FACTORS INFLUENCING THE IMPLEMENTATION OF PUBLIC PRIVATE PARTNERSHIP IN AGRICULTURAL PROJECTS IN KENYA: A CASE OF AMIRAN AND YOUTH ENTERPRISE DEVELOPMENT FUND PROJECTS IN MURANGA COUNTY

BY

ESTHER NYAMBUA MBUGUA

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2015
DECLARATION

I declare that this is my original work and has never been presented for examination in any other institution for award of a degree or a diploma.

Signed: ..............................  Date.................................

Esther N Mbugua  
L50/84003/2012

This Research Project has been submitted for examination with my approval as the University supervisor.

Signed: ..............................  Date.................................

Prof. Harriet Kidombo  
Department of Extra Mural Studies  
University of Nairobi
DEDICATION

This Research Project is dedicated to my dear parents Mr. Geoffrey Mbugua M. and Mrs. Hellen W. Mbugua.
ACKNOWLEDGEMENTS

I am sincerely grateful to all those who have contributed in one way or another in my effort to complete this project. My most sincere gratitude goes to my supervisor Prof. Harriet Kidombo who has dedicated her time in guiding and encouraging me to do this project. The University of Nairobi fraternity stands applauded for the opportunity accorded to me to pursue my studies at masters’ level. I also give thanks to the all the lecturers of the University of Nairobi, extra-mural department for the knowledge and wisdom they impacted in me during the course work period and thereafter. My special thanks go to my parents, Mr. and Mrs. Geoffrey Mbugua who instilled good morals and positive virtues of hard work in me, thank you more sincerely. Finally, I would like to thank the Almighty God for granting me enough strength and courage to tackle this research project.
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ABBREVIATIONS AND ACRONYMS

**3ADI**: African Agribusiness and Agro-Industries Development Initiative

**AFT**: Amiran Farmers’ Kit

**ASDS**: Agricultural Sector Development Strategy

**CSA**: Community Support Agriculture

**MoA**: Ministry of Agriculture

**MTP**: Medium Term Plan

**NGOs**: Non-Governmental Organizations

**PDF**: Project Development Fund

**PPPs**: Public Private Partnerships

**SACCOs**: Savings and Credit Co-operative Organizations

**YEDF**: Youth Enterprise Development Fund
ABSTRACT

Agriculture in Africa is not sustainable because average yields have been stagnating for decades due to underinvestment, especially in the development of agricultural markets, crop improvement and the sustainable management of agricultural systems. Low public sector funding for agricultural research and lack of incentives for the private sector to operate in areas where there is no market largely explain the yield gap in many food-importing developing countries. Yet, there are effective ways in which the public and the private sector could work together and jointly improve agricultural sustainability in poor countries. The public sector provides a favorable institutional environment for the development of agricultural markets and investment in rural infrastructure facilitates local business development and funds research with local relevance. The private sector, in return, brings its considerable expertise in product development and deployment. This research shows how new forms of public-private partnerships (PPPs) for agricultural development can work in challenging environments. It discusses the relationship between YEDF and Amiran in proving greenhouse farming. The study was led by the following objectives: establish the extent to which technical expertise by Amiran officials influences implementation of YEDF/Amiran partnership, examine how the level of financial support by YEDF has influenced the implementation of the partnership, to establish ways in which the level of education of the youth influences the implementation of the partnership and the extent to which the community support influences the implementation. The study used descriptive design with a sample of 190 respondents. Questionnaires and interview guide were used to collect data and the study used descriptive statistics as the main methods of analysis, since the data collection is both quantitative and qualitative in nature. The analysis and presentation of the data focused on the frequencies, percentages, and tables. The study established that respondents received training on how to maintain and manage the green houses by Amiran Officials. The study found that, making agriculture attractive is the only way Kenya can ensure food security and sufficiency as stated by Amiran officials. Thus, Amiran and YEDF encourage commercial farming supported by technology to drive agricultural development, by helping youths who are normally in groups of 5-10 in the start up of green houses. The study concludes that Amiran and YEDF Partnership is designed to enhance the mutual sharing of costs, risks and benefits of infrastructure projects between the two (private and public) sectors by exploiting the strengths of either side. The study further concludes that, making agriculture attractive is the only way Kenya can ensure food security and sufficiency as stated by Amiran officials. Based on the findings, this study recommends, formation of more Public-private partnerships should be encouraged and the government should promote the transparency in the different phases of Public-Private-Partnership projects through a legislative action to combat any kind of corruption.
CHAPTER ONE:

INTRODUCTION

1.1 Background of the study

In Kenya Public, Private Partnerships (PPPs) are increasingly gaining acceptance as a model of financing projects, improving efficiency, productivity and reducing unemployment, especially by the youth. Peoples’ enthusiasm about PPPs arise from their assumed benefits: PPPs are said to improve quality of services and project sustainability (Levinson 2006); reduce costs (Grimsey and Lewis 2005: 347), and risks (Irwin 2009) and the time required to implement a project (European Commission 2003: 55). It is also assumed that the private sector delivers projects more often-on time and on budget in comparison to the public sector (EPEC, 2009; Deloitte, 2006; Price WaterhouseCoopers, 2004; Thompson & Budin, 1997). PPP’s ability to spread the costs of large investments over the lifetime of the asset is seen as an attractive advantage for the public sector since it eases public debt (Meidute & Paliulis, 2011). PPPs are therefore assumed to offer better value for money (Grimsey and Lewis 2005: 347).

In the agricultural sector, the enthusiasm is even greater owing to its being a labor-intensive sector. Kenya’s agricultural sector has remained the mainstay of the economy since independence employing 75 per cent of the labor force and providing food requirements for the nation. It earns the country about 60 per cent of the foreign exchange (Republic of Kenya, 1997) and the sector is expected to spur economic development by generating funds to invest in other sectors of the economy.
PPPs—collaborations between public and private sectors, in order to provide significant public infrastructure, or other facilities and services—are a critical aspect of a nation’s innovation and strategy system (Link, 2006). Being a form of agreement or partnership between public and private parties (OECD, 2000). PPPs have, in the last decade, been advanced as fundamentally important mechanisms for reviving declining growth in the agricultural sector. This was boosted by the Abuja Declaration of March 2010, in which African leaders committed themselves to support implementation of African Agribusiness and Agro-industries Development Initiative (3ADI), aimed at “improving rural infrastructure and trade-related capacities for market access.” In Kenya, PPPs in the agricultural sector are anchored on the Agricultural Sector Development Strategy (ASDS 2010-2020), the Public Private Partnership Act and Vision 2030. ASDS states that the PPP approach will be embraced to accelerate growth in agribusiness and economic development. Vision 2030, on the other hand, identifies the agricultural sector among the six priority economic sectors where 21 flagship projects will be implemented.

Despite the success of Kenya’s agricultural sector in the first decade after independence, agricultural growth started to decline in the mid-1970s (Chibber, 1988; Mosley and Smith, 1989). The liberalization policies of the 1990s did not achieve much in reviving the sector. The performance of the sector has therefore been poor for most years since 1970 (World Bank, 1981). Its contribution to Kenya’s GDP, for example, decreased from 35 per cent in 1963 to 25 percent in 1996. This was mainly due to inefficiencies in marketing, limited land expansion of small holder farming, lack of modernization and deteriorating infrastructure, all of which were worsened by the over-politicization of the agricultural sector by successive regimes. Different regimes made policies and used
government controls of the sector—production, marketing and funding, to seek rents to buy support.

PPPs in Kenya are however, facing a number of challenges. First, PPPs in the country are still an “evolving concept” that must be adapted to the specific characteristics of specific sectors. Second, while the public sector sees potential for raising additional capital from the private sector to meet budgetary shortfalls, the private sector is skeptical about the government’s commitment and will not to make counter-productive, inappropriate, or ill-advised policies that distort the market. Third, the recently enacted PPPs Act requires the government to coordinate these projects, yet government ability to do this is also questionable.

In the agricultural sector, these problems are compounded by two more factors: First, the agricultural sector tends to be in labor intensive which requires more government supervision and coordination; and, second, not many of the public actors have a personal interest in agricultural projects, whose returns do not accrue much rents for those involved and hence the projects take longer to conceptualize and get started and are poorly supervised. Further, although the concept has been internalized in Ministry of Agriculture (MoA), it is yet to be operationalized–partly because the public element is still unclear within the government (Odame2002).

Since formal PPP models started in late 1980s and early 1990s in the developing world they have largely been in large projects—transport, physical infrastructure such as roads and energy schemes, water and waste management. Not many countries have embraced PPPs in “small” schemes, and even fewer are in the agricultural sector. Indeed, in many places, African countries are in the initial processor formulating appropriate legal and
regulatory frameworks to create enabling environment for PPPs (Ong’olo, 2006). Many of them have not examined the operation of existing PPPs. Not many of the existing PPPs in Kenya have been studied to establish their success or how well they have been implemented or how well they have achieved the objectives for which they were established. For example, not many studies have been done to establish the factors that influence their implementation or their success. Even those PPPs that were introduced to help reduce unemployment, no studies have been done to establish the number or nature of jobs created.

1.2 The Problem Statement

Established in 2006, Youth Enterprise Development Fund (YEDF) aimed at reducing unemployment among the youth who account for over 61% of the unemployed in Kenya. Objectives of YEDF are to provide loans to existing micro-finance institutions, registered NGOs involved in micro financing, and savings and credit co-operative organizations (SACCOs) for on-lending to youth enterprises; support youth oriented micro, small and medium enterprises to develop linkages with large enterprises; facilitate marketing of products and services of youth enterprises both in the domestic and the international markets; and, facilitate employment of youth in the international labor market. In 2008, the Fund developed a 3-year strategic plan to address varied needs and aspirations of the youth, and to address the challenges it has faced in the past.

YEDF is not only a funding institution but has developed a strategy to increase opportunities for the youth as espoused in Kenya’s Medium Term Plan (MTP) and Vision 2030. The Fund provides youth groups with financing to start or expand their businesses,
offers training to youths to build their businesses and supports thousands of youths take up jobs abroad. To youth groups and enterprises that promise to create jobs, the Fund makes enough loans available for the effort. Almost 4 billion shillings were set aside in 2008 to finance YEDF’s programs. To date the amount allocated has reached 5.9 billion. However, the Fund has not been the panacea for youth unemployment. The Fund has provided financing to only 157,000 groups worth almost 6 billion shillings, trained 200,000 and created employment for another 300,000. With over 4 million unemployed youths in the country, YEDF’s contribution is a mere drop in the ocean.

Determined to accelerate its twin mandate of job creation and training, YEDF partnered with Amiran Kenya Ltd, suppliers of agricultural kits for greenhouse farming. According to the partnership, YEDF developed a special agricultural based loan—AgriVijana Loan—to be given to youths willing to do greenhouse farming. Accordingly, youth groups and some individuals would be provided with special tailor made Amiran Farmers Kit (AFK). YEDF would guarantee Amiran payments, while Amiran would provide a fully assembled Farmers Kit, set up a greenhouse for the recipients and provide the necessary support needed, setting the greenhouse up, providing seeds/seedlings, training and marketing. The Amiran Farmers Kit (AFK), a tailor made kit designed to meet the farmers specific needs, was created with the aim of allowing small-scale farmers affordable access to modern agricultural technologies, methods and inputs of the highest standards. Each AgriVijana Amiran Farmer’s Kit contains two greenhouses, a drip irrigation system for the greenhouses and 400m of open field, a water tank, plant support system, Gold Medal seeds to be grown inside the greenhouses and in the open field, high quality fertilizers for one season, crop.
Since this partnership was started, no studies have been undertaken to establish its operations and how it has been implemented. As a result, we do not know how well it has been implemented and if so, what factors have influenced its implementation. This study therefore seeks to establish the factors that influence the successful implementation of Public Private Partnerships in the agricultural sector. Specifically the study seeks to establish the extent to which technical expertise and training by Amiran, the level of financial support by YEDF, level of education of the youth, community support and influence the implementation of PPPs.

1.3 Purpose of the study

The purpose of the study was to establish the factors that influence the implementation of PPPs in Kenya’s agricultural sector.

1.4 Objectives of the Study

Specifically, the objectives of the study were to establish the following:

1. To establish the extent to which technical expertise by Amiran officials influences implementation of YEDF/Amiran partnership in Muranga County;
2. To examine how the level of financial support by YEDF has influenced the implementation of YEDF/Amiran partnership in Muranga County;
3. To establish ways in which the level of education of the youth influences the way the partnership between YEDF and Amiran is implemented; and,
4. The extent to which the community support influences the implementation of YEDF/Amiran partnership
1.5 Research Questions

1. How has the expertise and training by Amiran officials influenced implementation of YEDF/Amiran partnership in Murangacounty?

2. How does the level of financial support by YEDF influence the implementation of partnership

3. In what way has the level of education of the youth influenced the way YEDF/Amiran partnership has been implemented?

4. How has the community support influenced the implementation of the YEDF/Amiran partnership?

1.6 Significance of the study

A large proportion of the Kenyan youth is unemployed, as a result of the government trying to reduce the numbers, the Youth Enterprise Development Fund (YEDF) and Amiran Kenya Ltd have partnered to support young farmers in acquiring a tailor made Amiran Farmers Kit (AFK) designed specifically for the AgriVijana Loan. YEDF has started the AgriVijana Loan to help youth, who are in groups, to get involved in Agribusiness by purchasing the special AFK’s each with 2 greenhouses and a large irrigated area. This is a first of its kind Public Private Partnership that seeks to reduce youth unemployment.

The findings of the study hopes to assist the government and Amiran to improve their partnership and give an answer as to whether the partnership has achieved its set goals. It is expected that the findings of this study will show the effectiveness of the partnership as opposed to those projects undertaken by the government alone.
1.7 Delimitation of the study

This study delimitated itself to youths who are practicing greenhouse farming under the Amiran project in Muranga county. For more conclusive results, other youth farmers practicing greenhouse farming in Muranga could be included but the researcher wants to focus only on Amiran greenhouse projects. Consequently, findings of the study may not be generalized to all greenhouse projects in the country as the study wants to get the advantages accrued from the partnership between Amiran and the government.

1.8 Limitations of the study

Language barrier is expected to be a limitation since majority of the youth in the county are not comfortable with English language that will be used in the questionnaire. This problem will be solved by translating the questions into Kiswahili language, which will finally help them to respond to all the questions, asked though with more time taken in data collection than expected. Another limitation is that it is not easy to access all the greenhouses in the county since most of them are put up in individual’s homesteads and farms but the researcher will use the Amiran offices to identify the farmers under their project. Lastly, availability of funds is also a limitation but the researcher hopes to get financial support from family, friends and other well-wishers.

1.9 Assumptions of the study

The researcher assumes that all the information that will be collected in the questionnaires will be true and correct, that the youth farmers and their Amiran supervisors will put total effort to the contribution of this research and that the study sample will be representative of the whole population.
1.10 Definition of significant terms used in the study

**Community Support:** Social groups of any size whose members reside in a specific locality, share government, and often have a common cultural and historical heritage.

**Farmer:** - Is the owner or a person in-charge of the greenhouse or land used in the production of crops

**Financial Support:** Financial resources provided to make the YEDF project with Amiran project possible; "the foundation (YEDF) provided support for the experiment which means the aggregate principal amount of any Financial Assistance made available under the facility, as more particularly determined in accordance with the relevant Facility Specific Terms.

**Greenhouse:** – Is a structure used for the production of crops under a controlled environmental condition.

**Level of Education:** - refers to the highest level of schooling that a person has reached. At the primary and secondary school level, educational attainment refers to the number of grades completed. At the postsecondary level, it refers to institutions attended and certificates, degrees or diplomas obtained.

**Public Private Partnerships (PPPs):**- Public–private partnerships are agreements by which public and private entities share resources, risks, and benefits in order to generate and provide products and services more efficiently. In agricultural development, participants in partnerships have traditionally included private entities (such as producers’ associations, small-farmer organizations, businesses, and individual producers) and
organizations involved in the generation and dissemination of knowledge and technology (such as universities, research institutes, and extension agencies).

**Technical Expertise:** The capability to perform the duties of one's profession generally, or to perform a particular professional task, with skill of an acceptable quality.

**Training:** - Training is a learning activity, which is directed towards acquisition of specific knowledge & skills for the purpose of an occupation. It focuses on the job task. The training can be both formal and informal and is usually carried out to assist a person understand and perform his/her job better. This is also a systematic modification of behavior through learning, which occurs because of education and instruction. This is therefore the process of being conditioned or taught to do something, the process of learning and being conditioned.

**Youth:** - Youth is best understood as a period of transition from the dependence of childhood to adulthood’s independence. The United Nations, for statistical purposes, defines ‘youth’, as those persons between the ages of 15 and 24 years, without prejudice to other definitions by Member States. The Kenyan national youth policy defines a Kenyan Youth as one aged between 15 - 30 years. This takes into account the physical, psychological, cultural, social, biological and political aspects, which explain the Kenyan youth situation. In this study, we will use person between the ages of 18-35, as mostly fewer than 18 will still be in school.

### 1.11 Organization of the study

Chapter one of this study has highlighted the background of public private partnerships, it has discussed the problem statement and described the specific problem addressed in the
study, purpose of the study, objectives of the study, research questions, the justification of it, delimitations and limitations as well as defining significant terms used in the study. Chapter two has presented a review of literature and relevant research associated with the problem addressed in this study; it has discussed the theoretical framework as well as the conceptual framework. Chapter three has presented the methodology, target population, sample size and procedures used for data collection and analysis. Chapter four has contained an analysis of the data and presentation of the results. Chapter five has offered a summary and discussion of the researcher's findings, implications for practice, and recommendations for future research.
CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction
This chapter outlines the various literatures on what constitutes PPPs and green house farming as an emerging field. Secondly, it highlights the literature related to knowledge, diversification and the collaboration of the government and the private sector in agriculture. The chapter also analyzes literature related to other aspects influencing greenhouse farming.

2.2 Technical Expertise
It is known that the public sector often does not have in-house capability to deliver new projects or maintain aging projects over a long period of time, due to the lack of necessary skills and training to implement projects. Government can tap into source of skilled and experienced labour by signing a contract with a private partner to deliver needed results as in the case of Amiran and YEDF. (Price Waterhouse Coopers, 2004). One of the great potentials of PPPs lies in human resource development and training.

PPP allows the government to pass operational roles to efficient private sector operators while retaining and improving focus on core public sector responsibilities, such as regulation and supervision. Properly implemented, this approach should result in a lower aggregate cash outlay for the government and better and cheaper service to the consumer. This should hold true even if the government continues to bear part of the investment or
operational cost since government’s cost obligation is likely to be targeted, limited, and structured within a rational overall financing strategy. (Asian Development Bank).

2.3 Financial Support

It is commonly thought that PPP can deliver better value for money. According to the, National Treasury (2002) amended regulations, ’value-for-money’ means that the use of an institution, or of state property by a private party, in terms of the PPP agreement, results in a net benefit to the institution in terms of cost, price, quality, quantity, risk transfer, or a combination thereof. This can also be argued out by Grimsey and Lewis (2005, p. 347) as “the optimum combination of whole life cycle costs, risks, completion time and quality in order to meet public requirements”. This definition assents to the one implied by the European Commission (2003, p. 55) which identifies a set of factors that determine value for money: life cycle costs, allocation of risks, time required to implement a project, quality of a service, and ability to generate additional revenues. The decision by government to pursue PPP delivery is often based on analysis to determine that the PPP approach will deliver value to the public through either lower cost; higher levels of service or reduced risk access to capital where PPPs allow governments to access alternative private sources of capital, allowing important and urgent projects to proceed when otherwise they may not be possible.

PPP’s ability to spread the costs of large investments over the lifetime of the asset is seen as an attractive advantage for the public sector. This eases the current debt of the government sector, as it does not have to incur large cash outflows immediately. It follows, that the government can get projects financed even though in reality there are no public funds available. This advantage could be considered from two points of view: first
large investment costs are spread out, and second – private funds are considered as the new financing opportunities for the government (Meidute&Paliulis, 2011)

In the UK, arguably one of the most efficient PPP market in the world, advisory costs during project development average 2.6 per cent of project capital costs. Advisory costs in lesser-developed PPP markets run even higher. The large amount of upfront costs for procuring PPP projects, in particular the cost of specialist transaction advisers often meets with strong resistance from government budgeting and expenditure control. However, quality advisory services are key to successful PPP development, and can save millions in the end. Therefore, funding, budgeting and expenditure mechanisms for project development are important to a successful PPP program, enabling and encouraging government agencies to spend the amounts needed for high quality project development.

The government may wish to develop a more or less independent project development fund (PDF), designed to provide funding to grantors for the cost of advisers and other project development requirements. The PDF may be involved in the standardization of methodology or documentation, its dissemination and monitoring of the implementation of good practices. It should provide support for the early phases of project selection, feasibility studies and design of the financial and commercial structure for the project, through to financial close and possibly thereafter, to ensure a properly implemented project. The PDF might focus on specific sectors or projects in a region or nationally, but needs to have a broad scope to address the different forms of PPP to respond to sector needs. The PDF may provide grant funding, require reimbursement (for example, through a fee charged to the successful bidder at financial close) with or without interest, or
obtain some other form of compensation (for example, an equity interest in the project),
or some combination thereof, to create a revolving fund. The compensation mechanisms
can be used to incentivize the PDF to support certain types of projects.

It should also be noted that the financial and economic viability of PPP projects is of
great concern to the government and if a PPP project is not financially viable but found to
have a high economic internal rate of return (EIRR), various options can be considered
for improving the project's financial rate of return, which may include government
intervention of various types and provision of incentives or subsidies. It may be noted
here that any significant difference between financial and economic internal rate of
returns of a project arises primarily due to existence of a large size of uncaptured external
benefits of the project to third parties. Government intervention and provision of
incentives for such projects are justified in view of market failure. Social welfare is
improved by undertaking such projects with government support.

Without government support, implementation of commercially unviable projects is not
possible. Government support may also be crucial in the early years of PPP development
in a country or in an untested PPP market. Without sufficient government support, the
private sector may not take much interest in such situations.

The critical success factor for financing the PPP is availability of well-established
financial markets. The external financing gives the opportunity to share the financial risks
and can give extra incentives for the private contractor by conditionings of the repayment
plan (Iossa, 2008).
2.4 The level of Education

The fact that different schooling levels may have different effects on growth has been addressed in a small set of recent papers, providing heterogeneity evidence. Petrakis and Stamatakis (2002) provide evidence that primary and secondary education matter more for growth in less developed countries as opposed to more developed economies, where higher education becomes more important. Papageorgiou (2003) finds that primary education is more important in final goods production, whereas post-primary education is essentially related to technology adoption and innovation. In the same vein, Vandenbussche, Aghion and Meghir (2004) present an endogenous growth model where the growth effect of skilled labour is stronger when a country gets closer to the technological frontier. In a sample of 19 developed countries between 1960 and 2000, they find that it is skilled human capital, and not total human capital, that matter for growth. Self and Grabowski (2004), a rare country-specific time series study, investigated whether education had a causal impact on growth in India. Their analysis was done in terms of Granger causality, finding that primary education has a strong impact on growth, evidence for a similar effect in what concerns secondary education being more limited. Empirical research on the education impact on growth has progressed basically by means of cross-sectional regressions where the growth rate is the dependent or explained variable and an education related variable is one of the explanatory variables.

Education has a strong influence on economic growth, increasing average education in the population by one year would raise the level of output per capita by between 3 and 6 percent in the long-run or lead to one percentage point faster growth if the effect on productivity growth is also taken into account (Veugelers and vander Ploeg, 2008).
It is evident that education plays a crucial role in economic growth, especially in modern growth theories. Estimates of education externalities and their impacts on economic growth are challenging to make, with empirical evidence on private returns to education being firmer than that concerning its social returns.

The empirical literature is faced with several difficulties. Both levels of education and levels of GDP per capita in any given year are closely related to those in earlier and later years, making it difficult to discern the ways in which GDP and education are interconnected. The measurement of education is also hindered by complexities, particularly in accounting for differences in the quality of education. While there is consensus on robust correlations, resolving the empirical question of causality remains one of the major challenges faced by studies linking education and economic performance, both at the individual and aggregate levels. Evidence strongly supports the human capital explanation that education raises productivity (Sianesi and Van Reenen, 2003).

2.5 Community Support

Farmers and other business owners often adopt the philosophy of, “If we build it (grow it or offer it), they will come (and buy it).” This is not necessarily the case, as many entrepreneurs have discovered after investing time and financial resources in a venture. Producers interested in marketing through community support agriculture (CSA) should analyze whether market potential exists before developing a CSA.

As noted above, a clear, concise, and accurate mission statement is absolutely essential for a successful market. It is the board's responsibility to develop this mission, revisit it regularly, and make decisions that reflect and further the mission. Traditionally, farmers
market boards have been comprised primarily or entirely of vendors. Now, as new markets emerge, more diverse boards that include community members who are interested in bringing the benefits of a farmers market to their community frequently organize them. At these markets, vendors are among the board members, but are not the only board members. Some markets are creating spaces on their boards for non-vendor community members. For example, schools and hospitals have members the board, which indicates the value the market places on integrating the host community’s values in market decisions. A diversity of stakeholders on the board can bring fresh ideas and new ways of thinking about the market. Community members can support the mission by serving on the board, or by supporting the market via one-time or ongoing assistance. Everybody knows somebody and word of mouth is a market’s best promotion strategy. Find out who among your board members, manager, vendors, and regular customers has skills that can support the market. Then, ASK for help! Some professionals may be able to provide services free of charge; others may offer or be willing to charge reduced rates. Sometimes, all it takes is a well-timed, well-framed request. As the market board of directors changes and grows, and as the types of members expand and diversify, community professionals can support the market board by providing services such as board development, strategic planning, conflict resolution, and meeting facilitation skills. Community professionals can also provide legal and accounting services to the market and the board. As the market undertakes new initiatives and begins to document its benefit to the community, professional support with record-keeping and evaluation can be essential.
2.6 PPPs a definition

According to the Organization for Economic Cooperation and Development (OECD), PPPs refer to any form of agreement or partnership between public and private parties (OECD, 2000). They are collaboration between public and private sectors, in order to provide significant public infrastructure, or other facilities and services. PPPs are a critical aspect of a nation’s innovation and strategy system (Link, 2006) that aim to resolve the shortcomings of state development projects in terms of efficiency, capital investment and long-term maintenance. PPPs recognize that the public and the private sectors each have certain advantages, relative to the other, in performing specific tasks. The purpose of a PPP is to share resources, risks, and benefits in order to generate and provide products and services more efficiently (European Commission 2003: 55). In a PPP risk allocation is ceded to the party, either government or private sector, which is best able to manage it (Irin 2009).

The government’s contribution to a PPP may take the form of capital for investment (available through tax revenue), a transfer of assets, or other commitments or in-kind contributions that support the partnership. The private sector’s role in the partnership is to bring its expertise in management and efficiency to the public sector to make it run more efficiently (Dennis 2002). The private partner may also contribute investment capital depending on the form of contract.

2.7 PPPs in the Agricultural Sector

In agricultural development, participants in partnerships have traditionally included private entities (such as producers’ associations, small-farmer organizations, businesses, and individual producers) and organizations involved in the generation and dissemination
of knowledge and technology (Odame2002). There is a growing realization of the value of PPP in agriculture, especially for projects that benefit farmers in developing countries. However, very few agricultural PPPs exist and those that do are largely experimental, and form a new field of practice and inquiry for the participants (Drayton, 2010), that create shared value (Drayton, 2010).

Public and private actors in the agricultural sector have different interests. The private sector is generally motivated by goals such as the maximization of earnings and economic profitability (Meidute&Palius 2011), increased productivity, competitiveness, or market position, cost reduction, increased product quality and diversity, leadership on markets, or consumer confidence (Dennis and Sylvia 2002). Small-scale farmers, in particular, tend to focus on reducing vulnerability and maximizing yields given the scarce resources available to them (Warner and Lehel 2008) (ref). Cases may arise in which the divergent interests of both sectors are met. A technology may improve yields for small-scale farmers, benefit the environment, improve product quality, and generate additional profits for the processing industry.

**2.8 Why the use of PPPs**

PPP is viewed as the governance strategy to minimize transaction costs and coordinating and enforcing relations between partners engaged in production of goods and services (Grimsey and Lewis (2005: 347). The model helps promote social and economic development through efficiency in implementation (Grimsey and Lewis (2005: 347). The model could also be extended to agriculture sector, where investments are not forthcoming under normal circumstances. PPP model in the agriculture sector help
enhance capital formation, and thereby improve robustness in the farming system, and efficient management practices (Warner and Lehel 2008). From a government’s perspective, the following are the broad reasons for engaging under the PPP model: Generate funds from private sector freeing public funds for core economic and social programs (Iossa and Martimort 2008), pooling resources (Thompson), technology, skills and expertise contributes towards increasing the efficiency of project implementation (Harris 2004). PPP lowers risk as compared to independent venture in such projects (Quiggin 2004), provide access to new customers for secondary business lines (Grimsey and Lewis 2005); competitive advantage and brand presence in value chain linkages (Shaoul 2005), and, lowers the rates of cost of capital (Meidute&Paliulis, 2011)).

While the public sector has only limited resources for investments in agriculture, the private sector tends to invest in ventures that are commercial in nature. The PPP model offers the prospect of overcoming the shortcomings of each of these sectors and makes the investment as successful ventures (Kerzner1989). The model brings together efficiency, flexibility and competence of private sector, with the accountability, long-term perspective, and social interest of the public sector(Iossa, 2008).PPPs enable sustainable outcomes and value for money that no single partner could achieve alone (National Treasury 2002).

Furthermore the certainty of outcomes are increased both in terms of ‘on time’ delivery of projects (EPEC, 2009), cost are controlled( Deloitte, 2006) and deliver ‘on-budget’ (PriceWaterhouseCoopers, 2004). Certainty of outcomes, mainly due to reason that private sector delivers projects more often on time and on budget in comparison to the public sector (Thompson &Budin, 1997).
The public sector often does not have adequate and competent in-house capability to deliver new projects or maintain aging projects over a long period, due to the lack of skills and training to implement projects. Government can tap into source of skilled and experienced labor by signing a contract with a private partner to deliver needed results as in the case of Amiran and YEDF (Price Waterhouse Coopers, 2004). PPPs allow the government to pass operational roles to efficient private sector operators while retaining and improving focus on core public sector responsibilities, such as regulation and supervision (Thompson and Budin 134). This should hold true even if the government continues to bear part of the investment or operational cost since government’s cost obligation is likely to be targeted, limited, and structured within a rational overall financing strategy (Asian Development Bank).
This study is based on the following conceptual framework.

**Independent Variables**

- Technical expertise offered by Amiran
  - Number of youths trained.
  - The type of training done.
- The level of financial support by YEDF
  - With financial support
  - Without financial support
- The level of education of the youth
  - Primary education
  - College/tertiary education
  - University education
- Community support
  - Market for the produce
  - Business involvement

**Dependent Variables**

- Implementation of PPP [Amiran projects in Muranga County]
  - Level of production
  - Availability of income
  - Creation of employment

**Moderating Variables**

- Central government policies
- County government support
- Non-governmental organizations support
Preliminary observation shows that successful implementation of PPPs in the study areas are affected by the technical expertise and training being offered, the financial resources available, the level of education of the youth and the community support offered. The extent to which these issues contribute to the projects’ success vary. The roles of central government policies and logistical support from county government and non-governmental organizations are of significant importance in influencing the level of Amiran and YEDF projects success.

2.9 Summary of Literature Review

This chapter has presented a review of literature related to PPPs and green house farming among the rural farmers. Administrative and regulatory burdens on farmers according to reviewed literature are key barriers for people in developing countries and needs to be reformed. The provision of farming education at primary, high school or training at tertiary level is also inadequate and needs to be addressed. This study therefore sought to find and recommend measures of mitigating the above shortcomings for effective development of PPPs in the agricultural sector. From the review, there was lack of disaggregated and long-term data on the PPPs in the agricultural sector, causes and coping strategies among the youth farmers, not only in Muranga County but also in Kenya as a whole. There was need for ongoing reliable data collection and synthesis to increase the knowledge base.

2.10 Knowledge Gap
CHAPTER THREE:

RESEARCH METHODOLOGY

3.1 Introduction
This chapter discusses the research methodology used in this study and provides a
general framework for this research. The chapter presents details of the research design,
target population, sample and sampling procedures, description of research instruments,
validity and reliability of instruments, data collection procedures, data analysis
techniques and ethical considerations while conducting the study.

3.2 Research Design
Ogula (2005) describes a research design as a plan, structure and strategy of investigation
to obtain answers to research questions and control variance. Additionally, a study design
is the plan of action the researcher adopts for answering the research questions and it sets
up the framework for study or is the blueprint of the researcher (Kerlinger, 1973). This
study adopted a survey research design. This design as defined by Orodho (2003) is a
method of collecting information by interviewing or administering a questionnaire to a
sample of individuals. The main feature of survey research design is to describe specific
characteristics of a large group of persons, objects or institutions, through questionnaires
(Jaeger, 1988). Besides, the design was used because of its descriptive nature in order to
assist the researcher in collecting data from members of the sample for estimating the
population parameters.
3.3 Target Population

According to Ogula, (2005), a population refers to any group of institutions, people or objects that have common characteristics. The target population for this study constituted of the youth practicing greenhouse farming under the Amiran project in Muranga County as well as the other youths involved in greenhouse farming but not under the Amiran project.

Table 3.1: Target Population

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Officers in Amiran</td>
<td>10</td>
</tr>
<tr>
<td>Officers in YEDF</td>
<td>10</td>
</tr>
<tr>
<td>Youth in Muranga County practicing greenhouse farming.</td>
<td></td>
</tr>
<tr>
<td>i. Under Amiran and YEDF</td>
<td>120</td>
</tr>
<tr>
<td>ii. Under Amiran only</td>
<td>190</td>
</tr>
<tr>
<td>Youth in Muranga practicing farming</td>
<td>100</td>
</tr>
<tr>
<td>TOTAL</td>
<td>430</td>
</tr>
</tbody>
</table>

3.4 Sample and Sampling techniques

A sample is a smaller group or sub-group obtained from the accessible population (Mugenda and Mugenda, 1999). This subgroup is carefully selected to be representative of the whole population with the relevant characteristics. Each member or case in the sample is referred to as subject, respondent or interviewee. Sampling is a procedure,
process or technique of choosing a sub-group from a population to participate in the study (Ogula, 2005). It is the process of selecting a number of individuals for a study in such a way that the individuals selected represent the large group from which they were selected. The study applied both random sampling procedures to obtain the respondents for questionnaires. The sample frame of the study included a representative sample of the youth in Muranga County who are doing greenhouse farming as well as the youth who are practicing farming with products same as those being planted in the greenhouses. At least 30% of the total population is representative (Borg and Gall, 2003). Thus, 30% of the accessible population is enough for the sample size.

**Table 3.2: Sample Population**

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
<th>Percentage %</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Officers in Amiran</td>
<td>10</td>
<td>30</td>
<td>3</td>
</tr>
<tr>
<td>Officers in YEDF</td>
<td>10</td>
<td>30</td>
<td>3</td>
</tr>
<tr>
<td>Youth in Muranga County practicing greenhouse farming.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i. Under Amiran and YEDF</td>
<td>120</td>
<td>30</td>
<td>36</td>
</tr>
<tr>
<td>ii. Under Amiran only</td>
<td>190</td>
<td>30</td>
<td>57</td>
</tr>
<tr>
<td>iii. Without Amiran and YEDF</td>
<td>100</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td></td>
<td><strong>129</strong></td>
</tr>
</tbody>
</table>
3.5 Data Collection Instruments

The main data collection instruments that were used in this study included the questionnaire. This was used for collecting primary quantitative data. Additionally, the questionnaires were used for the following reasons: its potentials in reaching out to a large number of respondents within a short time; able to give the respondents adequate time to respond to the items; offers a sense of security (confidentiality) to the respondent and it is objective method since no bias resulting from the personal characteristics (as in an interview) (Owens, 2002).

The questionnaires were divided into the main areas of investigation except the first part, which captures the demographic characteristics of the respondents. Other sections are organized according to the major research objectives.

3.6 Validity and Reliability of Research Instruments

3.6.1 Validity

Validity refers to the degree to which evidence and theory support the interpretation of test scores entailed by use of tests. The validity of instrument is the extent to which it does measure what it is supposed to measure. According to Mugenda and Mugenda (1999), Validity is the accuracy and meaningfulness of inferences, which are based on the research results. It is the degree to which results obtained from the analysis of the data actually represent the variables of the study. The research instrument was validated in terms of content and face validity. The content related technique measures the degree to which the questions items reflected the specific areas covered. An expert in the field of
greenhouse farming was given the instruments to assess the degree to which they could measure and determine the content of a particular concept.

### 3.6.2 Reliability

Reliability is the ability of a research instrument to consistently measure characteristics of interest over time. A research instrument yields consistent results or data after repeated trials to the degree. If a researcher administers a test to a subject twice and gets the same score on the second administration as the first test, then there is reliability of the instrument (Mugenda and Mugenda, 1999). Reliability is concerned with consistency, dependability or stability of a test (Nachmias and Nachmias, 1996). The researcher measured the reliability of the questionnaire to determine its consistency in testing what they were intended to measure. The test re-test technique was used to estimate the reliability of the instruments. This involved administering the same test twice to the same group of respondents who have been identified for this purpose.

### 3.7 Data Collection Process

Prior to the commencement of data collection, the researcher obtained all the necessary documents, including an introduction letter from the University. Audience with the sampled local authorities in the region were also sought to clarify the purpose of the study. Upon getting clearance, the researcher in person distributed the questionnaires to the sampled individuals who within Muranga county. Assistance from the Amiran was sought. Use of questionnaires was expected to ease the process of data collection, as all the selected respondents were reached in time. During the distribution of the instruments, the purpose of the research was explained.
3.8 Data Analysis Procedure

Both quantitative and qualitative approaches were used for data analysis. Quantitative data from the questionnaire was coded and entered into the computer for computation of descriptive statistics. The Statistical Package for Social Sciences (SPSS version 11.5) was used to run descriptive statistics such as frequency and percentages to present the quantitative data in form of tables and graphs based on the major research questions. The qualitative data generated from open-ended questions was categorized in themes in accordance with research objectives and reported in narrative form along with quantitative presentation. The qualitative data was used to reinforce the quantitative data.

3.9 Ethical Considerations in Research Involving Human Participants

The researcher explained to the respondents about the research and that the study was for academic purposes only. It was made clear that the participation is voluntary and that the respondents were free to decline or withdraw any time during the research period. Respondents were not coerced into participating in the study. The participants were inform to make the choice to participate or not. They were guaranteed that their privacy would be protected by strict standard of anonymity.
Table 3.3 Operational Definition of Variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Indicators</th>
<th>Measurement Scale</th>
<th>Method of Data Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Independent</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| i. Expertise and training | -How many youth have been trained  
-What one is trained on, the seeds to be planted or the fertilizer to be used. | -Nominal | -Content analysis |
| ii. The level of financial support | -With financial support from YEDF  
-Without financial support from YEDF | -Ordinal | -Content analysis |
| iii. The level of education | -Primary Education  
-Secondary Education  
-College/Tertiary Education  
-University Education | -Ordinal  
-Nominal | -Descriptive  
-Cross tabulation |
| iv. Community Support | -Market for the produce within the community  
-Are the business around supporting them  
-Are the schools around ensure they use their produce. | -Nominal | -Content analysis |
| **Dependent Variable** | | | |
| I. Implementation of PPPs in Agricultural sector | -Level of production  
-Availability of income  
-Creation of employment | -Ordinal  
-Nominal | -Descriptive  
-Content Analysis |
CHAPTER FOUR

DATA ANALYSIS PRESENTATION AND INTERPRETATION

4.1 Introduction

This chapter presents data analysis and interpretation. The objective of the study was to establish the factors that influence the implementation of PPPs in Kenya’s agricultural sector: a case of Amiran and youth enterprise development fund projects in Muranga County.

4.2 Response Rate

A total of one twenty nine (129) questionnaires had been distributed to the respondents, out of which 80 were completed and returned. This gave a response rate of 62%. According to Mugenda and Mugenda (2003) a response rate of 50% is adequate for a study, 60% is good and 70% and above is excellent. Thus, a response rate of 62% was fit and reliable for the study as shown in Table 4.3.

Table 4.1. Response Rate

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responded</td>
<td>80</td>
<td>62</td>
</tr>
<tr>
<td>Non-respondents</td>
<td>49</td>
<td>37.9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>129</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>
4.3 Respondents Bio-Data

This section presents the background information of the respondents in relation to their age bracket, gender and level education.

4.3.1 Respondents’ age bracket

The study asked the respondents to indicate their age bracket. Findings are as presented in the figure 4.3.

**Table 4.2 Respondents age bracket**

<table>
<thead>
<tr>
<th>Age Bracket</th>
<th>f</th>
<th>P (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-25 years</td>
<td>20</td>
<td>25</td>
</tr>
<tr>
<td>26-35 years</td>
<td>34</td>
<td>42</td>
</tr>
<tr>
<td>36 and above years</td>
<td>26</td>
<td>33</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>80</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

As per the findings, most (42%) of the respondents indicated they were 26-35 years, 33% stated 36 and above years and 25% were 18-25 years. This implies that majority of the respondents were 26-35 years.

4.3.2 Respondents Gender

The study asked the respondents to state their gender. Findings are as presented in the figure 4.4
Table 4.3: Respondents Gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>35</td>
<td>44</td>
</tr>
<tr>
<td>Male</td>
<td>45</td>
<td>56</td>
</tr>
<tr>
<td>Total</td>
<td>80</td>
<td>100</td>
</tr>
</tbody>
</table>

The findings presented in table 4.4 depict that; majorities (56%) of the respondents were males while 44% were females. This shows that majority of the respondents were males.

4.3.3 Level of Education Attained

The study asked the respondents to state their level of education. Findings are as presented in the table 4.5

Table 4.4: Level of Education Attained

<table>
<thead>
<tr>
<th>Level of Education</th>
<th>P (%)</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>18</td>
<td>14</td>
</tr>
<tr>
<td>Secondary</td>
<td>18</td>
<td>14</td>
</tr>
<tr>
<td>Technical and vocational</td>
<td>37</td>
<td>30</td>
</tr>
<tr>
<td>University</td>
<td>27</td>
<td>22</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>80</td>
</tr>
</tbody>
</table>

From the study findings in the table 4.5 (37%) of the respondents stated the level of education attained was technical and vocational, 27% stated university, while 18% stated primary and secondary.
4.4 Technical expertise and implementation of YEDF/Amiran partnership

The study began by investigating to what extent technical expertise by Amiran officials’ influences implementation of YEDF/Amiran partnership in Muranga County. Respondents were, therefore, asked questions in relation to this and the findings are as discussed.

4.4.1 Training on how to maintain and manage the green houses

The study asked the respondents whether they received training on how to maintain and manage the green houses. The findings are as indicated in the figure 4.6.

**Table 4.5 Training on how to maintain and manage the green houses**

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>54</td>
<td>68</td>
</tr>
<tr>
<td>No</td>
<td>26</td>
<td>32</td>
</tr>
<tr>
<td>Total</td>
<td>80</td>
<td>100</td>
</tr>
</tbody>
</table>

The findings presented in table 4.6 depict that; majority (68%) were of opinion they received training on how to maintain and manage the green houses by Amiran Officials while 32% were of a contrary opinion. This depicts that majority were of opinion they received training on how to maintain and manage the green houses by Amiran Officials.
4.4.1.1 Education offered by Amiran and YEDF regarding farming skills on greenhouse management

Amiran officials stated they offer trainings and seminars to raise awareness among the youth on the financial opportunities that modern agribusiness offers and the required technical expertise on how to manage the green house. The respondents further stated, the firm has in the past trained over 500 officers from the Ministry of Agriculture ensuring that in the effort to strengthen the agriculture sector, government and private sector work in a coordinated effort. Hence there able to reach youths and offer them the required education in different counties, Muranga county being one them.

4.4.2 Respondents farming skills necessary for cultivation of crops under greenhouses

The study asked the respondents whether they had acquired farming skills necessary for cultivation of crops under greenhouses from Amiran officials. The findings are as indicated in the table 4.7.
Table 4.6 Respondents farming skills necessary for cultivation of crops under greenhouses

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>38</td>
<td>48</td>
</tr>
<tr>
<td>No</td>
<td>42</td>
<td>52</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>80</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

From the study findings in the table above 52% of the respondents stated they had not acquired farming skills necessary for cultivation of crops under greenhouses from Amiran officials while 48% stated they had acquired farming skills necessary for cultivation of crops under greenhouses from Amiran officials. This implies that majority had not acquired farming skills necessary for cultivation of crops under greenhouses from Amiran officials.

4.4.3 Respondents opinion of how long they had been practicing greenhouse farming

The study requested the youths to indicate the period, which they had been practicing greenhouse farming under Amiran guidance. Findings are as indicated,

Table 4.7 Respondents opinion of how long they had been practicing greenhouse farming

<table>
<thead>
<tr>
<th></th>
<th>F</th>
<th>P (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than a year</td>
<td>26</td>
<td>32</td>
</tr>
<tr>
<td>2-5 years</td>
<td>22</td>
<td>28</td>
</tr>
<tr>
<td>6-9 years</td>
<td>18</td>
<td>22</td>
</tr>
<tr>
<td>10 years and above University</td>
<td>14</td>
<td>18</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>80</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>
According to the findings most 32% of the respondents indicated they had been practicing greenhouse farming for less than a year under Amiran guidance, 28% indicated 2-5 years, while 22% and 18% indicated 10years above. This implies that most of the respondents indicated they had been practicing greenhouse farming for less than a year under Amiran guidance.

4.4.4 Quality services and infrastructure

The study sought to determine from the respondents the extent to which Amiran provides quality services and infrastructure on a very cost-effective basis. The findings are as shown.

Table 4.8 Quality services and infrastructure

<table>
<thead>
<tr>
<th></th>
<th>F</th>
<th>P (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very great extent</td>
<td>18</td>
<td>22</td>
</tr>
<tr>
<td>Great extent</td>
<td>22</td>
<td>28</td>
</tr>
<tr>
<td>Moderate Extent</td>
<td>20</td>
<td>25</td>
</tr>
<tr>
<td>Less extent</td>
<td>16</td>
<td>20</td>
</tr>
<tr>
<td>Not at all</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>80</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Based on the findings, most (28%) of the respondents stated Amiran provides quality services and infrastructure on a very cost-effective basis to a great extent, 22% state very great extent, 25% stated to a moderate extent, 20% stated to a less extent while 5% stated
not at all. This depicts that majority of the respondents stated Amiran provides quality services and infrastructure on a very cost-effective basis.

4.5 Level of financial support by YEDF and implementation of YEDF/Amiran partnership

The study sought to determine how the level of financial support by YEDF has influenced the implementation of YEDF/Amiran partnership in Muranga County. Respondents were, therefore, asked questions in relation to this and the findings are as discussed below.

4.5.1 Respondents opinion on whether they received funds for green house farming from YEDF

The study asked the respondents whether they practiced green house farming. The findings are as shown.

Table 4.9 Respondents opinion on whether they received funds for green house farming from YEDF

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>36</td>
<td>45</td>
</tr>
<tr>
<td>No</td>
<td>44</td>
<td>55</td>
</tr>
<tr>
<td>Total</td>
<td>80</td>
<td>100</td>
</tr>
</tbody>
</table>

The findings presented in table 4.10 depict that; majority (55%) stated they did not receive funds for green house farming from YEDF while 45% state they received funds for green house farming from YEDF. This implies majority stated they did not receive funds for green house farming from YEDF.
4.5.2 Respondents opinion on who constructed the green houses for farmers their area

The respondents were requested to indicate whoever constructed the green houses for farmers their area. The findings were shown in the figure 4.11.

**Table 4.10: Respondents opinion on who constructed the green houses for farmers their area**

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The sponsoring organization</td>
<td>42</td>
<td>52</td>
</tr>
<tr>
<td>Farmers/self</td>
<td>38</td>
<td>48</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>80</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

The findings presented in table 4.11 depict that; majority (52%) stated, the sponsoring organization constructed the green houses for farmers in their area while 48% stated they constructed the greenhouses for themselves. This implies that majority stated, the sponsoring organization constructed the green houses for farmers in their area.

4.5.3 Value of constructing the green house

The respondents were requested to indicate the value it cost them to construct green houses under Amiran and YEDF sponsorship. The findings were as shown in the figure 4.12,

**Table 4.11 value of constructing the green house**

<table>
<thead>
<tr>
<th></th>
<th>F</th>
<th>P (%)</th>
</tr>
</thead>
</table>
According to the findings 38% of the respondents indicated 150000-199999sh as the value it cost them to construct the green house under Amiran and YEDF sponsorship, 20% indicated 100,000-149,999, 18% indicated 200,000-249,999, 15% indicated 50,000-99,999, 4% and 5% indicated 250,000 and above and 1000-49,999 respectively. This implies that majority of the respondents indicated 150000-199999sh as the value it cost them to construct the green house under Amiran and YEDF sponsorship.

4.5.3.1 Amiran and YEDF officials view on which criteria they employed when giving money for construction of the green houses to the youths

They stated that making agriculture attractive is the only way Kenya can ensure food security and sufficiency. Thus, Amiran and YEDF encourage commercial farming supported by technology to drive agricultural development, by helping youths who are normally in groups of 5-10 in the start up of green houses. The respondents stated they do so by financing the construction of the green house at a subsidized rate, whereby the youth’s payback the amount in installments. When probed further they stated, they don’t only finance the start of the green house but also the cost for installing the irrigation
scheme, procuring chemicals required and that of buying seedlings required for the green house.

On the other hand, regarding whether all farmers had the ability to pursue this kind of enterprise, Amiran officials stated once willingness and a piece of land is all that one required. Hence, everyone was in a capacity to engage in this enterprise.

4.5.4 Cost for Installing the Irrigation System in the Respondents Green House

The study requested the youths to indicate the cost for installing the irrigation system in their green house under Amiran and YEDF sponsorship. Findings are as indicated 4.13

Table 4.12 Cost for Installing the Irrigation System in the Respondents Green House

<table>
<thead>
<tr>
<th>Cost Range</th>
<th>F</th>
<th>P (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000-19,999</td>
<td>12</td>
<td>15</td>
</tr>
<tr>
<td>20,000-39,999</td>
<td>20</td>
<td>25</td>
</tr>
<tr>
<td>40,000-59,999</td>
<td>22</td>
<td>28</td>
</tr>
<tr>
<td>60,000-79,999</td>
<td>9</td>
<td>11</td>
</tr>
<tr>
<td>80,000-99,999</td>
<td>16</td>
<td>20</td>
</tr>
<tr>
<td>100,000 and above</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>80</td>
<td>100</td>
</tr>
</tbody>
</table>

From the study findings in the table above 28% of the respondents stated the cost for installing the irrigation system in their green house under Amiran and YEDF sponsorship was 40,000-59999, 25% stated 20,000-39,999, 20% stated 80,000-99,999, 15% stated
1,000-19,999 while 11% and 2% stated 60,000-79,999 and 100,000 and above respectively. This depicts that the respondents stated the cost for installing the irrigation system in their green house under Amiran and YEDF sponsorship was 40,000-59999.

4.5.5 Cost for Procuring Chemicals Required For Their Green House Crops

The study requested the respondents to indicate how much it cost them to procure chemicals required for their green house crops under Amiran and YEDF sponsorship. Findings are as indicated in the table 4.14:

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,000-4,999</td>
<td>12</td>
</tr>
<tr>
<td>5,000-9,999</td>
<td>26</td>
</tr>
<tr>
<td>10,000-14,999</td>
<td>24</td>
</tr>
<tr>
<td>15,000-19,999</td>
<td>20</td>
</tr>
<tr>
<td>20,000-24,999</td>
<td>6</td>
</tr>
<tr>
<td>25,000-29,999</td>
<td>5</td>
</tr>
<tr>
<td>30,000 and above</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>80</td>
</tr>
</tbody>
</table>

From the study findings in the table above 26% of the respondents stated 5,000-9,999, as the value it cost them to procure chemicals required for their green house crops under Amiran and YEDF sponsorship, 24% stated 10,000-14,999, 20% stated 15,000-19,999, 12% stated 1,000-4,999, 8% stated 30,000 and above while 6% and 5% stated 20,000-24,999 and 25,000-29,999 respectively. This shows that respondents stated 5,000-9,999,
as the value it cost them to procure chemicals required for their green house crops under Amiran and YEDF sponsorship.

4.5.6 Cost for Buying Seedlings for Their Green House

The respondents were requested to indicate the cost of buying seedlings for their green house under Amiran and YEDF sponsorship. The findings were as shown in the figure,

**Table 4.14 Cost for Buying Seedlings for Their Green House**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,000-1,999</td>
<td>10</td>
</tr>
<tr>
<td>2,000-2,999</td>
<td>27</td>
</tr>
<tr>
<td>3,000-3,999</td>
<td>20</td>
</tr>
<tr>
<td>4,000-4,999</td>
<td>8</td>
</tr>
<tr>
<td>5,000 and above</td>
<td>15</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>80</strong></td>
</tr>
</tbody>
</table>

According to the findings 34% of the respondents indicated 2000-2,999sh as the cost of buying seedlings for their green house under Amiran and YEDF sponsorship, 25% stated sh3000-3,999, 19% stated sh5000 and above, 12% stated sh1000-1999 and 10% stated sh4000-4999. This depicts that majority of the respondents indicated 2000-2,999sh as the cost of buying seedlings for their green house under Amiran and YEDF sponsorship.
4.6 Influence of the Level of education of the youth on implementation

YEDF/Amiran partnership

The study requested the youths to indicate whether the level education influenced implementation YEDF/Amiran partnership in Muranga County. Respondents were asked various questions in relations to this. Findings are as indicated

4.6.1 Influence of the level of education attained in enhancing understanding of public private partnerships

The study requested the youths to indicate whether the level education attained influenced their understanding of public private partnerships. Findings are as indicated below,

Table 4.15 Influence of the level of education attained in enhancing understanding of public private partnerships

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>50</td>
<td>62</td>
</tr>
<tr>
<td>No</td>
<td>30</td>
<td>38</td>
</tr>
<tr>
<td>Total</td>
<td>80</td>
<td>100</td>
</tr>
</tbody>
</table>

The findings presented in figure 4.9 above depict that; majority (62%) were of the opinion that the level of education attained enhanced understanding of public private partnerships while 38% were of a contrary opinion. This implies that majority were of the opinion that the level of education attained enhanced understanding of public private partnerships.
4.6.2 Respondents satisfaction with education offered by Amiran regarding using green house farming in production of crops

The respondents were requested to indicate whether they were satisfied with education offered by Amiran regarding using green house farming in production of crops. The findings were shown in the table 4.17,

Table 4.16 Respondents satisfaction with education offered by Amiran regarding using green house farming in production of crops

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not satisfied</td>
<td>16</td>
<td>20</td>
</tr>
<tr>
<td>Satisfied</td>
<td>20</td>
<td>25</td>
</tr>
<tr>
<td>Undecided</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>Somewhat satisfied</td>
<td>17</td>
<td>22</td>
</tr>
<tr>
<td>Very satisfied</td>
<td>18</td>
<td>23</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>80</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

From the study findings in the table above 25% of the respondents were satisfied with education offered by Amiran regarding using green house farming in production of crops, 23% stated they very satisfied, 22% they were somewhat satisfied while 20% and 10% Not satisfied and Undecided respectively. This depicts that majority of the respondents were satisfied with education offered by Amiran regarding using green house farming in production of crops
4.6.3 Impact of Education on the Youth Regarding Agriculture

The respondents were requested to indicate the level to which they agree with the following statement concerning the impact of education on the youth regarding agriculture. The findings were shown in the table 4.18,

**Table 4.17 Impact of Education on the Youth Regarding Agriculture**

<table>
<thead>
<tr>
<th>Statement</th>
<th>mean</th>
<th>Std d</th>
</tr>
</thead>
<tbody>
<tr>
<td>primary education is more important in final goods production</td>
<td>4.55</td>
<td>0.6917</td>
</tr>
<tr>
<td>post-primary education is essentially related to technology adoption and innovation</td>
<td>4.55</td>
<td>0.7779</td>
</tr>
<tr>
<td>Education on agriculture has a strong influence on economic growth; increasing average education in the population by one year would raise the level of output per capita.</td>
<td>4.44</td>
<td>0.6530</td>
</tr>
<tr>
<td>primary and secondary education on agriculture matter more for growth in less developed countries as opposed to more developed economies</td>
<td>4.29</td>
<td>0.9704</td>
</tr>
<tr>
<td>Education on public private partnerships enhances your understanding about the existence and use of the PPMs</td>
<td>4.45</td>
<td>0.7779</td>
</tr>
</tbody>
</table>

From the findings, the respondents strongly agreed that primary education is more important in final goods production and post-primary education is essentially related to technology adoption and innovation (mean=4.55 each), education on public private partnerships enhanced their understanding about the existence and use of the PPMs (mean=4.45), Education on agriculture has a strong influence on economic growth: increasing average education in the population by one year would raise the level of output...
per capita (mean = 4.44) and primary and secondary education on agriculture matter more for growth in less developed countries as opposed to more developed economies (mean = 4.29). This implies that majority of the respondents strongly agreed primary education is more important in final goods production and post-primary education is essentially related to technology adoption and innovation.

4.7 Respondents opinion on influence of community support in implementing YEDF and Amiran partnership

The study asked the respondents to state the influence of community support in implementing YEDF and Amiran partnership. Respondents were asked various questions in relations to this. Findings are as indicated.

4.7.1 Presence of community support in Muranga County that enhances implementation of YEDF and Amiran partnership

The respondents were requested to indicate whether there is community support in Muranga County that enhances implementation of YEDF and Amiran partnership. The findings were as illustrated.

Table 4.18 Presence of community support in Muranga County that enhances implementation of YEDF and Amiran partnership

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>34</td>
<td>42</td>
</tr>
<tr>
<td>No</td>
<td>46</td>
<td>58</td>
</tr>
<tr>
<td>Total</td>
<td>80</td>
<td>100</td>
</tr>
</tbody>
</table>
The findings presented in table 4.19 above depict that; majority (58%) were of the opinion community support in Muranga County enhanced implementation of YEDF and Amiran partnership; while (42%) were of a contrary opinion. This shows that most of the respondents were of the opinion community support in Muranga County enhanced implementation of YEDF and Amiran partnership.

4.7.2 Extent to which Amiran encourages community support in implementing of YEDF and Amiran partnership

The study asked the respondents to state the extent to which Amiran encourages community support in implementing of YEDF and Amiran partnership. The findings are as indicated in the figure 4.20

Table 4.19 Extent to which Amiran encourages community support in implementing of YEDF and Amiran partnership

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very great extent</td>
<td>14</td>
<td>18</td>
</tr>
<tr>
<td>Great extent</td>
<td>28</td>
<td>28</td>
</tr>
<tr>
<td>Moderate extent</td>
<td>10</td>
<td>12</td>
</tr>
<tr>
<td>Less extent</td>
<td>26</td>
<td>32</td>
</tr>
<tr>
<td>Not at all</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>80</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>
As per the findings, most (32%) of the respondents indicated Amiran encourages community support to a less extent, (28%) stated to a great extent, (18%) stated very great extent while (12%) and (10%) indicated to a moderate extent and not at all respectively. This depicts that Amiran encourages community support.

4.7.3 Influence of community support in implementing YEDF and Amiran partnership

The respondents were requested to indicate the level to which they agree with the following statement regarding the Influence of community support in implementing YEDF and Amiran partnership. The findings were shown in the table below:

<table>
<thead>
<tr>
<th>Statement</th>
<th>mean</th>
<th>Std d</th>
</tr>
</thead>
<tbody>
<tr>
<td>farmers market boards should comprise of community members</td>
<td>4.46</td>
<td>0.145</td>
</tr>
<tr>
<td>community professionals can support the market board by providing services such as board development, strategic planning and conflict resolution</td>
<td>3.99</td>
<td>0.641</td>
</tr>
<tr>
<td>Community professionals can also provide legal and accounting services to the market and the board.</td>
<td>4.19</td>
<td>0.361</td>
</tr>
<tr>
<td>Community support does not encourages implementation of Amiran and YEDF partnership</td>
<td>2.15</td>
<td>0.097</td>
</tr>
<tr>
<td>Value of the market places in increased by integrating the host community’s values in market decisions by the partnership</td>
<td>4.59</td>
<td>0.322</td>
</tr>
</tbody>
</table>
From the study findings table 4.7, the respondents strongly agreed that community support does influence the implementation of YEDF and Amiran partnership by; indicating, value of the market places in increased by integrating the host community’s values in market decisions by the partnership, (mean=4.59), farmers market boards should comprise of community members (mean=4.46), Community professionals can also provide legal and accounting services to the market and the board (mean=4.19), community professionals can support the market board by providing services such as board development, strategic planning and conflict resolution (mean=3.99) on the contrary the respondents disagreed that Community support does not encourages implementation of Amiran and YEDF partnership. This implies that the value of the market places in increased by integrating the host community’s values in market decisions by the partnership.

4.8 Correlation Analysis

To quantify the strength of the relationship between the variables, the study used Karl Pearson’s coefficient of correlation. The Pearson product-moment correlation coefficient (or Pearson correlation coefficient for short) is a measure of the strength of a linear association between two variables and is denoted by $r$. The Pearson correlation coefficient, $r$, can take a range of values from +1 less than 0 indicates a negative association, that is, as the value of one variable increases the value of the other variable decreases.

The Pearson’s coefficient was used to verify the existence or non-existence to -1. A value of 0 indicates that there is no association between the two variables. A value greater than 0 indicates a positive association, that is, as the value of one variable increases so does
the value of the other variable. A value of linear correlation between and among the net assets value variables. The findings are presented as follows;

**Table 4.20: Correlation Matrix Table**

<table>
<thead>
<tr>
<th></th>
<th>Implementation of PPPs in Agricultural sector</th>
<th>Level of financial support YEDF</th>
<th>Technical expertise offered by Amiran</th>
<th>Community support</th>
<th>Level of education of the youth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implementation of PPPs in Agricultural sector</td>
<td>Pearson Correlation</td>
<td>1</td>
<td>.844</td>
<td>.921</td>
<td>.908</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.006</td>
<td>.702</td>
<td>.605</td>
<td>.008</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>80</td>
<td>80</td>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td>Level of financial support by YEDF</td>
<td>Pearson Correlation</td>
<td>.844</td>
<td>1</td>
<td>.037**</td>
<td>.039</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.006</td>
<td>.000</td>
<td>.108</td>
<td>.011</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>80</td>
<td>80</td>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td>Technical expertise</td>
<td>Pearson Correlation</td>
<td>.921</td>
<td>.037**</td>
<td>1</td>
<td>.064</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.102</td>
<td>.000</td>
<td>.052</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>80</td>
<td>80</td>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td>Community support</td>
<td>Pearson Correlation</td>
<td>.908</td>
<td>.039</td>
<td>.064</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.105</td>
<td>.208</td>
<td>.852</td>
<td>.007</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>80</td>
<td>80</td>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td>---------------------------</td>
<td>---</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td><strong>Level of education of the youth</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.842</td>
<td>.156</td>
<td>.130</td>
<td>.039</td>
<td>.091</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.042</td>
<td>.011</td>
<td>.000</td>
<td>.007</td>
<td>1</td>
</tr>
<tr>
<td><strong>N</strong></td>
<td>80</td>
<td>80</td>
<td>80</td>
<td>80</td>
<td>80</td>
</tr>
</tbody>
</table>

From the findings, it was clear that there was positive correlation between the variables Implementation of PPPs in Agricultural sector and; level of financial support YEDF (0.844), level of financial support by YEDF (0.844), Technical expertise offered by Amiran (0.921), Community support (0.908) as well as the level of education of the youth (0.842). However, there is little evidence of multi collinearity among the explanatory variables since the correlations among them are not very strong hence all the variables can be incorporated into regression analysis.
CHAPTER FIVE

SUMMARY, DISCUSSIONS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents summary, conclusion and recommendations on factors that influence the implementation of PPPs in Kenya’s agricultural sector: a case of Amiran and youth enterprise development fund projects in Muranga County.

5.2 Summary of findings

The study established that respondents received training on how to maintain and manage the green houses by Amiran Officials. Further, Amiran officials stated they offer trainings and seminars to raise awareness among the youth on the financial opportunities that modern agribusiness offers and the required technical expertise on how to manage the green house. The respondents further stated, the firm has in the past trained over 500 officers from the Ministry of Agriculture ensuring that in the effort to strengthen the agriculture sector, government and private sector work in a coordinated effort. Hence there able to reach youths and offer them the required education in different counties, Muranga county being one them.

The findings revealed 52 percent of the respondents had not acquired farming skills necessary for cultivation of crops under greenhouses from Amiran officials while 48 percent had acquired farming skills necessary for cultivation of crops under greenhouses from Amiran officials, which implied that majority had not acquired farming skills
necessary for cultivation of crops under greenhouses from Amiran officials. The study also found that most of the respondents had been practicing greenhouse farming for less than a year under Amiran guidance. The study also established 28 percent of the respondents were of the opinion Amiran provided quality services and infrastructure on a very cost-effective basis to a great extent, 22 percent to a very great extent, 25 percent to a moderate extent, 20 percent to a less extent while 5 percent not at all. Thus, majority of the respondents were of the opinion Amiran provided quality services and infrastructure on a very cost-effective basis.

The study found that majority did not receive funds for green house farming from YEDF. On the other hand, majority said the sponsoring organization constructed the green houses for farmers in their area. The study further found that, making agriculture attractive is the only way Kenya can ensure food security and sufficiency as stated by Amiran officials. Thus, Amiran and YEDF encourage commercial farming supported by technology to drive agricultural development, by helping youths who are normally in groups of 5-10 in the start up of green houses. The respondents stated they do so by financing the construction of the green house at a subsidized rate, whereby the youth’s payback the amount in installments. When probed further they stated, they don’t only finance the start of the green house but also the cost for installing the irrigation scheme, procuring chemicals required and that of buying seedlings required for the green house.

The study also found that all farmers had the ability to pursue this kind of enterprise, Amiran officials stated once willingness and a piece of land is all that one required. Hence, everyone was in a capacity to engage in this enterprise. Further, the study found that most respondents cost for installing the irrigation system in their green house under
Amiran and YEDF sponsorship was 40,000-59999. In regard to procuring of chemicals, the study found that sh5, 000-9,999, as the value it cost the respondents in to procuring chemicals required for their green house crops under Amiran and YEDF sponsorship. In addition, the respondents indicated 2000-2,999sh as the cost of buying seedlings for their green house under Amiran and YEDF sponsorship.

The study found that, majority 62 percent were of the opinion that the level of education attained enhanced understanding of public private partnerships while 38 percent were of a contrary opinion, which implied that majority were of the opinion that the level of education attained enhanced understanding of public private partnerships. Further the study found that 25 percent of the respondents were satisfied with education offered by Amiran regarding using green house farming in production of crops, 23 percent said they were very satisfied, 22 percent they were somewhat satisfied while 20 percent and 10 percent said they were not satisfied and undecided respectively, which implied that majority of the respondents were satisfied with education offered by Amiran regarding using green house farming in production of crops.

In regard to impact of education on the youth concerning Agriculture, the study established respondents strongly agreed that primary education is more important in final goods production and post-primary education is essentially related to technology adoption and innovation (mean=4.55 each), education on public private partnerships enhanced their understanding about the existence and use of the PPMs (mean=4.45), Education on agriculture has a strong influence on economic growth: increasing average education in the population by one year would raise the level of output percapita (mean=4.44) and primary and secondary education on agriculture matter more for growth.
in less developed countries as opposed to more developed economies (mean=4.29). This implies that majority of the respondents strongly agreed primary education is more important in final goods production and post-primary education is essentially related to technology adoption and innovation.

The study further established; majority 58 percent were of the opinion community support in Muranga County enhanced implementation of YEDF and Amiran partnership; while 42 percent were of a contrary opinion. This shows that most of the respondents were of the opinion community support in Muranga County enhanced implementation of YEDF and Amiran partnership. Further the study established 32 percent of the respondents were of the opinion Amiran encourages community support to a less extent, 28 percent said to a great extent, 18 percent said very great extent while 12 percent and 10 percent indicated to a moderate extent and not at all respectively. This depicts that Amiran encourages community support.

The study also established the respondents strongly agreed that community support does influence the implementation of YEDF and Amiran partnership by; indicating, value of the market places in increased by integrating the host community’s values in market decisions by the partnership, (mean=4.59), farmers market boards should comprise of community members (mean=4.46), Community professionals can also provide legal and accounting services to the market and the board (mean=4.19), community professionals can support the market board by providing services such as board development, strategic planning and conflict resolution (mean=3.99) on the contrary the respondents disagreed that Community support does not encourages implementation of Amiran and YEDF.
partnership. This implies that the value of the market places in increased by integrating the host community’s values in market decisions by the partnership.

The study found that, there was positive correlation between the variables Implementation of PPPs in Agricultural sector and; level of financial support of YEDF, Technical expertise offered by Amiran, Community support as well as the level of education of the youth. However, there is little evidence of multi collinearity among the explanatory variables since the correlations among them are not very strong hence all the variables can be incorporated into regression analysis.

5.3 Discussions

The study found that, majority of the respondents said the sponsoring organization constructed the green houses for farmers in their area. The study further found that, making agriculture attractive is the only way Kenya can ensure food security and sufficiency as stated by Amiran officials. Thus, Amiran and YEDF encourage commercial farming supported by technology to drive agricultural development, by helping youths who are normally in groups of 5-10 in the startup of green houses. The respondents stated they do so by financing the construction of the green house at a subsidized rate, whereby the youth’s payback the amount in installments. When probed further they stated, they don’t only finance the start of the green house but also the cost for installing the irrigation scheme, procuring chemicals required and that of buying seedlings required for the green house. Similarly as argued out by Grimsey and Lewis (2005) as “the optimum combination of whole life cycle costs, risks, completion time and quality in order to meet public requirements”. This definition assents to the one implied by the European Commission (2003) which identifies a set of factors that determine value
for money: life cycle costs, allocation of risks, time required to implement a project, quality of a service, and ability to generate additional revenues.

Petrakis and Stamatakis (2002); Papageorgiou (2003) provide evidence that primary and secondary education matter more for growth in less developed countries as opposed to more developed economies, where higher education becomes more important. this is in accordance to our study findings, as the respondents strongly agreed that primary education is more important in final goods production and post-primary, education is essentially related to technology adoption and innovation, Moreover, education on public private partnerships enhanced their understanding about the existence and use of the PPMs, Education on agriculture has a strong influence on economic growth: increasing average education in the population by one year would raise the level of output per capita. This implies that majority of the respondents strongly agreed primary education is more important in final goods production and post-primary education is essentially related to technology adoption and innovation.

The study also established the respondents strongly agreed that community support does influence the implementation of YEDF and Amiran partnership by; indicating, value of the market places in increased by integrating the host community’s values in market decisions by the partnership and farmers market boards should comprise of community members similarly (Kerzner, 1989), states traditionally, farmers market boards have been comprised primarily or entirely of vendors as new markets emerge, more diverse boards that include community members who are interested in bringing the benefits of a farmers market to their community frequently organize them.
In addition, respondents strongly agreed, Community professionals can also provide legal and accounting services to the market and the board, community professionals can support the market board by providing services such as board development, strategic planning and conflict resolution On the contrary the respondents disagreed that Community support does not encourages implementation of Amiran and YEDF partnership. This implies that the value of the market places is increased by integrating the host community’s values in market decisions by the partnership. The study findings are in accordance to (Quiggin, 2004) who stated, a diversity of stakeholders on the board can bring fresh ideas and new ways of thinking about the market. Community members can support the mission by serving on the board, or by supporting the market via one-time or ongoing assistance. Everybody knows somebody and word of mouth is a market’s best promotion strategy.

5.4 Conclusions

This study concludes that Amiran and YEDF Partnership is designed to enhance the mutual sharing of costs, risks and benefits of infrastructure projects between the two (private and public) sectors by exploiting the strengths of either side. The study further concludes that, making agriculture attractive is the only way Kenya can ensure food security and sufficiency as stated by Amiran officials. Thus, Amiran and YEDF encourage commercial farming supported by technology to drive agricultural development, by helping youths who are normally in groups of 5-10 in the start up of green houses. The respondents stated they do so by financing the construction of the green house at a subsidized rate, whereby the youth’s payback the amount in installments. When probed further they stated, they don’t only finance the start of the
green house but also the cost for installing the irrigation scheme, procuring chemicals required and that of buying seedlings required for the green house. The study also concludes youths received training on how to maintain and manage the green houses by Amiran Officials. Further, Amiran officials stated they offer trainings and seminars to raise awareness among the youth on the financial opportunities that modern agribusiness offers and the required technical expertise on how to manage the green house. The respondents further stated, the firm has in the past trained over 500 officers from the Ministry of Agriculture ensuring that in the effort to strengthen the agriculture sector, government and private sector work in a coordinated effort. Hence there able to reach youths and offer them the required education in different counties, Muranga county being one them.

The study further concludes the youths agreed primary education is more important in final goods production and post-primary education is essentially related to technology adoption and innovation. In addition, majority of the youths were of the opinion that the level of education attained enhanced understanding of public private partnerships.

5.5 Recommendations

Based on the findings, this study recommends;

I. Formation of more Public-private partnerships should be encouraged.

II. The government should promote the transparency in the different phases of Public-Private-Partnership projects through a legislative action to combat any kind of corruption.
III. Public-private partnerships should subsidize their rates further so as to encourage more youths in engaging in green house farming

5.6 Suggestions for Further Research

The study recommends that further research should be done on other public-private partnerships as this study concentrated on Amiran and YEDF, to establish more factors influencing implementation of this partnership. In addition, research should be done on the policy measures that can be strategically developed in order to enhance the success of public-private partnership.
REFERENCES


Mwangi, E., Gichini, G.G & Guchu, S.M. (2009) .Recent strategies towards science technology and innovation transfer commercialization and partnerships in
Kenya for social economic development. The Second Science with Africa Conference.


Thompson, L. S., & Budin, K. J. Global trend to railway concessions delivering positive results. Public Policy for the Private Sector, World Bank Group, (134)


APPENDICES

Appendix A: Letter of Transmittal

Dear Sir/Madam

RE: LETTER OF TRANSMITTAL

My name is Esther N Mbugua, a Masters in project Planning and Management student at the University of Nairobi. I am currently carrying out my research project and you have been selected to participate in this study that aims to establish the factors that influence public private partnerships in Kenya’s agricultural sector. The study will involve carrying out interviews as well as self-administered questionnaires in which your views about the Amiran greenhouse projects in Muranga County will be highlighted. This will be treated with utmost confidentiality and at no particular time will the information you provide be divulged to anybody without your consent. No reference will be made in both oral and written reports which could link you to any information collected and your name will not appear anywhere. No risks are anticipated because of taking part in this exercise.

Thanking you in advance.

Yours faithfully

Esther Mbugua
CONSENT

I have read and understood the above information and all questions pertaining to this project have been answered to my satisfaction. I also understand that by signing and returning this consent form, I have agreed to participate in this study voluntarily, truthfully and completely.
Appendix B: Questionnaires for the green house farmers

Instructions

Please tick in the appropriate box by filling in the blank spaces provided for those questions where elaborate answers are required. You are requested to complete this questionnaire as honestly and objectively as possible. Use the space at the back of this questionnaire if you need more space for your responses.

A. Profile of the farmer

1. What is your age

   18-25 years [ ] 26-35 years [ ] 36 and above years [ ]

2. What is your Gender?

   Male [ ] Female [ ]

3. Level of education attained

   Primary [ ]

   Secondary [ ]

   Technical and Vocational [ ]

   University [ ]

   None [ ]

B. Technical expertise of green house farming

4. Were you trained on how to maintain and manage the green houses?
5. Do you have the farming skills necessary for cultivation of crops under greenhouses?

Yes [ ] No [ ]

6. How long have you been practicing greenhouse farming?

Less than year [ ] 2-5 years [ ] 6-9 years [ ] 10 years and above [ ]

8. To what extent do you agree Amiran provides quality services and infrastructure on a very cost-effective basis?

Very great extent [ ]
Great extent [ ]
Moderate extent [ ]
Less extent [ ]
Not at all [ ]

C. Effects of financial ability of Farmers in practice of Greenhouse Farming

7. Do you receive funds for greenhouse farming from YEDF?

Yes [ ] No [ ]

8. Who constructed the green houses for farmers in your area?
The sponsoring organization
[ ] Farmer/Self [ ]

9. How much did it cost you to construct green house under Amiran and YEDF sponsorship?

Cost range in KHz

1,000-49,999 [ ]

50,000-99,999 [ ]

100,000-149,999 [ ]

150,000-199,999 [ ]

200,000-249,999 [ ]

250,000 and above [ ]

10. How much did it cost you to install the irrigation system in your green house Amiran and YEDF sponsorship?

Cost range in Kshs

1,000-19,999 [ ]

20,000-39,999 [ ]

40,000-59,999 [ ]

60,000-79,999 [ ]

80,000-99,999 [ ]

100,000 and above [ ]
11. How much did it cost you to procure chemicals required for your green house crops Amiran and YEDF sponsorship?

Cost range in Kshs

<table>
<thead>
<tr>
<th>Range</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1,000-4,999</td>
<td></td>
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<tr>
<td>5,000-9,999</td>
<td></td>
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<tr>
<td>10,000-14,999</td>
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<td>15,000-19,999</td>
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<td>20,000-24,999</td>
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<tr>
<td>25,000-29,999</td>
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<tr>
<td>30,000 and above</td>
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</table>

12. How much did it cost you to buy the seedlings for your green house Amiran and YEDF sponsorship?

Cost range in Kshs

<table>
<thead>
<tr>
<th>Range</th>
<th></th>
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<tbody>
<tr>
<td>1,000-1,999</td>
<td></td>
</tr>
<tr>
<td>2,000-2,999</td>
<td></td>
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<td>3,000-3,999</td>
<td></td>
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<tr>
<td>4,000-4,999</td>
<td></td>
</tr>
<tr>
<td>5,000 and above</td>
<td></td>
</tr>
</tbody>
</table>
D. Influence of the Level of education of the youth on implementation of YEDF/Amiran partnership in Muranga County

15. Has the level of education attained influenced your understanding of public private partnerships?
   Yes [ ] No [ ]

16. How satisfied are you with education offered by Amiran regarding using green house farming in production of crops?
   Not satisfied [ ] somewhat satisfied [ ]
   Satisfied [ ] Very satisfied [ ]
   Undecided [ ]

17. Indicate the level to which you agree with the following statement concerning the impact of education on the youth regarding agriculture.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly</th>
<th>Agree</th>
<th>Undecided</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>primary education is more important in final goods production</td>
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<tr>
<td>post-primary education is essentially related to technology adoption and innovation</td>
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<tr>
<td>Education on agriculture has a strong influence on economic growth; increasing average education in the population by one year would raise the level of output per capita.</td>
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<tr>
<td>primary and secondary education on agriculture matter more for growth in less developed countries as opposed to more developed economies</td>
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</tbody>
</table>
Education on public private partnerships enhances your understanding about the existence and use of the PPMs

E Influence of community support in implementing YEDF and Amiran partnership.

18. Is there community support in Muranga county that enhances implementation of YEDF and Amiran partnership

Yes [ ] No [ ]

19. To what extent does Amiran encourage community support in implementing YEDF and Amiran partnership?

Very great extent [ ]
Great extent [ ]
Moderate extent [ ]
Less extent [ ]
Not at all [ ]

20. Indicate the level to which you agree with the following statement concerning Influence of community support in implementing YEDF and Amiran partnership.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly</th>
<th>Agree</th>
<th>Undecided</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farmers market boards should comprise of community members</td>
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</table>
Community professionals can support the market board by providing services such as board development, strategic.

Community professionals can also provide legal and accounting services to the market and the board.

Community support does not encourage implementation of Amiran and YEDF partnership.

Value of the market places in increased by integrating the host community’s values in market decisions by the partnership.

Appendix C: Interview guide

I. Please tell me your name

Cost of green house

a. What criteria are employed when giving money for construction of the green houses to the youths?

b. In your opinion, do all farmers have the ability to pursue this kind of enterprise?

Technical expertise offered

c. Do you educate farmers on the necessary farming skills on green house management needed to run this kind of venture?