’s food sustainability.

2.3.3 Influence of Availability of Funds on Sustainable implementation of the Home-grown School Feeding Programme

Funding is a vital tool in ensuring the success of any project/Programme. The home-grown school model strives to strike a balance between meals provision to learners and promoting

the local smallholder farmers. For this model to succeed, there is a need for Funds to be available in the entire supply chain until the point of delivery of food to schools.

The ministry of agriculture in collaboration with the ministry of education and health are keen for the model to promote education, the local economy, social and agricultural development (page 68 School Nutrition and Meals Strategy for Kenya). The objectives of this goal include to; i.) strengthen the food value chain from production to school ii.) develop the smallholder farmers' organizations, cooperatives and small and medium enterprises for production, processing and distribution of food and agricultural products to schools and iii.) promote smallholder farmers' access to new and existing products and technologies. For all these objectives to be achieved, Funds should be available to facilitate the realization of each one of them.

So far, the Kenyan government has only managed to allocate Funds for school meals. In 2018/2019, the government allocated \$24 million for the school meals budget (WFP 2018 – 2023). In a bid to promote the local farmers, there is a huge gap to be filled in the local small holders' space. As highlighted by the Ministry of Agriculture (MoA 2010), farmers in the rural Kenya are usually located far away from key agricultural inputs such as water, fertilizer, pesticides, and seed, lack adequate large-scale storage facilities, have little access to affordable bank credit, and are unable to efficiently transport bulk harvests. It is therefore imperative for the government to make considerations of how these farmers can be supported with Funds to increase their production for the home-grown model to succeed.

Karisa and Orodho (2014) through their study to test the efficacy of HGSFP in Kinango Sub-County, Kwale County Kenya, found out that the HGSFP failed to achieve its objective especially on the front of empowering local farmers. It was established that the Funds released by the Ministry of Education targeted the cereal traders who procure food from outside Kwale County. The lack of Funds and general support from the government has resulted to the community of Kwale County not benefiting from the HGSFP.

The case of Turkana is even more complex right from the approved menu design. The point of contention surrounding home-grown model so far is the cost-motivated prohibition of the purchase of other products such as livestock for use within the school feeding Programmes. Local communities are currently pushing for the inclusion of meat in the meal budget to involve pastoralists who comprise the bulk of the economic activity in the ASAL (USDA, 2009). If the government considers the proposed menu change, then there would still be need

for them to support livestock farmers in Turkana by providing key farming input and Funds to facilitate large production. This only demonstrates how important availability of Funds is key towards the achievement of the sustainable implementation of home-grown school feeding Programme.

2.3.4 Influence of Culture on Sustainable implementation of the Home-grown School Feeding Programme

In many countries, one of the ways cultures is expressed is through the food its people eat and that also includes school meals. In any school feeding Programme, it is important for school meals to include foods that reflect the cultural and religious demographics of a school community. This is critical to ensure a wider acceptance and by extension, create a great platform to connect with learners and other stakeholders including but not limited to local farmers (Center for Best Practices 2022 Webinar).

Countries and key players of the school feeding Programme have been urged to appreciate the need for food sovereignty as it represents the greatest indicator of the full maturation and realization of a country's agricultural development. Food sovereignty is defined as the right of people, communities, and countries to define their own agricultural, labour, fishing, food and land policies, which are ecologically, socially, economically and culturally appropriate to their unique circumstances (AU, 2018).

It has been highlighted that food sovereignty goes beyond food security, as food security only guarantees access to sufficient and adequate food, whereas food sovereignty guarantees national control over food production and wider and more equitable access to the means and resources for producing food. The role of government and other key players should be to work towards food sovereignty that includes empowering local farmers with enough resources i.e., land and inputs to meet school demands, drawing up contracts with farmers that set fair commodity prices, and using locally produced food in school menus to the greatest extent possible (Tomlinson, 2007). Reaching greater local ownership over food production for AU member states also contributes to reaching sustainable, inclusive economic growth, which is part of the SDGs and factors into the goals and priority areas of Agenda 2063.

As elaborated in 2.2 above, Turkana's main source of livelihood is livestock farming which contributes to the biggest source of county's income at 67% (Turkana County Government, 2018). The crop farming does not do well due to the harsh weather conditions since the

county is known to receive a very limited number of rainfalls in a year. The limited rainfall has forced the community to practice livestock farming where they move from one place to the other in such pastures. It is therefore imperative to appreciate that livestock farming is what is considered as culturally appropriate and as well as the consumption of its produce.

For the government and key players to realize Sustainable implementation of the Home-grown School Feeding Programme in Turkana especially Turkana Central Sub-county, there is need for the menu to be revised to a culturally appropriate menu. Further, and per the definition, there is to consider livestock farming as the main source of livelihood in Turkana.

The appreciation and adoption of cultural diversity will see to it that the government achieves the sustainable implementation of home-grown school feeding Programme in arid and semi-arid areas like Turkana.

2.3.5 Influence of Stakeholders' Partnership on Sustainable implementation of the Home-grown School Feeding Programme

Stakeholder partnership is a fundamental principle of sustainability. A government or organization must be able to partner and communicate with its external stakeholders in order to stay relevant and meet the needs of its beneficiary. Over the years, many organizations or companies including Unilever have appreciated the need for stakeholder partnership. In the Global Partnership for Effective Development Cooperation meeting held in November 2016, it was highlighted that the issues organizations and stakeholders face are so big, and the targets are so challenging that cannot be achieved by a single organization or institution. It was emphasized that issues such as food or water scarcity, cannot be addressed by individual institutions, government, or company (Paul Polman, CEO, Unilever).

The Sustainable Development Goals (SDGs) explicitly highlight the need of partnership to realize the prosperity of business, society and the environment. The SDG goals represent a fundamental shift in approach, naming all societal sectors as key development actors, and requiring an unprecedented level of cooperation and collaboration among civil society, business, government, NGOs, foundations and others for their achievement. They appreciate that each stakeholder holds a key part of the solution, and that all stand to benefit by collectively driving forward sustainable development (UNDP, 2019).

For home-grown school feeding to be sustainable, there is need for government to partner with other stakeholders who have the same interest in home-grown school feeding model. In

Turkana County for example, Mary's Meals Kenya is one of the key stakeholders partnering with both County and National Government to provide school meals to learners across Early Childhood Development Education Centres (ECDEs) and Primary Schools. Mary's Meals Kenya started implementing school feeding Programme in the county in 2018. To date they are feeding over 200,000 children with one meal a day at their place of education. The organization's focus is to also boost the local economy by supporting the home-grown model. However, this has been difficult to achieve as the community does not grow enough food sufficient for their operation.

Since Mary's Meals Kenya has proven its consistency in almost 6 years, the government should re-allocate its resources to other aspects of home-grown model for sustainability. The critical aspect in this context is agriculture where they can support small holder farmers in Turkana with agricultural inputs to boost their produce. The government can further partner with other players with similar interest to support other critical aspects of home-grown model.

2.4 Summary of Empirical Review

This literature review focuses on two theories by which this study is informed. Both the implementation and social theory underscore the importance of considering key parameters when implementing a Programme/project that directly/indirectly impacts a community. For example, the implementation theory highlights focusing on the environment in which your Programme operates, the realistic approach to the social objectives you want to achieve and the mechanism of operations. Turkana County is one of the Arid and Semi-Arid Lands prioritized by the government for home-grown school feeding. The implementation theory, therefore, will consider it as an environment in which the home-grown school feeding Programme should operate. Appreciating the explicit context provided above, Turkana as an environment is not suitable for the model unless the definition is reviewed to include the context. On the same note, the social objective intended to be achieved by the home-grown model in that environment is not realistic as the consideration of the major source of livelihood has not been considered. This makes the operating environment for the model difficult.

The social theory by Frenchman Nicolas de Condorcet (1743–1794) and the American Kenneth Arrow (1921–2017), asserts the need for collective decision-making right from Programme design to implementation. The two scholars demonstrate how policymakers can

arrive at a winning outcome by extensively involving the right people in all the stages of Programme design and policy formulation. Looking at the home-grown model, the key stakeholders cut across education, agriculture (e.g., local farmers and the entire supply chain) and community members. The involvement of these stakeholders is key to the success of the model's implementation. The two theories highlight the gap between the current model, the environment and the mechanism of operation.

2.5 Conceptual Framework

A conceptual framework is a diagrammatic representation that shows the perceived relationship between study variables. The framework shows that there are three sets of variables which include independent, dependent and intervening. Independent variables include weather conditions, availability of funds, Culture diversification and stakeholder partnership. The intervening variables include government policy and regulation in home-grown school feeding and donor policy and regulation in home-grown school feeding. A dependent variable is sustainable implementation of Programme. The relationship between the variables is conceptualized in Figure 2.1.

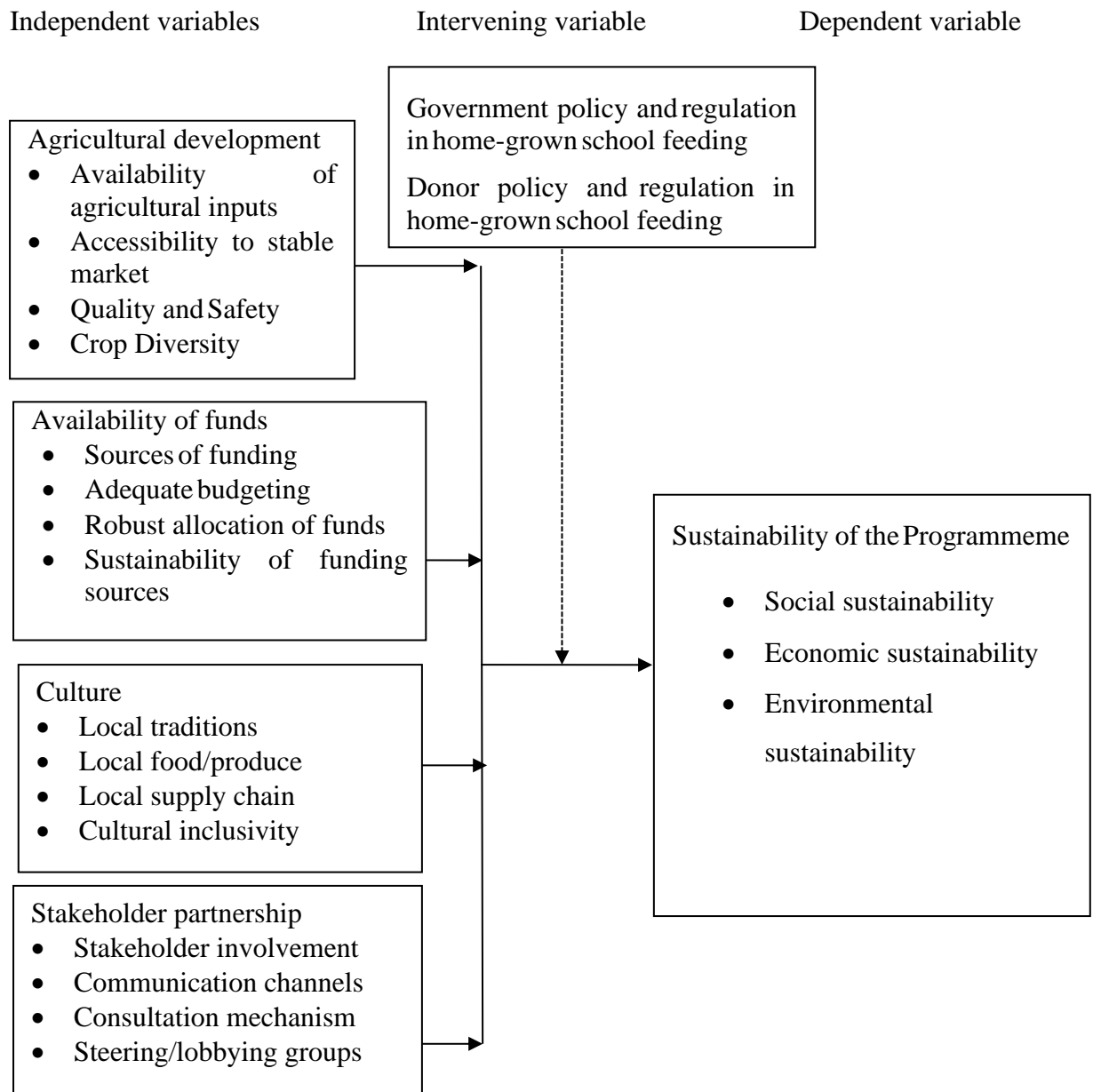


Figure 2. 1: Conceptual Framework

Agricultural development as an independent variable is measured by the availability of agricultural inputs, accessibility of stable market, quality and safety and crop diversity.

Agricultural inputs have effects on the farming activities and the yields of crops and livestock. Langiger (2011) underscored the importance of farmers easily accessing key agricultural inputs such as water, fertilizer, pesticides, and seed for the realization of robust agricultural development. MoA (2010), on the other hand emphasized on the need of storage facilities for farmers, accessibility to affordable bank credit and the availability of transportation of bulk harvests.

Access to stable markets is one of the key objectives of any HGSFP. The HGSFP creates a stable market due to the demand of its sizable and stable nature. This in turn stimulates farmers to invest and focus on increasing their produce, improving and exploring the production of other crops with the end results being boosting of income and improved local economy (WFP, 2017).

Quality and safety are imperative before and after the purchase of farm produce. Small holder farmers should ensure transparency, accountability and efficiency in the entire procurement process until the procured food reaches the schools. The schools on the hands should ensure they have adequate infrastructure to transport and store the food.

Ensuring crop diversity by measuring the number and variety of crops grown can indicate agricultural resilience and sustainability. A diverse range of crops can reduce vulnerability to pests, diseases, and adverse weather conditions.

Availability of Funds as an independent variable was measured in 4 dimensions, sources of funding, appropriate allocation of Funds and adequate budgeting. Sources of funding is critical to the successful and sustainable implementation of a home-grown schools feeding Programme. In this research finding, key players in school feeding Programmes such as Mary's Meals have anchored their Programme success on a strong support based of supporters. Individual donors make up majoring their funding compared to institutional donors. This has seen to it that their school feeding Programme remains sustainable.

Availability of Funds as an independent variable was measured in 4 dimensions, sources of funding, adequate allocation of funds, adequate budgeting. Sources of funding is critical to the successful and sustainable implementation of a home-grown schools feeding Programme. In this research finding, key players in school feeding Programmes such as Mary's Meals have anchored their Programme success on a strong support based of supporters. Individual donors make up majoring their funding compared to institutional donors. This has seen to it that their school feeding Programme remains sustainable.

Appropriate allocation of Funds and adequate budgeting on the other hand also plays a critical role in ensuring sustainable implementation of a home-grown school feeding Programme. Organizations like Mary's Meals have designed a financial model that allows 93 percent of their budget to go to feeding and 7 percent to administration. This approach ensures sustainable implementation of home-grown school feeding Programme is achieved.

Evaluating the long-term sustainability of funding sources is critical to ensure consistent availability of Funds over time. Sustainable funding ensures financial health by allowing robust planning for future expenses leading to strategic financial decisions.

Culture as an independent variable was measured in 3 dimensions; local Culture and tradition, local food/produce and local supply chain. Local Culture and tradition play an important role in the success of any Programme. This is because normally the key stakeholders involved are the community members who are the locals. Sensitivity to their Culture and tradition is imperative in Programme designing and overall success.

Local food/produce is critical especially in a successful implementation of sustainable home-grown school feeding Programme. Considerations should be made to allow for incorporation of the local food in order to realize acceptability, adoption and easy accessibility of the same.

Cultural inclusivity is imperative to the implementation of home-grown school feeding as the Programme focuses to empower both the community and learners. It is important to ensure that the marginalized and underrepresented groups are included in the Programme activities to ensure cultural equity is achieved.

The local supply chain is vital to the implementation of a sustainable home-grown school feeding Programme. From the home-grown definitions provided above, the home-grown model is designed to impact the local supply chain up to the point of actual feeding. Therefore, the local supply chain will be important to measure the success of the implementation.

The sustainability of the Programme as the dependent variable is defined to have five major dimensions, including technical, social, economic, time and environmental. Technical sustainability implies the ability to have a project implemented in the right way, using recommended inputs to enable efficiency and effectiveness. Social sustainability refers to the ability of the project to serve the community expected benefits for improved livelihood. Economic sustainability on the other hand is the ability of the implementers to use minimum resources to achieve maximum benefit from project implementation. It may also refer to the ability of the community to raise required resources to sustain project benefit after handover of the project. It may be by way of maintenance of the project in case of defects during operation. Environmental sustainability refers to mitigation of destruction of the environment, as caused by project implementation.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter focused on the research methodology which will inform the research findings and address both the research problem and the objectives of the study. The chapter covered the research design, the target population, Sample Size and Sampling Procedures, research instruments, data collection procedures, data analysis, ethical considerations and operationalization of the variables.

3.2 Research Design

Sekeran (2016), defines descriptive research as a type of design used to obtain information concerning the status of the phenomena to describe "what exists" with respect to variables or conditions in a situation. Orodho (2009) states that a descriptive research design is suitable where the study sought to describe and illustrate characteristics of an event, situation of a group of people, community or population. This study therefore used the design to collect descriptive data through a questionnaire to the targeted participants with closed ended questions.

3.3 Population

The target population is the specific, conceptually bounded group of potential participants to whom the researcher may have access that represents the nature of the population of interest. To successfully utilize the target population, one must examine all the boundary considerations in an interactive manner to ensure that the end description of the target population is inclusive. This is to ensure that the data provided is sufficient for the study. The target population should be robustly specific to avoid having participants who do not represent the study's needs, which will intern misrepresent the population of interest (Kalleberg et al., 1990).

In this study, the target population consisted of the national government ministry of education, agriculture and treasury and national planning. In addition, it consisted of county representatives from ministry of education, agriculture, treasury, county education steering group, 17 local farmers (large and medium scale), head teachers of 33 primary schools in Turkana Central who are beneficiaries of the school feeding Programme and direct school feeding implementing organization, Mary's Meals.

Table 3. 1: Target Population

Description	Population
Ministry of Education	13
Ministry of Agriculture	14
Ministry of Treasury	16
Ministry of Education, Turkana County	13
Ministry of Agriculture, Turkana County	14
Ministry of Finance, Turkana County	7
County Education Steering Group	20
Local farmers	20
Head teachers	50
Mary's Meals	20
Total	187

3.4 Sample Size Determination

A sample is a group of people, objects or items that are taken from a large population for a measurement. The sample should be representative of the population to ensure that we can generalize the findings from the research sample to the population (Jopnes, 1955) and (Salant & Dillman, 1994).

The sample size is a subsection of the populace taken to represent of the whole populace (Pneumol, 2018). The study adopted the census sampling method since the respondents were few. Census is a quantitative research method, in which all the members of the population are enumerated. On the other hand, the sampling method is used, in statistical testing, wherein a data set is selected from the large population, which represents the entire group (Kassiani Nikolopoulou, 2022).

3.5 Operationalization of Variables

Table 3. 2: Operationalization of Variables

Variable	Indicators	Scales of measurement	Data collection tool
Agricultural development	<ul style="list-style-type: none"> • Availability of agricultural inputs • Accessibility to stable market • Quality and safety • Crop Diversity 	Ordinal	Questionnaire
Availability of funds	<ul style="list-style-type: none"> • Sources of funding • Adequate budgeting • Robust allocation of funds • Sustainability of funding sources 	Ordinal	Questionnaire
Culture	<ul style="list-style-type: none"> • Local traditions • Local food/produce • Local supply chain • Cultural inclusivity 	Ordinal	Questionnaire
Stakeholder partnership	<ul style="list-style-type: none"> • Stakeholder involvement • Communication channels • Consultation mechanism • Steering/lobbying groups 	Ordinal	Questionnaire

3.6 Research Instruments

A structured questionnaire was chosen as a tool for collecting data. The questionnaire was divided into 6 sections; section one covered the general information and section two, three, four, five and six covered questions that are in line with the 4 variables in the research question. The Likert scale was considered to ensure that the findings are more stable and subject to less random variability.

The questionnaire was administered by the researcher and completed by the respondents. The respondents were given a time frame within which they were required to respond to the questions in the questionnaire. Upon completion, the researcher collected the questionnaires where a completion rate was recorded.

Secondary data was collected in the process as well. This involved collecting data from other past data that has been collected and tabulated through graphs, charts, and reports. This type of data was collected from reference materials, which have key information and is helpful to

this research study. Collection of secondary data was obtained through desk research, both from internal and external sources. The external source included online libraries and various research from the school feeding implementing organizations in Turkana.

3.7 Reliability and Validity Tests

A pilot testing was carried out before the main study. The rationale was to assess both validity and reliability of the questionnaire. In this study, the researcher considered a simple random technique to identify the respondents for the pilot testing. The respondents included 10% of the sample size i.e., 3 respondents each from Kawalese primary school, Kaloko ward, Kerio primary school, Kerio ward and Lodwar Mixed in Township Ward. In addition, two respondents each was identified from the Ministry of Education, Agriculture and Treasury (National Government) and Ministry of Education, Agriculture and Finance (Country Government of Turkana). Further, 6 local farmers from Kangatoha ward and 4 employees from Mary's Meals Kenya Lodwar office was identified. The respondents identified for the pilot study shall not participate in the main study.

The validity of a research study refers to how well the results among the study participants represent true findings among similar individuals outside the study (Pneumol, 2018).

According to Mugenda Mugenda (1999), validity refers to the degree to which an instrument measures what it is supposed to measure and the appropriateness of specific inferences and interpretations that are made by using the test scores. For the purpose of this study, the researcher ensured that the instrument meets the criteria for determining content validity. As explained by Ravid (2019), content validity describe how well instruments measure a representative sample of behaviors and content domain about which inferences are to be made. Therefore, to enhance validity, the researcher conducted a pilot study but did not use the population in the final research. The reason for the pilot study was to help in identifying items found in the questionnaire that was misunderstood and then discard or modify them accordingly.

Reliability refers to the consistency of answers one gets by using an instrument to measure something more than once (ICA Chiang, 2015). In simple terms, research reliability is the degree to which a research method produces stable and unvarying results. A specific measure is considered to be reliable if its application on the same object of measurement number of times produces the same results. According to Mugenda and Mugenda, 2003, the

reliability of a research instrument enables the researcher to identify obscurity and deficiency in the instrument.

In this study, Spearman-Brown formula was considered to test the reliability of the research instrument.

The Spearman-Brown formula is:-

$$\rho = \frac{r(\sqrt{r^2 + 2c(1 - r^2)} - r)}{c(1 - r^2)}$$

3.8 Data Analysis Methods

The filled questionnaires were checked for completeness at two levels where the researcher verifies that questionnaires are completed before the final verification. This was done to ensure that any anomalies detected are corrected immediately before the questionnaires are taken from the respondents. Data Analysis commenced once all the data has been captured. The researcher conducted statistical Analysis through IBM SPSS Statistic 27 Analysis software. The data generated from the questionnaires was coded and entered into the SPSS. Quantitative data was analyzed using descriptive statistics of means, percentages, standard deviation. Multiple regression analysis was worked to determine relationship among the variables and extent of the relationship that exists.

CHAPTER FOUR: DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This chapter contains sections that have the analysis of the data collected concerning how perceived factors influencing the implementation of home-grown school feeding Programme in public primary schools within Turkana Central Sub- County, Turkana County, Kenya, its presentation through the means, standard deviation, frequencies and percentages as well as its interpretation. The chapter is organized to present the findings by first looking at the response rate, and the demographic variables. In order to simplify the discussions, the researcher provided tables that summarize the collective reactions of the respondents.

4.1.1 Response Rate

The researcher administered 187 questionnaires. From these, only 163 respondents were able to return fully filled questionnaires, which represented a response rate of 87.2%. This response rate was good, representative conforms to Ørngreen, and Levinsen (2017) stipulation that a response rate of 50 percent is adequate for analysis, which meant that 73.1% was even better.

Table 4. 1: Response Rate

	Number of informants	Percent
Response	163	87.2
Non- Response	24	12.8
Total	187	100.0

Source: Researcher (2023)

4.1.2 Reliability Analysis

In this study, construct reliability was determined using Cronbach alpha coefficients that test internal consistency of items on a scale and were thus considered reliable if the as the results showed that the Cronbach Alpha associated with the variables of the study were above 0.70 threshold as recommended by Snyder (2019) where it is asserted that Cronbach Alpha's should be in excess of 0.70 for the measurement intervals. The results of the reliability analysis are presented in the Table 4.2.

Table 4.2: Reliability of Measurement Scales

	Cronbach's Alpha	Decision
Agricultural development	.838	Reliable
Availability of funds	.896	Reliable
Culture	.882	Reliable
Stakeholder partnership	.765	Reliable
Implementation of home-grown school feeding Programme	.730	Reliable

Source: Researcher (2023)

The findings indicated that availability of funds had a coefficient of 0.896, Culture had a coefficient of 0.882, agricultural development had a coefficient of 0.838, stakeholder partnerships had a coefficient of 0.765 and implementation of home-grown school feeding programme had a coefficient of 0.730. All constructs depicted that the value of Cronbach's alpha are above the suggested value of 0.7 thus it can be concluded that the study was reliable to capture the constructs (Fraser, Fahlman, Arscott & Guillot, 2018).

4.2 Background Information of Respondents

Regarding background information of the respondents, the researcher examined their age bracket, gender and the number of years worked or lived in Turkana County. This allowed for deeper interpretation of the findings and provides valuable insights into the diversity and representativeness of the study population.

4.2.1 Distribution of Respondent by Age Bracket

The distribution of respondents by age bracket was considered necessary because the data provides valuable insights into the sample's composition, informs subgroup analysis, identifies age-related trends, and contextualizes the research findings. It supports the thesis's overall validity, enhances the understanding of research outcomes, and contributes to evidence-based decision-making and policy development.

Table 4.3: Age Bracket of the Respondent

Age	Frequency	Percent
18-25 yrs.	2	1.2
26-35 yrs.	42	25.8
36-45 yrs.	48	29.4
46-55 yrs.	39	23.9
56 yrs and above	32	19.6
Total	163	100.0

Source: Researcher (2023)

The age distribution is presented in Table 4.3. The findings revealed that 29.4% of the respondents were aged between 36-45 years, 25.8% were aged between 26-35 years, 23.9% were aged between 46-55 years, 19.6% were aged above 56 years and 1.2% were aged between 18-25 years. The results demonstrate that home-grown school feeding programme in public primary schools in Turkana Central Sub-county had respondents of different age groups hence the study could have varying perceptions of the home-grown school feeding programmes' impact and benefits.

4.2.2 Distribution of Respondent by Gender

It was important to establish the gender of the respondents who participated in the study. The purpose was to add value to the research by offering gender-based insights, addressing gender inequalities, and informing gender-sensitive policies and practices. It enriches the research's relevance, impact, and potential for contributing to a more equitable and inclusive society. The results were as shown in the Table 4.4.

Table 4.4: Gender of the Respondent

Gender	Frequency	Percent
Male	85	52.1
Female	78	47.9
Total	163	100.0

Source: Researcher (2023)

As per Table 4.4, 52.1% of the respondents were male, while 47.9% were female. This shows that the study obtained more information from male respondents since most of the workers involved in the home-grown school feeding programme in public primary schools in Turkana Central Sub-County were men. This implies that the project has been able to achieve the two-thirds gender rule which has been hard to strategy to implement in the government

institutions in Kenya. The rule remains a crucial tool in advancing gender equality and fostering inclusive governance in the country.

4.2.3 Distribution of Respondent by Number of Years worked or lived in Turkana County

Accounting for the distribution of number of years worked or lived in Turkana County ensures the research's validity by acknowledging that respondents' perspectives may vary based on their tenure in the area.

Table 4.5: Distribution of Respondent by Number of Years worked or lived in Turkana County

Number of years	Frequency	Percent
Less than 2 years	34	20.9
Between 2 and 4 years	74	45.4
More than 5 years	55	33.7
Total	163	100.0

Source: Researcher (2023)

As per the distribution of respondent by number of years in the home-grown school feeding programme in public primary schools in Turkana Central Sub- County, study indicated that 45.4% of the respondents have been working with the home-grown school feeding programme for between 2 and 4 years, 33.7% indicated for more than 5 years, while 20.9% indicated for less than 2 years. This shows that respondents with varying years of experience in the home-grown school feeding programme in public primary schools in Turkana Central Sub- County can provide insights based on their tenure and exposure. Those with more years might offer a historical perspective and deeper knowledge of the projects, while newer participants may share fresh perspectives and recent developments. This implies that they could all provide quality responses to the questionnaire due to vast experience in home-grown school feeding programme.

4.3 Agricultural Development and Sustainable implementation of the Home-grown School Feeding Programme

The study sought to determine the influence of agricultural development system on the implementation of home-grown school feeding programme in public primary schools in Turkana Central Sub- County. The researcher required to know the level of agreement that the respondents had with statements related to agricultural development system on

implementation of home-grown school feeding programme in public primary schools in Turkana Central Sub- County. The results were as displayed on Table 4.6.

Table 4.6: Level of agreement with statements on the Influence of Agricultural Development on Sustainable Implementation of the Home-grown School Feeding Programme

Statements on influence of Agricultural Development	SD F (%)	D F (%)	N F (%)	A F (%)	SA F (%)	Mean	Std. Dev.
The programme provides a variety of agricultural inputs to the schools.	0 (0.0)	0 (0.0)	0 (0.0)	68 (41.7)	95 (58.3)	4.583	0.495
The programme has reliable access to a stable market for its agricultural products.	0 (0.0)	0 (0.0)	2 (1.2)	81 (49.7)	80 (49.1)	4.479	0.525
Safety and hygiene standards are maintained during the preparation of food for the schools.	26 (16.0)	19 (11.7)	27 (16.6)	70 (42.9)	21 (12.9)	3.252	0.283
The programme cultivates a diverse range of crops in its feeding programme.	12 (7.4)	10 (6.1)	6 (3.7)	63 (38.7)	72 (44.2)	4.061	0.680
Composite Mean and Standard deviation						4.094	0.496

Source: Researcher (2023)

As per Table 4.6, 95 (58.3%) strongly agreed that the programme provides a variety of agricultural inputs to the schools while 68 (41.7%) agreed. The mean was 4.583 and standard deviation was 0.495. The item had a mean score above the composite mean of 4.094 implying that the programme has a variety of agricultural inputs to choose from. Further, the standard deviation was lower than the sub-composite standard deviation of 0.496 implying that the opinions converged.

Regarding the aspect that the programme has reliable access to a stable market for its agricultural products, 81 (49.7%) of the respondents selected agreed, 80 (49.1%) strongly agreed, while 2 (1.2%) were undecided. The mean was 4.479 and standard deviation was 0.525. The item had a mean score above the composite mean of 4.094 implying that the

programme has reliable access to a stable market for its agricultural products. Further, the standard deviation was above the sub-composite standard deviation of 0.496 implying that the opinions were inconsistent.

On the aspect, the programme cultivates a diverse range of crops in its feeding programme, 72 (44.2%) of the respondents strongly agreed, 63 (38.7%) agreed, 12 (7.4%) strongly disagreed, 10 (6.1%) disagreed while 6 (3.7%) were undecided. The average was 4.061 and standard deviation was 0.680. The item had a mean score lower than the composite mean of 4.094 implying that the programme did not cultivate a diverse range of crops in its feeding programme. Further, the standard deviation was above the sub-composite standard deviation of 0.496 implying that the opinions were inconsistent.

Regarding safety and hygiene standards are maintained during the preparation of food for the schools, 70 (42.9%) of the respondents agreed, 27 (16.6%) were undecided, 26 (16.0%) strongly disagreed, 21 (12.9%) strongly agreed while 19 (11.7%) disagreed. The mean was 3.252 and standard deviation was 0.283. The item had a mean score lower than the composite mean of 4.094 implying that safety and hygiene standards are not maintained during the preparation of food. Further, the standard deviation was lower than the sub-composite standard deviation of 0.496 implying that the opinions converged.

The respondents were also asked to describe any specific challenges or successes related to the availability of agricultural inputs in the implementation of the feeding programme in your school. The respondents indicated that one of the notable challenges has been the limited variety of crops cultivated for the programme. For instance, schools primarily rely on staple crops like maize and beans due to their suitability for the local climate. This lack of crop diversity can result in a limited range of nutritious ingredients for school meals. Moreover, due to the arid nature of Turkana Central, water scarcity poses a challenge for irrigation and crop cultivation, impacting the consistent supply of agricultural inputs.

On a positive note, the programme has successfully established partnerships with local agricultural cooperatives and community members. These partnerships have facilitated access to a stable supply of key agricultural inputs such as seeds, fertilizers, and tools. Additionally, the community's traditional knowledge of drought-resistant crops and farming techniques has proven invaluable. For instance, the use of drought-resistant sorghum and millet has been a success, allowing schools to maintain a steady supply of these crops despite challenging environmental conditions. Furthermore, schools have embraced eco-friendly

and sustainable farming practices, such as rainwater harvesting and the use of organic fertilizers, to overcome the challenge of water scarcity. These practices not only ensure a steady supply of agricultural inputs but also contribute to the resilience of the local ecosystem.

4.4 Availability of Funds and Sustainable Implementation of the Home-grown School Feeding Programme

The research aimed to determine the influence of availability of funds on implementation of home-grown school feeding programme in public primary schools in Turkana Central Sub-County. The respondents were required to indicate their level of agreement with statements related to availability of funds on implementation of home-grown school feeding programme in public primary schools in Turkana Central Sub-county. The responses were as presented on Table 4.7.

Table 4.7: Level of agreement with statements on the influence of Availability of Funds on Sustainable Implementation of the Home-grown School Feeding Programme

Statement	on	SD	D	N	A	SA	Mean	Std.
Availability	of	F	F	F	F	F		Dev.
Funds		(%)	(%)	(%)	(%)	(%)		
The programme receives financial support from various sources for the feeding programme.		18 (11.0)	23 (14.1)	26 (16.0)	47 (28.8)	49 (30.1)	3.528	0.844
Budget constraints limit the effectiveness of the feeding programme.		0 (0.0)	0 (0.0)	0 (0.0)	63 (38.7)	100 (61.3)	4.614	0.988
Funds are allocated based on the specific needs of the programme.		16 (9.8)	9 (5.5)	10 (6.1)	57 (35.0)	71 (43.6)	3.969	0.769
There is a strategy in place to secure funding for the programme in the future.		35 (21.5)	22 (13.5)	26 (16.0)	77 (47.2)	3 (1.8)	2.945	0.744

Composite Mean and Standard deviation	3.764 0.836
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Source: Researcher (2023)

As per the findings in Table 4.7, on the aspect that the programme receives financial support from various sources for the feeding programme, 49 (30.1%) of the respondents strongly agreed, 47 (28.8%) agreed, 26 (16.0%) were undecided, 23 (14.1%) disagreed, while 18 (11.0%) strongly disagreed. The average was 3.528 and standard deviation was 0.844. The item had a mean score lower than the composite mean of 3.764 implying that the programme did not receive financial support from various sources for the feeding programme. Further, the standard deviation was above the sub-composite standard deviation of 0.836 implying that the opinions were inconsistent.

On the item, budget constraints limit the effectiveness of the feeding programme, 100 (61.3%) of the respondents strongly agreed, while 63 (38.7%) agreed. The average was 4.614 and standard deviation was 0.988. The item had a mean score above the composite mean of 3.764 implying that the budget constraints limit the effectiveness of the feeding programme. Further, the standard deviation was above the sub-composite standard deviation of 0.836 implying that the opinions were inconsistent.

Regarding, funds are allocated based on the specific needs of the programme, 71 (43.6%) of the respondents strongly agreed, 57 (35.0%) agreed, 16 (9.8%) strongly disagreed, 10 (6.1%) were undecided, while 9 (5.5%) disagreed. The mean was 3.969 and standard deviation was 0.769. The item had a mean score above the composite mean of 3.764 implying that funds are allocated based on the specific needs of the programme. Further, the standard deviation was lower than the sub-composite standard deviation of 0.836 implying that the opinions converged.

Regarding the aspect that there is a strategy in place to secure funding for the programme in the future, 77 (47.2%) of the respondents agreed, 35 (21.5%) strongly disagreed, 26 (16.0%) were undecided, 22 (13.5%) disagreed, while 3 (1.8%) strongly agreed. The average was 2.945 and standard deviation was 0.744. The item had a mean score lower than the composite mean of 3.764 implying that there is no strategy in place to secure funding for the programme in the future. Further, the standard deviation was lower than the sub-composite standard deviation of 0.836 implying that the opinions converged.

The respondents were also required to indicate the main sources of funding for the feeding programme, and how have these sources influenced the programme's effectiveness and sustainability. They indicated that the main sources of funding for the home-grown school feeding programme in Turkana Central Sub- County primarily include government grants, community contributions, and local partnerships. Government grants, both at the national and local levels, have been instrumental in providing financial support for the programme. These grants are typically allocated based on the specific needs of each school, including student enrollment and the extent of the programme's reach. Community contributions, such as donations from parents and community members, have also played a significant role in sustaining the programme. These contributions are often in the form of food items, volunteer labor, and, on occasion, cash donations. Lastly, the programme has fostered partnerships with local businesses and agricultural cooperatives. These partnerships ensure a stable supply of agricultural inputs and, in some cases, additional financial support. The influence of these funding sources on the programme's effectiveness and sustainability is substantial. Government grants have provided essential financial backing, allowing schools to expand and maintain the feeding programme. Community contributions not only strengthen local ownership of the programme but also help bridge financial gaps. Moreover, partnerships with local businesses and agricultural cooperatives have ensured a consistent supply of quality agricultural inputs, contributing to the sustainability of the programme. By diversifying funding sources, the programme has become more resilient, enhancing its overall effectiveness and long-term sustainability.

4.5 Culture and Sustainable Implementation of the Home-grown School Feeding Programme

The study sought to establish how culture influences the implementation of home-grown school feeding programme in public primary schools in Turkana Central Sub- County. The respondents were asked to indicate their level of agreement with statements related to culture on implementation of home-grown school feeding programme in public primary schools in Turkana Central Sub- County. Table 4.8 displays their responses.

Table 4.8: Level of Agreement with Statements on the Influence of Culture on Sustainable Implementation of the Home-grown School Feeding Programme

Statements on Influence of Culture	SD	D	N	A	SA	Mean	Std. Dev.
	F	F	F	F	F		
	(%)	(%)	(%)	(%)	(%)		
Local cultural practices are taken into account when planning the programme.	0 (0.0)	0 (0.0)	0 (0.0)	68 (41.7)	95 (58.3)	4.583	0.995
The feeding programme predominantly uses locally sourced food and produce.	0 (0.0)	0 (0.0)	0 (0.0)	63 (38.7)	100 (61.3)	4.614	0.988
A local supply chain ensures the timely delivery of necessary resources.	21 (12.9)	25 (15.3)	29 (17.8)	81 (49.7)	7 (4.3)	3.172	0.647
The programme actively promotes cultural inclusivity and diversity.	14 (8.6)	9 (5.5)	8 (4.9)	61 (37.4)	71 (43.6)	4.018	0.720
Composite Mean and Standard deviation						4.097	0.838

Source: Researcher (2023)

Table 4.8 revealed that on the aspect that local cultural practices are taken into account when planning the programme, 95 (58.3%) of the respondents strongly agreed, while 68 (41.7%) agreed. The mean was 4.583 and standard deviation was 0.995. The item had a mean score above the composite mean of 4.097 implying that local cultural practices are taken into account when planning the programme. Further, the standard deviation was above the sub-composite standard deviation of 0.838 implying that the opinions were inconsistent.

Regarding the item, the feeding programme predominantly uses locally sourced food and produce, 100 (61.3%) of the respondents strongly agreed, and 63 (38.7%) agreed. The mean was 4.614 and standard deviation was 0.988. The item had a mean score above the composite mean of 4.097 implying that the feeding programme predominantly uses locally sourced food and produce. Further, the standard deviation was above the sub-composite standard deviation of 0.838 implying that the opinions were inconsistent.

On the item, a local supply chain ensures the timely delivery of necessary resources, 81 (49.7%) of the respondents agreed, 29 (17.8%) were undecided, 25 (15.3%) disagreed, 21 (12.9%) strongly disagreed, and 7 (4.3%) strongly agreed. The mean was 3.172 and standard deviation was 0.647. The item had a mean score lower than the composite mean of 4.097 implying that the local supply chain did not ensure the timely delivery of necessary resources. Further, the standard deviation was lower than the sub-composite standard deviation of 0.838 implying that the opinions converged.

On the item, the programme actively promotes cultural inclusivity and diversity, 71 (43.6%) of the respondents strongly agreed, 61 (37.4%) agreed, 14 (8.6%) strongly disagreed, 9 (5.5%) disagreed, and 8 (4.9%) were undecided. The mean was 4.018 and standard deviation was 0.720. The item had a mean score lower than the composite mean of 4.097 implying that the programme did not actively promote cultural inclusivity and diversity. Further, the standard deviation was lower than the sub-composite standard deviation of 0.838 implying that the opinions converged.

The respondents were further asked to state how local traditions and cultural practices play a pivotal role in the design and execution of the feeding programme in Turkana Central Sub-County. They indicated that one of the most significant ways in which culture influences the programme is through the selection of locally favored crops and traditional recipes. For example, the programme actively incorporates crops like sorghum, millet, and indigenous vegetables, which hold cultural and nutritional significance within the Turkana community. These crops have been staples in the local diet for generations, and their inclusion in the feeding programme not only reflects cultural respect but also ensures that the meals are culturally accepted and preferred by the students. Additionally, they indicated that the programme schedules are designed to accommodate local customs, such as communal agricultural activities and traditional celebrations. This ensures that the programme aligns with the daily routines and practices of the community, making it more accessible and effective. Furthermore, cultural elements like communal cooking and sharing of meals promote a sense of togetherness and community bonding, reinforcing the programme's role in social cohesion.

4.6 Stakeholder Partnerships and Sustainable Implementation of the Home-grown School Feeding Programme

The study sought to examine the influence of stakeholder partnerships on the implementation of home-grown school feeding programme in public primary schools in Turkana Central Sub-county. The respondents were asked to indicate their level of agreement with statements related to stakeholder partnerships on implementation of home-grown school feeding programme in public primary schools in Turkana Central Sub-county. The results were as shown in Table 4.9.

Table 4.9: Level of Agreement with Statements on the Influence of Stakeholder Partnerships on Sustainable Implementation of the Home-grown School Feeding Programme

Statements on influence of Stakeholder Partnerships	SD F (%)	D F (%)	N F (%)	A F (%)	SA F (%)	Mean	Std. Dev.
Various stakeholders are actively involved in the feeding programme.	18 (11.0)	0 (0.0)	0 (0.0)	62 (38.0)	83 (50.9)	4.178	0.717
Information is readily accessible to all stakeholders involved.	0 (0.0)	0 (0.0)	0 (0.0)	71 (43.6)	92 (56.4)	4.564	0.997
A structured mechanism for stakeholder consultation is in place.	18 (11.0)	0 (0.0)	0 (0.0)	65 (39.9)	80 (49.1)	4.160	0.712
There are active steering or lobbying groups advocating for the programme.	26 (16.0)	23 (14.1)	19 (11.7)	60 (36.8)	35 (21.5)	3.337	0.880
Composite Mean and Standard deviation						4.060	0.827

Source: Researcher (2023)

Table 4.9 revealed that various stakeholders are actively involved in the feeding programme, 83 (50.9%) of the respondents strongly agreed, 62 (38.0%) agreed, and 18 (11.0%) strongly disagreed. The mean was 4.178 and standard deviation was 0.717. The item had a mean score above the composite mean of 4.060 implying that various stakeholders are actively involved in the feeding programme. Further, the standard deviation was lower than the sub-composite standard deviation of 0.827 implying that the opinions converged.

On the item, information is readily accessible to all stakeholders involved, 71 (43.6%) of the respondents agreed, and 92 (56.4%) strongly agreed. The mean was 4.564 and standard deviation was 0.997. The item had a mean score above the composite mean of 4.060 implying that information is readily accessible to all stakeholders involved. Further, the standard deviation was above the sub-composite standard deviation of 0.827 implying that the opinions were inconsistent.

Regarding the item, a structured mechanism for stakeholder consultation is in place, 80 (49.1%) of the respondents strongly agreed, 65 (39.9%) agreed, and 18 (11.0%) strongly disagreed. The mean was 4.160 and standard deviation was 0.712. The item had a mean score above the composite mean of 4.060 implying that a structured mechanism for stakeholder consultation is in place. Further, the standard deviation was lower than the sub-composite standard deviation of 0.827 implying that the opinions converged.

On the item, there are active steering or lobbying groups advocating for the programme, 60 (36.8%) of the respondents agreed, 35 (21.5%) strongly agreed, 26 (16.0%) strongly disagreed, 23 (14.1%) disagreed, and 19 (11.7%) were undecided. The mean was 3.337 and standard deviation was 0.880. The item had a mean score lower than the composite mean of 4.060 implying that there are no active steering or lobbying groups advocating for the programme. Further, the standard deviation was above the sub-composite standard deviation of 0.827 implying that the opinions were inconsistent.

The respondents were required to share their experiences regarding how various stakeholders have played a crucial role in shaping and supporting the programme. They indicated that one of the key contributors has been the local community, including parents and community leaders. They actively participate in the programme by contributing locally grown food, volunteering their time to assist in meal preparation, and offering valuable insights on local food preferences. This strong community involvement not only ensures a steady supply of ingredients but also fosters a sense of ownership and pride in the programme. They also added that the local government authorities have been instrumental in providing financial support through grants and facilitating coordination between schools and community members. Moreover, partnerships with local agricultural cooperatives have ensured a consistent supply of high-quality agricultural inputs. These cooperatives offer expertise, resources, and sometimes financial aid, making the programme more resilient and sustainable. Schools and teachers also play a pivotal role, as they oversee the day-to-day execution of the programme, making it a seamless part of the programme routine. In essence, it is the collaborative efforts of these stakeholders that have shaped and sustained the feeding programme, making it an integral part of the local community and an effective means of providing nutritious meals to students.

4.7 Sustainable Implementation of the Home-grown School Feeding Programme

The respondents were asked to indicate their level of agreement with statements related to implementation of home-grown school feeding programme in public primary schools in Turkana Central Sub- County. The results were as shown in Table 4.10.

Table 4.10: Level of Agreement with Statements on Sustainable Implementation of the Home-grown School Feeding Programme in Public Primary Schools

Statements on implementation of home-grown school feeding programme	SD F (%)	D F (%)	N F (%)	A F (%)	SA F (%)	Mean	Std. Dev.
The feeding programme positively impacts the community, more so farmers.	0 (0.0)	0 (0.0)	0 (0.0)	68 (41.7)	95 (58.3)	4.583	0.995
The programme promotes social cohesion and well-being.	11 (6.7)	0 (0.0)	7 (4.3)	72 (44.2)	73 (44.8)	4.203	0.531
The programme efficiently manages its resources for economic sustainability.	12 (7.4)	32 (19.6)	30 (18.4)	55 (33.7)	34 (20.9)	3.411	0.726
Economic challenges affect the sustainability of the programme.	0 (0.0)	0 (0.0)	0 (0.0)	73 (44.8)	90 (55.2)	4.552	0.999
The programme has a positive impact on the local environment.	0 (0.0)	0 (0.0)	0 (0.0)	64 (39.3)	99 (60.7)	4.607	0.990
The programme implements environmentally sustainable practices.	8 (4.9)	4 (2.5)	22 (13.5)	84 (51.5)	45 (27.6)	3.945	0.977
Composite Mean and Standard deviation						4.217	0.870

Source: Researcher (2023)

Table 4.10 revealed that on the feeding programme positively impacts the community, more so farmers, 95 (58.3%) of the respondents strongly agreed, and 68 (41.7%) agreed. The mean was 4.583 and standard deviation was 0.995. The item had a mean score above the composite mean of 4.217 implying that the feeding programme positively impacts the community, more so farmers. Further, the standard deviation was above the sub-composite standard deviation of 0.870 implying that the opinions were inconsistent.

On the item, the programme promotes social cohesion and well-being, 73 (44.8%) of the respondents strongly agreed, 72 (44.2%) agreed, 11 (6.7%) strongly disagreed, and 7 (4.3%) were undecided. The mean was 4.203 and standard deviation was 0.531. The item had a mean score lower than the composite mean of 4.217 implying that the programme does not promote social cohesion and well-being. Further, the standard deviation was lower than the sub-composite standard deviation of 0.870 implying that the opinions converged.

On the item, the programme efficiently manages its resources for economic sustainability, 55 (33.7%) of the respondents agreed, 34 (20.9%) strongly agreed, 32 (19.6%) disagreed, 30 (18.4%) were undecided, and 12 (7.4%) strongly disagreed. The mean was 3.411 and standard deviation was 0.726. The item had a mean score lower than the composite mean of 4.217 implying that the programme does not efficiently manage its resources for economic sustainability. Further, the standard deviation was lower than the sub-composite standard deviation of 0.870 implying that the opinions converged.

Regarding, economic challenges affect the sustainability of the programme, 90 (55.2%) of the respondents strongly agreed, and 73 (44.8%) agreed. The mean was 4.552 and standard deviation was 0.999. The item had a mean score above the composite mean of 4.217 implying that economic challenges affect the sustainability of the programme. Further, the standard deviation was above the sub-composite standard deviation of 0.870 implying that the opinions were inconsistent.

On the item, the programme has a positive impact on the local environment, 99 (60.7%) of the respondents strongly agreed, and 64 (39.3%) agreed. The mean was 4.607 and standard deviation was 0.990. The item had a mean score above the composite mean of 4.217 implying that the programme has a positive impact on the local environment. Further, the standard deviation was above the sub-composite standard deviation of 0.870 implying that the opinions were inconsistent.

On the item, the programme implements environmentally sustainable practices, 45 (27.6%) strongly agreed, 22 (13.5%) were undecided, 8 (4.9%) strongly disagreed, and 4 (2.5%) disagreed. The mean was 3.945 and standard deviation was 0.977. The item had a mean score lower than the composite mean of 4.217 implying that the programme does not implement environmentally sustainable practices. Further, the standard deviation was above the sub-composite standard deviation of 0.870 implying that the opinions were inconsistent.

The respondents were asked to give additional reflections, recommendations, or comments relating to the Sustainable implementation of the Home-grown School Feeding Programme in Turkana Central Sub- County. The respondents indicated that diversifying crop production and emphasizing the cultivation of drought-resistant, locally favored crops is crucial. This not only enhances the variety and nutritional quality of school meals but also strengthens the local agricultural sector. Additionally, further efforts should be made to promote water harvesting and conservation practices to mitigate the challenges of water scarcity in this arid region. In terms of funding, a sustainable financing strategy that combines government support, community contributions, and public-private partnerships should be developed to guarantee the long-term viability of the programme. Finally, continued community engagement, cultural sensitivity, and local ownership are essential for sustaining the programme's success. Encouraging active involvement of stakeholders, including parents, community leaders, and teachers, fosters a sense of shared responsibility and ensures that the programme remains tailored to the unique needs of Turkana Central Sub-county. The sustainable implementation of the home-grown school feeding programme ultimately relies on a holistic approach that balances agricultural development, financial stability, cultural integration, and active community participation.

4.8 Multiple Regression Analysis

Multiple regression analysis was carried out to determine the influence of agricultural development, availability of funds, culture and stakeholder partnerships on implementation of home-grown school feeding programme in Kenya. The findings were presented in Table 4.11, 4.12 and 4.13.

Table 4.11: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.876	0.767	0.761	1.369

Source: Researcher (2023)

Table 4.11 shows that adjusted R-Square value (coefficient of determination) is 0.761, which indicates that the independent variables (agricultural development, availability of funds, Culture, stakeholder partnerships) explain 76.1% of the variation in the dependent variable (implementation of home-grown school feeding programme). This implies that there are other factors that influence the implementation of home-grown school feeding programme in Kenya attributed to 23.9% unexplained.

Table 4.12: Analysis of Variance Results

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	992.31	4	248.078	129.896	6.87E-49
	Residual	301.75	158	1.910		
	Total	1294.06	162			

Source: Researcher (2023)

The results shown in Table 4.12 revealed that p-value was 6.87E-49 and F-calculated was 129.896. Since the p-value was less than 0.05 and F-calculated was greater than F-critical (2.4289), then the overall model was statistically significant.

Model coefficients provide unstandardized and standardized coefficients to explain the direction of the regression model and to establish the level of significance of the study variables. The results are captured in Table 4.13.

Table 4.13: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.987	0.417		2.367	0.019
Agricultural development	0.923	0.372	0.901	2.481	0.014
Availability of funds	0.653	0.251	0.704	2.602	0.010
Culture	0.834	0.199	0.821	4.191	0.000
Stakeholder partnership	0.751	0.213	0.723	3.526	0.001

Source: Researcher (2023)

As per the SPSS generated table above, the equation ($Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \epsilon$) becomes:

$$Y = 0.987 + 0.923X_1 + 0.653X_2 + 0.834X_3 + 0.751X_4$$

The findings showed that if all factors (agricultural development, availability of funds, culture, stakeholder partnerships) were held constant at zero implementation of home-grown school feeding programme will be 0.987. The findings presented also show that taking all other independent variables at zero, a unit increase in the agricultural development would lead to a 0.923 increase in implementation of home-grown school feeding programme. This variable was significant since the p-value 0.014 was less than 0.05.

The findings also show that a unit increase in Availability of funds would lead to a 0.653 increase of implementation of home-grown school feeding programme. This variable was significant since $0.010 < 0.05$. Further, the findings show that a unit increase of culture would

lead to a 0.834 significant increase of implementation of home-grown school feeding programme since p-value (0.000) was less than 0.05. The study also found that a unit increase of stakeholder partnerships would significantly lead to a 0.751 increase of implementation of home-grown school feeding programme since p-value (0.001) was less than 0.05.

Overall, it was established that agricultural development had the greatest effect on the implementation of home-grown school feeding programme in Kenya, followed by culture, then stakeholder partnerships while availability of funds had the least effect to the implementation of home-grown school feeding programme in Kenya. All the variables were significant since their p-values were less than 0.05.

CHAPTER FIVE: SUMMARY OF FINDINGS, DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the major findings summary, discussions, conclusions and the essential recommendations. The study sought to examine the influence of socio-economic factors on women involvement in income generating agribusiness projects in Munuki Payam, Juba County in South Sudan. The following are the specific breakdown of the summaries of the major findings based on the output of the descriptive and inferential statistical analyses guided to answer the four research questions of the study.

5.2 Summary of Findings

The study sought to determine the influence of agricultural development system on the implementation of home-grown school feeding programme in public primary schools in Turkana Central Sub- County. The study found that the programme has a variety of agricultural inputs to choose from, and the programme has reliable access to a stable market for its agricultural products. The research also found that the programme did not cultivate a diverse range of crops in its feeding programme, and safety and hygiene standards are not maintained during the preparation of food.

The research aimed to determine the influence of availability of funds on implementation of home-grown school feeding programme in public primary schools in Turkana Central Sub- County. The study found that the programme did not receive financial support from various sources for the feeding programme and there is no strategy in place to secure funding for the programme in the future. Further, the study found that the budget constraints limit the effectiveness of the feeding programme, funds are allocated based on the specific needs of the programme.

The study sought to establish how culture influences the implementation of home-grown school feeding programme in public primary schools in Turkana Central Sub- County. The study found that local cultural practices are taken into account when planning the programme, and the feeding programme predominantly uses locally sourced food and produce. The study established that the local supply chain did not ensure the timely delivery of necessary resources, and the programme did not actively promote cultural inclusivity and diversity.

The study sought to examine the influence of stakeholder partnerships on the implementation of home-grown school feeding programme in public primary schools in Turkana Central Sub- County. The research found that various stakeholders are actively involved in the feeding programme, information is readily accessible to all stakeholders involved, and a structured mechanism for stakeholder consultation is in place. The research however found that there are no active steering or lobbying groups advocating for the programme.

5.3 Discussion of the Findings

The following subsections entail the discussions of findings per objective linked to the literature. The objectives discussed were agricultural development, availability of funds, culture and stakeholder partnerships.

5.3.1 Influence of Agricultural Development on Sustainable implementation of the Home-grown School Feeding Programme

The study found that the programme has a variety of agricultural inputs to choose from, and the programme has reliable access to a stable market for its agricultural products. Bundy et al. (2009); Espejo et al. (2009); Kiamba (2013) also asserts the same through their theory of the home-grown school feeding Programme which highlights the nature of HGSFP that links education through school feeding to agricultural development. The scholars argue that, unlike school feeding Programmes (SFP) whose main aim is to target learners, the HGSFP targets both learners and farmers. Their argument demonstrates that a successful implementation of HGSFP in a region can only be achieved if agricultural practice is robust.

The research also found that the programme did not cultivate a diverse range of crops in its feeding programme, and safety and hygiene standards are not maintained during the preparation of food. The implementation takes 2 forms; the home-grown school feeding whose objective is to improve education, smallholder farmers and nutrition, and Njaa Marufuku Kenya (NMK) which capitalizes on the agricultural expertise present within the Ministry of Agriculture. The NMK Programme provides support to school meals over a three-year period within the target schools where funding is provided for: 100% of the children to be fed in the first year; 75% of the children to be fed in the second year; and 50% of the children to be fed in the third year (WFP, 2018). The country has been able to come off the hunger map in such a short period of time implementing the model (Martial De-Paul

Ikounga 2016). The success of this model has prompted many African countries to conduct a benchmark in the country and pilot the Programme in their countries (NEPAD, 2003).

5.3.2 Influence of Availability of Funds on Sustainable implementation of the Home-grown School Feeding Programme

The study found that the programme did not receive financial support from various sources for the feeding programme and there is no strategy in place to secure funding for the programme in the future. Karisa and Orodho (2014) through their study to test the efficacy of HGSFP in Kinango Sub-County, Kwale County Kenya, found out that the HGSFP failed to achieve its objective especially on the front of empowering local farmers. It was established that the Funds released by the Ministry of Education targeted the cereal traders who procure food from outside Kwale County. The lack of Funds and general support from the government has resulted to the community of Kwale County not benefiting from the HGSFP.

Further, the study found that the budget constraints limit the effectiveness of the feeding programme, funds are allocated based on the specific needs of the programme. Local communities are currently pushing for the inclusion of meat in the meal budget to involve pastoralists who comprise the bulk of the economic activity in the ASAL (USDA, 2009). If the government considers the proposed menu change, then there would still be need for them to support livestock farmers in Turkana by providing key farming input and Funds to facilitate large production. This only demonstrates how important availability of Funds is key towards the achievement of the sustainable implementation of home-grown school feeding Programme.

5.3.3 Influence of Culture on Sustainable implementation of the Home-grown School Feeding Programme

The study found that local cultural practices are taken into account when planning the programme, and the feeding programme predominantly uses locally sourced food and produce. In any school feeding Programme, it is important for school meals to include foods that reflect the cultural and religious demographics of a school community. This is critical to ensure a wider acceptance and by extension, create a great platform to connect with learners and other stakeholders including but not limited to local farmers (Center for Best Practices 2022 Webinar).

The study established that the local supply chain did not ensure the timely delivery of necessary resources, and the programme did not actively promote cultural inclusivity and diversity. Food sovereignty is defined as the right of people, communities, and countries to define their own agricultural, labour, fishing, food and land policies, which are ecologically, socially, economically and culturally appropriate to their unique circumstances (AU, 2018). The role of government and other key players should be to work towards food sovereignty that includes empowering local farmers with enough resources i.e., land and inputs to meet school demands, drawing up contracts with farmers that set fair commodity prices, and using locally produced food in school menus to the greatest extent possible (Tomlinson, 2007).

5.3.4 Influence of Stakeholders' Partnership on Sustainable implementation of the Home-grown School Feeding Programme

The research found that various stakeholders are actively involved in the feeding programme, information is readily accessible to all stakeholders involved, and a structured mechanism for stakeholder consultation is in place. The Sustainable Development Goals (SDGs) explicitly highlight the need of partnership to realize the prosperity of business, society and the environment. The SDG goals represent a fundamental shift in approach, naming all societal sectors as key development actors, and requiring an unprecedented level of cooperation and collaboration among civil society, business, government, NGOs, foundations and others for their achievement. They appreciate that each stakeholder holds a key part of the solution, and that all stand to benefit by collectively driving forward sustainable development (UNDP, 2019).

The research however found that there is no active steering or lobbying groups advocating for the programme. For home-grown school feeding to be sustainable, there is need for government to partner with other stakeholders who have the same interest in home-grown school feeding model. In Turkana County for example, Mary's Meals Kenya is one of the key stakeholders partnering with both County and National Government to provide school meals to learners across Early Childhood Development Education Centres (ECDEs) and Primary Schools. Mary's Meals Kenya started implementing school feeding Programme in the county in 2018. To date they are feeding over 200,000 children with one meal a day at their place of education. The organization's focus is to also boost the local economy by supporting the home-grown model. However, this has been difficult to achieve as the community does not grow enough food sufficient for their operation.

5.4 Conclusion

The study concluded that agricultural development system has a significant influence on the implementation of the home-grown school feeding programme in Turkana Central Sub-County. The research concluded that the programme has access to a variety of agricultural inputs and a stable market for their products. However, the cultivation of a diverse range of crops is lacking, and safety and hygiene standards during food preparation are not adequately maintained. Conclusively, while local farmers have access to diverse agricultural inputs and reliable markets, there's room for improvement in crop diversity and food safety standards.

The research concluded that availability of funds significantly affects the implementation of the home-grown school feeding programme in public primary schools in Turkana Central Sub-County. The study deduced that schools lack financial support from various sources and do not have a strategy to secure future funding. Budget constraints limit the programme's effectiveness, and funds are allocated based on specific needs. Therefore, the programme struggle due to a lack of financial support from various sources, and budget constraints limit programme effectiveness. Sustainable funding strategies are essential.

The study concluded that local cultural practices are considered in programme planning, and locally sourced food is primarily used. However, there are challenges in the timely delivery of necessary resources through the local supply chain, and the programme does not actively promote cultural inclusivity and diversity. The research further deduced that while culture is integrated into the programme, there is room for improving the efficiency of the supply chain and enhancing cultural diversity and inclusivity.

The research concluded that stakeholder partnerships significantly affect the implementation of the home-grown school feeding programme in Turkana Central Sub-County. The study concluded that various stakeholders are actively involved, and information is readily accessible. A structured mechanism for stakeholder consultation is in place. However, the study finds a lack of active steering or lobbying groups advocating for the programme. In addition, stakeholder engagement is a key determinant of the programme's success, but efforts should be made to establish advocacy groups that can further support and promote the programme.

5.5 Recommendations

To strengthen the influence of the agricultural development system in Turkana Central Sub-county's home-grown school feeding programme, the study recommended that the public primary schools should focus on diversifying the crops they grow locally for the feeding initiative. Providing training and resources for teachers and students involved in agriculture is crucial to achieving this goal. Furthermore, schools should prioritize strict adherence to food safety and hygiene standards during the preparation of meals, ensuring the health and well-being of the students.

It is vital for schools in Turkana Central Sub-County to establish a clear and locally tailored strategy for securing funding for the home-grown school feeding programme. This strategy may involve seeking support from local government authorities, community-based organizations, and partnerships with businesses within the region. Additionally, budget allocation should be based on the specific needs of the programme, and schools should focus on efficient and transparent financial management.

Embracing and integrating the rich local cultural practices of Turkana Central is essential to the success of the programme. To address challenges related to the supply chain, efforts should be made to improve the logistical coordination of locally sourced food, ensuring timely delivery to the programme. Promoting cultural inclusivity and diversity should be an integral part of the programme, involving active community engagement and awareness-building.

While various stakeholders are actively involved in Turkana Central Sub-county's home-grown school feeding programme, it is essential to establish active steering or lobbying groups advocating for the programme at the local level. Schools and authorities should encourage and facilitate collaboration between local stakeholders, emphasizing their roles and responsibilities. Maintaining open channels of communication is key to ensuring that all stakeholders in Turkana Central are well-informed and engaged.

The study recommended that continuous training and capacity building for teachers, students, and programme administrators in Turkana Central Sub-county are essential. This will empower them with the knowledge and skills needed to maintain and enhance the programme's quality while respecting the region's unique cultural aspects. Efforts should also be made to establish a sustainable model for the home-grown school feeding programme in Turkana Central Sub-county. This includes exploring long-term funding strategies,

environmentally friendly agricultural practices suitable for the region, and partnerships that can endure beyond the scope of the study.

5.6 Suggestions for Future Studies

The research sought to investigate the perceived factors influencing the implementation of home-grown school feeding programme in public primary schools within Turkana Central Sub-county, Turkana County, Kenya. The study was narrowed down to factors such as agricultural development, availability of funds, culture and stakeholder partnerships and how they contribute to the implementation of home-grown school feeding programme in Kenya. Just as the current study recognized the possibility of other unexplored factors, there may be need for additional, or further investigation on other unforeseen factors that influence or affect similar programme's success for. Moreover, more research can be done in other areas of Kenya apart from Turkana Central Sub-county.

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APPENDICES

Appendix I: Questionnaire to the Respondents

These questions are part of a research study geared towards the understanding of the factors influencing Sustainable implementation of the Home-grown School Feeding Programme in Turkana Central Sub-county. Your responses are invaluable in helping to gain insights into the various outlooks related to the implementation of this Programme.

Please do not write your name as the information you have provided shall remain confidential.

Section A: General Information

1. Age

- 18-25___
- 26-35___
- 36-45___
- 46-55___
- 56 and above___

2. Gender

- Male___
- Female___

3. Occupation_____

4. How long have you worked or lived in Turkana County? _____

Section B: Influence of Agricultural Development

5. What is your level of agreement with the following statements on agricultural development and implementation of home-grown school feeding programme in public primary schools in Turkana Central Sub-county?

Where:

- 1- Strongly disagree
- 2- Disagree
- 3- Undecided
- 4- Agree
- 5- Strongly agree

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The programme provides a variety of agricultural inputs to the programme.	1	2	3	4	5
The programme has reliable access to a stable market for its agricultural products.	1	2	3	4	5
Safety and hygiene standards are maintained during the preparation of food for the schools.	1	2	3	4	5
The programme cultivates a diverse range of crops in its feeding programme.	1	2	3	4	5

6. Can you describe any specific challenges or successes related to the availability of agricultural inputs in the implementation of the feeding programme in your school? Please provide examples if possible.

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Section C: Influence of Availability of Funds

7. What is your level of agreement with the following statements on the influence of availability of funds on implementation of home-grown school feeding programme in public primary schools in Turkana Central Sub-county?

Where:

- 1- Strongly disagree
- 2- Disagree
- 3- Undecided
- 4- Agree
- 5- Strongly agree

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

The programme receives financial support from various sources for the feeding programme.	1	2	3	4	5
Budget constraints limit the effectiveness of the feeding programme.	1	2	3	4	5
Funds are allocated based on the specific needs of the programme.	1	2	3	4	5
There is a strategy in place to secure funding for the programme in the future.	1	2	3	4	5

8. What are the main sources of funding for the feeding programme, and how have these sources influenced the programme's effectiveness and sustainability?

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Section D: Influence of Culture

9. What is your level of agreement with the following statements on the influence of culture on implementation of home-grown school feeding programme in public primary schools in Turkana Central Sub-county?

Where:

- 1- Strongly disagree
- 2- Disagree
- 3- Undecided
- 4- Agree
- 5- Strongly agree

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Local cultural practices are taken into account when planning the programme.	1	2	3	4	5

The feeding programme predominantly uses locally sourced food and produce.	1	2	3	4	5
A local supply chain ensures the timely delivery of necessary resources.	1	2	3	4	5
The programme actively promotes cultural inclusivity and diversity.	1	2	3	4	5

10. How do local traditions and cultural practices play a role in the design and execution of the feeding programme in your school? Please provide insights into any specific cultural elements that have been integrated into the programme.

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Section E: Influence of Stakeholder Partnerships

11. What is your level of agreement with the following statements on the influence of stakeholder partnerships on the implementation of home-grown school feeding programme in public primary schools in Turkana Central Sub-county?

Where:

- 1- Strongly disagree
- 2- Disagree
- 3- Undecided
- 4- Agree
- 5- Strongly agree

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Various stakeholders are actively involved in the feeding programme.	1	2	3	4	5
Information is readily accessible to all stakeholders involved.	1	2	3	4	5

A structured mechanism for stakeholder consultation is in place.	1	2	3	4	5
There are active steering or lobbying groups advocating for the programme.	1	2	3	4	5

12. Could you share your experiences regarding how various stakeholders have been involved in shaping and supporting the feeding programme?

Section F: Implementation Of Home-Grown School Feeding Programme

13. What is your level of agreement with the following statements on implementation of home-grown school feeding programme in public primary schools in Turkana Central Sub-county?

Where:

- 1- Strongly disagree
- 2- Disagree
- 3- Undecided
- 4- Agree
- 5- Strongly agree

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The feeding programme positively impacts the community, more so farmers.	1	2	3	4	5
The programme promotes social cohesion and well-being.	1	2	3	4	5
The programme efficiently manages its resources for economic sustainability.	1	2	3	4	5

Economic challenges affect the sustainability of the programme.	1	2	3	4	5
The programme has a positive impact on the local environment.	1	2	3	4	5
The programme implements environmentally sustainable practices.	1	2	3	4	5

14. Please share any additional reflections, recommendations, or comments relating to the Sustainable implementation of the Home-grown School Feeding Programme in Turkana Central Sub-county. _____

Thank you for your time in completing this questionnaire. Your input is highly appreciated and useful to this research