

**FACTORS AFFECTING PARTICIPATION OF SMALL SCALE FARMERS IN
CONTRACT FARMING IN ZAMBIA'S LUSAKA DISTRICT**

**A Research Report presented to the Department of Agricultural Economics and Extension
of the University of Zambia.**

BY

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ABSTRACT

Factors Affecting Participation of Small Scale Farmers in Contract Farming in Zambia's Lusaka District

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Ms. B. Chimai

This study was carried out to assess the factors that affect the participation of small scale farmers in contract farming. The study was done in Lusaka district in the Zambia's Lusaka province. The objective of the study was to identify the specific factors affecting participation, to find out the social, cultural and institutional factors affecting participation and to determine the extent to which each factor affects participation.

The study was conducted using a structured questionnaire and research of different literature on the topic. Descriptive statistics were generated using SPSS and the regression model was run in STATA.

A Probit regression model was chosen because of its ability to determine the effects of variables on the probability of farmer participation. A Probit model is a type of regression where the dependent variable can only take two values, for example married or not married. This model is most often estimated using standard maximum likelihood procedure, such an estimation being called a Probit regression

The findings reveal that factors that affect participation include household head education (p-value = 0.0354), off-farm income (p-value = 0.0041), marital status (p-value = 0.0232) and number of household members supplying agricultural labour (p-value = 0.0024).

It is therefore recommended that contract farming arrangements should be extended to all farmers irrespective of farmer scale of production. This will improve productivity and profitability of small scale farmers especially. Also, government should put in place incentives to encourage both farmers and agribusiness firms to enter into contract farming arrangements.

CHAPTER ONE

INTRODUCTION

1.1 Introduction

Contract farming in Zambia can be traced back to the late 60s and early 70s when the government set up Lint Company of Zambia (LINTCO) with the explicit objective of increasing the production of cotton through contractual arrangements with the small- scale farmers. This was followed by the setting up of Tobacco Board of Zambia (TBZ), also aimed at involving small- scale tobacco growers throughout grower schemes. A significant non- government initiative was for sugar where Zambia Sugar Company Limited partnered with Commonwealth Development Cooperation (CDC) and Development Bank of Zambia (DBZ) by setting up Kaleya Smallholder Limited to contract smallholder producers to supply sugarcane to Zambia Sugar Company (ZSC) for processing. In the same vein the Coffee Board of Zambia (CBZ) was formed but it was soon realized that coffee did not take off quickly with small- scale farmers as a cash crop due to various reasons such as the long gestation period (3 years). Following the liberalization of the Zambian economy in the early 90s key players from the private sector came on board such as Lonhro (later succeeded by Dunavant), Clark Cotton, Agriflora (export vegetables), Cheetah and Bmzi (Paprika). Thus new commodities were introduced on contract farming arrangement but mainly through private sector driven initiatives. (Likulunga 2005)

The definition of contract farming is very well documented but may vary in coverage from country to country depending on prevailing circumstances (Eaton 2001, Williams 1996 and Watts 1994). Contract farming refers to a system where a central processing or exporting unit purchases the harvests of independent farmers and the terms of the purchase are arranged in advance through contracts. The terms of the contract vary and usually specify how much produce the contractor will buy and what price they will pay for it. The contractor frequently provides credit inputs and technical advice. Contracting is fundamentally a way of allocating risk between producer and contractor; the former takes the risk of production and the latter the risk of marketing. In practice, there is considerable interdependence between the two parties, the nature of which is subject to much debate as the review of the literature and the case studies will

explore. The allocation of risk is specified in the contract which can vary widely; some agree to trade a certain volume of production; in others the contract specifies price (which can be market price; average price over a period of time, difference between a basic price and market price etc.) but not amount.

In Zambia contract farming (or out-grower) may be defined as a range of initiatives taken by private and public firms to secure access to smallholder produce under forward agreements. Contract farming compels farmers to commit themselves to provide a specific commodity in quantities and at quality standards determined by the purchaser while the company commits itself to purchase the commodity at agreed prices and to support its production through provision of inputs (seed, fertilizers and pesticides) on credit and technical advice (extension services). Costs are recovered when the produce is sold, in effect making the contract non-transferable. The term out-grower scheme is often used interchangeably with contract farming (Hantuba, 2004).

1.2 Problem Statement

The problems of farmers' participation in contract farming are not just the industry issue but also a concern of government as well. Participation in contract farming of fresh vegetables (e.g. Babycorn, Mange tout, Fine beans) can be beneficial; and profitable to small scale farmers. However, this participation and adoption is not obvious and there has not been sufficient cases recognized by theorists and policy analysts regarding this field. As of 2005, York Farm Limited had about 200 small-scale farmers supplying vegetables on contract arrangements. However this is a small portion of farmers dealing in fresh vegetables compared to e.g. tobacco which had an estimated number of about 2,000 small scale farmers who participated in the growing of tobacco on contract basis averaging about 0.5 to 1 ha per farmer. Honey is another commodity that is produced on contract by small-scale farmers. Honey was produced by more than 10 000 small-scale farmers located in North Western Province of Zambia, where beekeeping is a traditional agricultural activity (Likulunga 2005)

Much of the research done and literature available is concentrated on factors relating to the Agribusiness sector firms involved in contract farming, and to a lesser extent the farmers' sides of the contracts and issues which influence them.

It is on the basis of this background that the study was conducted. In the study, it was of interest to find out the specific factors that affect smallholder farmers' decisions in participating in contract farming. It was also of interest to find out the social, cultural and institutional factors affecting participation and to determine the extent to which each factor affects participation.

1.3 General Objective

To determine the factors that affect small scale farmer's participation in contract farming in Lusaka district.

1.4 Specific Objectives

- i) Identify the specific factors affecting participation.
- ii) Find out the social, cultural and institutional factors affecting participation.
- iii) Determine the extent to which each factor affects participation.

1.5 Study Significance

Although small-scale farmers produce the bulk of the fresh vegetables which supplied on the local markets, there is a considerable body of evidence that these farmers do so almost on individual basis. It was important to undertake this study in order to understand the reasons as to why a lesser number of small scale farmers are participating in contract farming of fresh vegetables despite the potential returns and numerous advantages and opportunities this can offer to them. It was thus important to critically analyze the factors that influence small-scale farmer participation in contract farming systems.

The study would also help in understanding the factors which can be helpful to policy makers in coming up with viable agricultural policies that are beneficial to both small scale farmers and agribusiness firms as regards to the improvement of contract farming arrangements.

1.6 Study Scope

This study focused on the farmers' side of contract farming arrangements. The study focused on specific factors affecting participation which include the social, cultural and institutional factors and to determine the extent to which each factor affect the involvement in contract farming among small scale farmers.

1.7 Structure of the Report

This research report is divided into five (5) chapters and is laid out as follows: chapter one contains the study introduction and background, statement of the problem, objectives, study significance and study scope. Chapter two presents a discussion on the literature review. Chapter three outlines the research methodology. Study findings are presented and discussed in chapter four and lastly chapter five which contains the study conclusions and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter discusses the meaning and definition of contract farming. It highlights the major literature on contract farming in perspective, typical contracts, costs and benefits of contract farming, financial and economic viability of contract farming, and the conceptual models used to explain the decision of farmers to participate in contract farming.

2.2 Meaning and definition of contract farming

Glover and Kusterer, (1990) suggest that contracts can be thought of as varying in ‘intensity’. At one extreme, the company pays the market price on delivery and exercises little control over production. At the other, extreme prices are fixed and the contractor exercises constant and rigorous control over all aspects of production. The main distinction is between arrangements which only affect smallholder access to inputs and to processing facilities and markets, and those that provide them also with developed land under varying degrees of control. The crucial potential problem for contracting smallholders, whatever the contracting arrangement, lies in the division of value added between themselves and the contractor. This is usually not a reflection of real value added but of relative strengths. The only thing that binds all contract schemes together as an analytical category, is the contract. However, it is important to bear in mind that the ‘contract is a representation of a relationship rather than the relationship itself, and the divergence between the two may be crucial. Its implementation takes place in specific social and political contexts’ (White, 1997).

The definition of contract farming is often confused because there are so many different types of contracts and actors (private sector firms, public sector firms and parastatals, international aid agencies)

2.3 Contract farming in perspective

In Zambia contract farming can be defined as an extension of contracting firm's activities in which the firm has considerable control over the smallholder production and provides a comprehensive input or extension package and in turn, the farmers provide labor and land as highlighted by Kwenda (2009). The contractor specifies the conditions of the contract pertaining to hectares, quantity, price schedule, payment modalities and the delivery schedule. The basis of this arrangement is the commitment of the farmer to provide a specified quality of produce as determined by the contractor and a commitment on the part of the company to support the farmer's production and purchase the produce in effect making the contract non-transferable (Eaton and Shepherd, 2001). Contract farming has expanded particularly in countries that have liberalized their markets through closing down of marketing boards. According to the risk theory, contract farming is usable by both the contractor and the farmer to mitigate risk (Makhura, Coertze, and Good, 1996). As a result, contract farming has received increased attention as an institutional approach to commercialization of smallholder agriculture; improvement of the incomes and livelihoods of smallholder farmers and private sector led agriculture as postulated by Wooded (2003).

Several factors have been linked to the emergence of contract farming. The factors vary between developed and developing countries. In developed countries, agribusinesses were economically motivated and entered into contracts with farmers in order to obtain assured supply of produce for processing (Key and Runsten, 1996). Baumann (2000) classify contract farming into out-grower schemes, nucleus estate – out-grower schemes, and multipartite arrangements. Contracting agribusinesses incorporates monopsonies or oligopsonies hence smallholder farmers need to be organized to boost their bargaining power (Coulter, Goodland, Tallontire, and String fellow, 1999).

Production under contract farming has contributed to most economies in Sub-Saharan Africa (Minot and Daniels, 2002; Ton, 2001). Notably, cotton production in developing economies has been greatly affected by subsidies paid by the USA, European Union and China that undermine world market prices through overproduction (Goreux, 2003; Linard, 2002; Watkins, 2002). More

so, in developing economies, prices of cotton are set below world prices to subsidise the state sector and allow it to compete against artificially low international market prices caused by subsidies elsewhere (Watkins, 2002).

2.4 Typical Contracts

Market specification contracts: future purchase agreements which determine quantity, timing and price of commodities to be sold.

Resource-providing contracts: specify the sorts of crops to be cultivated, some production practices and the quality and standardisation of the crop through the provision of technical packages and credits.

Production management contracts: associated with large outgrower and nucleus-estate schemes, directly shape and regulate the production and labour processes of the grower.

The definitions suggested by Ellman (1986) and Glover and Kusterer (1990), provide an insight into the types of schemes which exist under the label ‘contract farming’

Outgrower schemes: Schemes that provide production and marketing services to farmers on their own land. For Glover and Kusterer (1990), these generally connote a government scheme with a public enterprise, purchasing crops from farmers, either on its own or as a joint venture with a private firm. Glover and Kusterer (1990) also use the term contract farming to refer to the same arrangement in the private sector.

Nucleus Estate-Outgrower Schemes: A core estate and factory is established and farmers in the surrounding area grow crops on part of their own land, which they sell to the factory for processing.

Multipartite Arrangements: A term often used in the literature to emphasise the participation of several actors.

The variable definitions used in the literature make it difficult to establish a rigid categorization of these terms. This review will use the terms contract farming and outgrower schemes interchangeably. Where necessary, it will be specified which sectors are involved in the scheme

and whether or not there is a nucleus estate involved. A smallholder is a producer who relies primarily on family labour.

2.5 Costs and Benefits of Contract Farming

Wooded (2003) highlighted that the institutional arrangement of contract farming has reduced the transactional cost and improved market efficiency to benefit the smallholder farmer. In Zambia, the cotton out growers' schemes has commercialized the cotton smallholder agriculture through provision of assured markets, "favourable" producer prices, critical input provision and knowledge on agriculture technologies to farmers and as a driver to rural development. The schemes are creditable for playing a key role in increasing profitability of crop farming reducing market risk and above all opening new markets (Larpar, Holloway and Ehui, 2008). Contract farming has proved effective in integration of smallholder farmers in that provisions of seasonal finance is made to farmers that they cannot access through normal commercial channels as acknowledged by Wooded (2003). This has lightened the burden of sourcing scarce and expensive inputs to rural farmers.

Furthermore, the system has also promoted infrastructural development in the rural areas for cotton industries such as agrochemicals, fertilizer and cotton marketing companies. As a result, the adoption of contract farming has created employment especially for the rural poor. Wooded (2003) also appraises contract farming for giving the smallholder farmer the opportunity to earn income as evident by a large participation of smallholder farmers in cotton production as a means of acquiring cash.

Contract farming is less subjective if smallholder farmers are involved and sponsors have or attainment of political acceptability. As long as the farmer is not a tenant to the sponsor contract farming is less likely to be subject to criticism. With the land reform program in Zimbabwe contractors have managed to overcome land constraints through assessing crop production to land that is unavailable to the company with the additional advantage that it does not have to purchase it. Working with contracted farmers enables sponsors to share the risk of production

failure weather, diseases etc. The farmer takes the risk of loss of production while the company absorbs losses associated with reduced or non-existent throughput for processing facilities.

2.6 Financial and Economic Viability

The economic case for smallholders rests on three arguments: (1) small farms tend to use more labour and produce more output per unit of land than estates; (2) owners tend to use more labour and produce more per unit of land owned than tenants; (3) income inequalities tend to hinder technology diffusion, while encouraging mechanisation on estates in labour surplus countries where labour-intensive technology would be more appropriate (Tiffen and Mortimore, 1990). In general, smallholders do have a lower ratio of fixed working capital to land owned, so economic efficiency would indicate a strategy of lower purchased inputs and lower output. They have lower wage costs (due both to the ability to use family labour and ignore minimum wage legislation) and may therefore be able to compensate for lower capital intensity with higher labour intensity. A stable income is high on their list of priorities so they may avoid dependence on a single crop, and because they have a smaller proportion of fixed costs, they have a greater ability to change production when the market turns. They are however also less able to invest in upgrading their production (Tiffen and Mortimore, 1990: 75).

There are few smallholder projects which are able to sustain themselves without government or development agency support. The CDC projects which have achieved financial viability are generally those which have kept investment levels low through restricting investments to productive purposes. They have encouraged farmers to take responsibility for developing their own holdings and capital assets wherever possible. They still however rely on sharing overheads, such as roads, with other producers or the public sector. They also encourage other agencies (the government, grant agencies, banks) to take responsibility for some components of the project rather than keeping everything in the hands of a single project authority (CDC, 1989).

The accumulated evidence suggests that smallholders are not as efficient if judged only by yield per hectare. However economic efficiency is not only a matter of returns to land. Smallholders can adopt a low-input and low-output strategy and continue making a profit at prices that would

not be economically viable for estates. ‘Such flexibility offers the possibility of efficient resource allocation in response to the diversification of economic opportunities in the developing and urbanising economies, as well as being a form of insurance against the uncertainties inherent in world markets’ (Tiffen and Mortimore, 1990: 113). Further, the political case for smallholder contract farming rests not only on efficiency, but also on equity considerations in the distribution of land and in the regional knock-on effects that smallholdings would generate.

There is mixed evidence both in relation to the relative benefits of smallholder farming compared to estates and the economic viability of contract farming in general. Many of the institutions, such as CDC, which had supported contract farming as a development activity are withdrawing their involvement in commercially unattractive projects. Tiffen and Mortimore (1990) point out the capital costs of smallholder development projects have often been ignored. A higher social and economic benefit may actually be achieved from spreading the investment around a larger number of people than concentrating it all in a few projects. They suggest that faith in smallholder projects and the simultaneous rejection of large scale ones has been too hasty. ‘After the preference for large-scale production units (in Africa), the pendulum of donor support now swings to the other extreme...the reaction to past failures, however, should not be a simplistic glorification of smallholder production’ (Tiffen and Mortimore, 1990). The following section will consider some of the evidence on the effect of contract farming on smallholder welfare and regional development.

2.7 Conceptual Framework

The choice of an appropriate econometric model was mainly based on a concise definition of participation. Participation in this context implies being contracted to one contractor during the period under review. The model was used to analyse the relationship between participation and various variables including demographic characteristics and other factors external to the household. A Probit regression model was chosen because of its ability to determine the effects of variables on the probability of farmer participation.

A Probit model is a type of regression where the dependent variable can only take two values, for example married or not married. This model is most often estimated using standard maximum likelihood procedure, such an estimation being called a Probit regression. The model is specified as follows:

$$Y_i = 1 (Y^* > 0) = \begin{cases} 1 & \text{if } Y_i^* > 0 \\ 0 & \text{otherwise} \end{cases}, \text{ where } Y_i^* = x_i'\beta + \varepsilon, \text{ and } \varepsilon|x \sim N(0, 1).$$

And: β = vector of parameters to be estimated

X_1 is the household head age

X_2 is the gender of the household head

X_3 is the household size

X_4 is the house head level of education in years

X_5 is number of years in farming (experience)

X_6 is off farm income

X_7 is the marital status

X_8 is number of household members supplying agricultural labour

X_9 is farm size

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the methods and procedures used to achieve the stated goals. It gives information on the area of study, research design, sampling procedure, data collection and data analysis tools that were used in the study.

3.2 Area of Study

The study was conducted in Lusaka district. This area was chosen because it has the high concentration of smallholder farmers.

3.3 Data Collection Methods

Both primary and secondary data was collected; primary data was collected by means of structured questionnaires administered to respondents. This is because the literacy levels of farmers vary; therefore, administered structured questionnaires helped obtain accurate information. Secondary data was collected from various relevant publications such as student report, journals and various reports from the internet.

3.4 Research Design

The research design that was used is a case study under non experimental research design. A non-experimental research design was selected because farmers in the target area were not divided into groups based on their similarities i.e. control and target groups but rather were considered as being part of one group. A case study was used so as to have a deeper understanding and knowledge of the factors affecting participation in contract farming.

3.5 Data Analysis

Data was entered using computer software statistical package for social sciences (SPSS), the same software (SPSS) was used to generate descriptive statistics, the regression model was run in STATA and Microsoft excel used to organise the SPSS output.

3.6 Limitations of the Study

In this research, a sample size of 100 small-scale farmers was supposed to be sampled. Covering all sampled farmers was not possible because of the resources to do that were limited. Secondly, the gathering of information from some farmers was difficult using structured questionnaires because some of the farmers were unwilling to participate.

CHAPTER FOUR

STUDY FINDINGS AND DISCUSSION

4.1 Introduction

This chapter presents and discusses the study findings. It begins by presenting the sample characteristics of the survey followed by the presentation and discussion of the probit regression results.

4.2 Sample Characteristics

Table 1 shows that the farmers with ages between 21 and 30 years comprised 5.3% of the respondents. About 23.7% constituted farmers that were between 31 and 40 years while 34.2% were between 41 and 50 years. Further, 21% constituted those that were between 51 and 60 years while 15.8% were between 61 and 70 years respectively.

Table 1: Distribution of Farmers by Age

Age group (years)	Frequency	Percent
21-30	4	5.3
31-40	18	23.7
41-50	26	34.2
51-60	16	21.0
61-70	12	15.8
Total	76	100

Table 2 depicts the distribution of farmers according to sex. The study showed that 58 of the respondent farmers were male accounting for 76.3% and the females accounted for 33.7% of the farmers interviewed.

Table 2: Distribution of Farmers by Sex

	Frequency	Percent (%)
Male	58	76.3
Female	18	33.7
Total	76	100

Table 3 shows the distribution of marital status among the farmers. The study showed that the majority of farmers were married accounting for 54%, the single farmers accounted for 25%, the widowed accounted for 18.4% and the least were the divorced who accounted for 2.6%.

Table 3: Distribution of Marital Status

Status	Frequency	Percent
Single	19	25
Married	41	54
Divorced	2	2.6
Widowed	14	18.4
Total	76	100

Table 4 shows distribution of the level of education of the famers. The study showed that the highest number of farmers accounting for 44.7% had attained secondary education and the remaining 9.2%, 29.0%, and 17.1% had no education, attained primary and tertiary education respectively.

Table 4: Level of Education

	Frequency	Percent (%)
No Education	7	9.2
Primary	22	29.0
Secondary	34	44.7
Tertiary	13	17.1
Total	76	100

Table 5 shows the average farm sizes. Approximations were made because it was not easy to establish the exact size of the fields. The study showed that 30.3% of the farms were less than 1ha and 19.7% were more than 5ha. Most of the farms were between 1 and 5 ha accounting for 50%.

Table 5: Farm size in Hectares

	Number	Percent
<1ha	23	30.3
1-5ha	38	50.0
>5ha	15	19.7
Total	76	100

Table 6 shows the number of farmers that have access to off-farm income and the farmers that depend only on farming. The study showed that 43.4% depended only on income from the farm and 35.6% had access to some form of off-farm income.

Table 6: Access to Off-farm income

	Frequency	Percent
Yes	33	43.4
No	43	56.6
Total	76	100

Table 7 shows the average number of years a farmer had engaged in farming. The mean value was found to be approximately 13 years.

Table 7: Number of Years in Farming

	Years in Farming
Number	76
Mean	12

4.3 Regression Results

Table 8 below shows the adjusted R-square of 0.6508, this means that 65.08% variations in the dependent variable (participation) are actually caused by the independent variables

Table 8: R-squared table

Number of observations	76
Prob > F	0
R-squared	0.7209
Adj R-squared	0.6508

Table 9The results show that four of the variables have significant effects on the farmers decision to participate in contract farming in that their p-values were less than 0.05, while the remaining variables have shown to be insignificant (p-value greater than 0.05). The significant variables are household head education, which indicates the level of education that the farmer has attained (i.e. no education, primary, secondary or tertiary), access to off farm income, the marital status of the farmer, and the number of household members providing agricultural labour on the farm.

Table 9: Regression Table

Variable	Marginal effect dy/dx	p-value	ey/ex (Elasticities)
Household head Age	-0.000498	0.810	0 .02372
Household head Sex	0.011651	0.0681	0.958189
Household size	-0.03988	0.5842	-0.0481291
Head Education	0.06764	0.0354	0.1939017
Number of Years of Farming	0.02312	0.1692	0.0812505
Off Farm Income	-0.007063	0.0041	-0.1094481
Married	0.02396	0.0232	0.0158926
Single	-0.16623	0.0563	0.0109327
Number of Household Members Supplying Agricultural Labour	0.10612	0.0024	0.2994664
Farm Size	0.68201	0.0631	0.9867658

From the table, it can be said that small scale farmer participation in contract farming is significantly explained by household head's level of education, number of years of farming, marriage status, and the number of family members supplying labour. The positive sign in the marginal effect for household head education shows that a 1 year increase in the level of education will increase the probability of the farmer engaging in contract farming. From the elasticity of 0.1939017, it can be said that a 1% change in education level will result in a less than 1% change in the farmers' decision to participate in contract farming.

The negative sign in the marginal effect on off farm income indicates that an increase in the farmer's non-farm income will decrease the likelihood of engaging in contract farming. From the elasticity of 0.1094481, it can be said that a 1% change in off farm income will result in less than 1% change in farmer's decision to participate in contract farming.

Marital status had a positive sign in the marginal effect which indicates that if one is married as opposed to being single, they are more likely to be involved in contract farming. From the elasticity of 0.0158926, it can be said if one is married it will result in less than 1% change in farmer's decision engage in contract farming.

The positive sign on the marginal effect of the number of family members supplying labour shows that if there is more labour on the farm, the farmer is more likely to participate in contract farming. From the elasticity of 0.2994664, it can be said that a 1% increase in family labour supply will result in less than 1% increase of the decision of the farmer to participate in contract farming.

CHAPTER FIVE

CONCLUSION AND RECCOMENDATIONS

5.1 Introduction

This chapter presents the conclusion and recommendations of the study based on the findings and interpretations of the study.

5.2 Conclusions

This study was carried out to assess the factors that affect small scale farmers' participation in contract farming. The study was done in Lusaka district in Lusaka province of Zambia. The objective of the study was to identify the specific factors affecting participation, to find out the social, cultural and institutional factors affecting participation and to determine the extent to which each factor affects participation.

The study reveals that contract farming is important in integrating smallholder farmers into the overall economy in that provisions of seasonal finance is made to farmers that they cannot access through normal commercial channels. This has lightened the burden of sourcing scarce and expensive inputs to small scale farmers.

The findings reveal that factors that affect participation include level of education of household head. A possible explanation can be that education influences household to process information and causes farmers to have better access to understanding and interpretation of information as Larpar et al., (2008) asserted.

In the study, access to off farm had a negative sign. This can be attributed to the fact that as the farmers' access to income from off-farm or non-farm sources increases, the probability of being in a contract decreases. At higher levels of off-farm income, the farmers are less likely to participate in contract farming because they have enough to finance their farming activities and still remain with enough for contingencies. As postulated by Spio (2002) agricultural finance is a

major constraint limiting market access, participation and commercialization of the smallholder farmers.

The marital status of the farmer indicated that married farmers are more likely to participate in contract farming. This could be due to the fact that if a farmer is married, factors such as labour and other material resources may increase enabling the farmer to meet contractual agreements.

5.3 Recommendations

Contract farming arrangements should be targeted all farmers whether large or small scale. However, companies do often prefer large farmers because it cuts down on transaction costs and allows for a more uniform quality of product. A large number of smallholders can be costly and time consuming to organize hence the need for an improved organizational system to accommodate many small scale farmers in contract farming.

There is need for government to be more proactive in encouraging farmer and agribusiness participation into contract farming. Measures such as more conducive price policies for contractual arrangements can serve as an incentive for encouraging farmers into contract farming.

Future studies are encouraged to be carried out across the country with a much larger sample size in order to increase variations within the sample, hence capture more variables of importance. When results of such a survey are analyzed with available literature on contract farming, there will be a greater understanding of factors that affect decisions that farmers make as regards to contract farming.

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APPENDIX

QUESTIONNAIRE

Questionnaire serial number:

FACTORS AFFECTING PARTICIPATION OF SMALL SCALE FARMERS IN CONTRACT FARMING IN LUSAKA DISTRICT

This questionnaire is for academic purpose only. Be rest assured that all the information you provide will be treated as private and confidential as possible. Feel free to answer all the questions honestly. Your cooperation in this regard will be highly appreciated.

Instructions: Please write some answers in the boxes & blank spaces provided.

1. Farm identification

1.1 District code dist. | | District name: _____

1.2 Constituency code const | | Constituency name: _____

1.3 Ward code ward | | Ward name: _____

1.4 Farm code farm | | Name of the farm: _____

1.5 a) Name of farm owner own _____

b) Sex of farm owner

0 = Female

☐

1 = Male

1.6 a) Is the owner the main respondent?

0 = No

1 = Yes

☐

If no, Name of main respondent _____

b) Relationship to farm owner_____

2. Personal Information

2.1 What is your marital status?

- 1) Single
- 2) Married
- 3) Divorced
- 4) Widowed

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2.2 Year of birth?

2.3 Level of education attained?

- 1)None
- 2)Primary
- 3) Secondary
- 4)Tertiary

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2.4 I now would like to ask you a few questions about each of the members of your household/farm family

[illegible]

0.										
.										
2.										
3.										
.										

Month codes (DM02) Level of education codes (DM05) Relationship to head codes (DM06):

Jan	7=July	0=None	5=Std 4; Grade 5	11=Form 4; Grade11	1=Head	7= Nephew/Niece
Feb	8=August	1=Sub A; Grade1	6=Std 5; Grade 6	12=Form 5; Grade12	2=Spouse	8= Son/daughter-in-law
Mar	9=September	1=Sub B; Grade 1	7=Std 6; Grade 7	13=Form 6	3=Own child	
April	10=October	2=Std 1; Grade 2	8=Form 1; Grade 8	14=College Student	4=Step child	9= Grandchild
May	11=Novembe	3=Std 2; Grade 3	9=Form 2; Grade 9	15=Tertiary	5= Parent	10=Other (Specify)
June	12=December	4=Std 3; Grade 4	10=Form 3; Grade	Certificate	6= Brother/Sister	11=Unrelated
				16=Bachelors degree		55=Farm manager

2.5 What is your main occupation?

- 1) Farmer
- 2) Other, specify _____

2.6 Do have other sources of income, non-farm or off-farm?

- 1) Yes
- 2) No

3. Nature of the farm

3.1What is the approximate size of the farm in hectares?

- 1)<1000
- 2) 1000 – 1500
- 3)> 1500

3.2How many years have you been farming? _____

3.3 Do you know about contract farming?

- 1) Yes
- 2) If No, skip next two questions

3.4 Has the farm been engaged in contract farming before?

- 1) Yes

2) No – Skip next question

3.5 Which year was contract farming started at the farm (e.g. 1997) _____

3.6 Have you had any hired workers on the farm in the last 12 months?

1) Yes ☐

2) No

3.7 What is the main economic activity for this farm? (Pick one only)

1 = Fruits and vegetables 3 = Grains ☐

2 = Livestock/dairy 4 = Other, specify: _____

4. Organizational capital

4.1 Does your farm collaborate with other farms in the following activities (0=No; 1=Yes).

1) Buying inputs

2) Production (land preparation; weeding; harvesting) ☐

3) Marketing of produce

4.2 Fill in the following table about the services received by the farm and their providers.

Service and its description		Has this farm ever received assistance with or info on ...? 0=No→ Go to next service 1=Yes	Which year did you first receive help/info on...? Enter year (e.g. 2001)	Who is/was the most important supplier or organizer of this service? See codes below	Ask only if SR03=2 Is the farmer org. still active? 0=No 1=Yes	How did you receive (info on) this service? See codes below	Did you use or receive this service during the past year? 0=No 1=Yes
Service	Name/description	SR01	SR02	SR03	SR04	SR05	SR06
1	Technical assistance						
2	Training						
3	Inputs						
4	Credit						
5	Farm machinery services						

6	Packing/collection						
7	Packaging/selection						
8	Transportation						
9	Quality control						
10	Phytosanitary inspection						
11	Export certification						
12	Product price information						
13	Other (specify)						
14	Other (specify)						
15	Other (specify)						

Codes for service provider (SR03)

- 1=Fellow farmer(s)
2=Farmer organization
3=Private firm(s) or intermediaries
- 4=Government department
5=NGO or project
6=Bank

Codes for mode of service delivery (SR05)

- 1=Informal conversation
2=Radio program
3=Pamphlet/newspaper
4=Workshop
- 5=Field Day
6 =Demonstration plot
7 =Other (specify)

4.3 Sources of funding that this farm uses and/or has used, and the farm’s access to credits

Enumerator: Fill in the following table about the farm’s sources of funding and access to credit. Do not go through the list of sources one by one; just indicate all sources the farmer mentions in subsequent columns. However, ensure that you probe adequately to help the respondent to be comprehensive.

Source of funding or credit		Has the farm used ... to finance investment in capital items? 0=No 1=Yes	Does the farm usually use ... to finance inputs (e.g. fert, labour) 0=No 1=Yes	Did the farm use ... as a source of funding last year? 0=No 1=Yes	How much money did the farm receive from ... last year (ZMK)?
1	Retained earnings				
2	Off-farm income				
3	Bank				
4	Family members, relatives				
5	Farmer group				

6	Government				
8	Intermediaries (buyers)				
7	Fellow farmers or informal lenders				
8	Other (specify)				
9	Other (specify)				
10	Other (specify)				

5.1 Do you think contract farming has been beneficial to your farm business?

1) Yes

2) No

☐

5.2 Do you think there are other means of achieving your objectives of belonging to a cooperative other than belonging to a cooperative?

1) Yes – proceed to 5.3

2) No

☐

5.3 Will you please list two better ways of achieving those objectives other than the cooperatives