

ECONOMIC AND SOCIAL RESEARCH FOUNDATION



POLICY DIALOGUE SERIES No. 14

**STRENGTHENING MICRO-ENTERPRISES IN TANZANIA:
THE CASE OF SMALL-SCALE VEGETABLE FARMERS IN ARUSHA**

**A report of a policy dialogue by Dr. O. Mashindano, Vivian Kazi and
Dr. Beatrice Mkende**

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(ESRF)**



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Published by:
Economic and Social Research Foundation
P.O Box 31226
51 Uporoto Street
Dar es Salaam, TANZANIA

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ISSN 0856-6291

TABLE OF CONTENT

ABBREVIATIONS	I
PREFACE	II
1.0 THE BACKDROP.....	1
1.1 Main Source of Income, Participation of Family Labour in Farming Activities, and Types of Crops Grown.....	2
1.2 Financing of Farming Activities and Marketing Methods Used	2
1.3 Constraints in Farming and Marketing Activities	3
1.4 Determinants of Profitability – Results from Econometric Analysis.....	4
1.5 Key Policy Implications	4

ABBREVIATIONS

ACBF	The African Capacity Building Foundation
ESRF	Economic and Social Research Foundation
NGOs	Non- Governmental Organizations
FAO	Food and Agricultural Organization
ROSCAS	Rotating Savings and Credit Association
SIDO	Small Industries Development Organization
TAHA	Tanzania Horticultural Association

PREFACE

This report is a summary of a policy dialogue discussion on “Strengthening Micro-Enterprises in Tanzania: The case of Small-Scale Vegetable Farmers in Arusha” that was conducted by two senior lecturers from Economic department at the University of Dar Es Salaam; Dr. Oswald Mashindano and Dr. Beatrice Mkenda and Ms. Vivian Kazi, Assistant Research Fellow at ESRF.

The discussion was a dissemination dialogue basing on the findings from the research study that was conducted by ESRF under the African Capacity Building Foundation (ACBF) support. The dialogue was organized by the ESRF Capacity Building Department and was attended by professionals, academicians, Development partners, members of business and agricultural communities and NGOs.

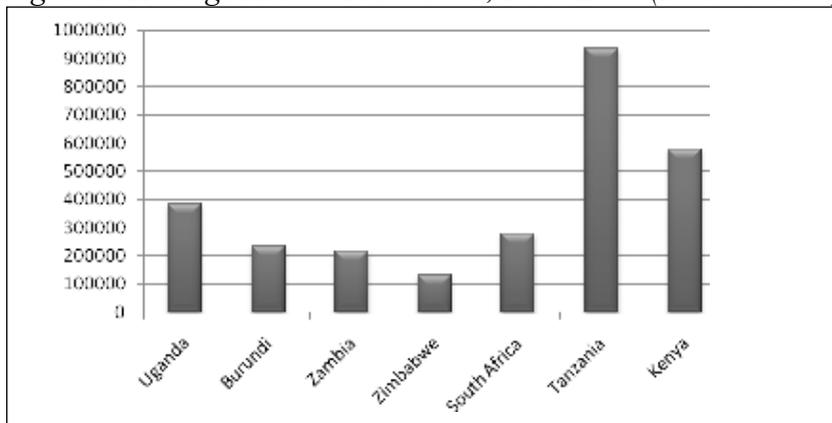
STRENGTHENING MICRO-ENTERPRISES IN TANZANIA: THE CASE OF SMALL-SCALE VEGETABLE FARMERS IN ARUSHA

1.0 THE BACKDROP

In recent years, the world has witnessed a rapid increase in demand and production of non-traditional horticulture products. The increase has been in response to the rising demand and popularity of these products resulting from health awareness of people regarding the benefits of eating fruits and vegetables (Dolan and Humphrey, 2000). The positive effect of this increase in demand is how supermarkets have taken a lead in stocking and sourcing vegetables and fruits from guaranteed sources in developing countries, in what is called “global governance”. In developed countries for example, the availability of fresh vegetables and fruits in supermarkets is almost taken for granted all year round (Dolan and Humphrey, 2000). Another key factor accounting for the increase in horticulture products is the rise in the number of supermarkets, which has made small-scale producers in developing countries to rise to the challenge of supplying the supermarkets with non-traditional horticulture products to meet the growing demand of consumers in the developed and developing countries (see FAO, 2003).

Figure 1 shows Tanzania’s contribution in the global production of fresh vegetables compared to some selected countries, between 1990 and 2008.

Figure 1: Average Annual Production, 1990-2008 (metric tonnes)



Source: www.fao.org; retrieved on September 9th, 2009.

Although Tanzania's level of production of fresh vegetables is impressive, it does not do as well in the export market. Tanzania is among the top 20 countries in terms of production (in 2000, it was ranked 20th, but her position improved to 18th in 2007), but in the export market, Tanzania does not appear among the top 20 exporters of fresh vegetables. Amazingly, Kenya, which does not appear among the top 20 producers, maintained her 6th position among the top 20 exporters of fresh vegetables in both periods (FAO figures, <http://www.fao.org>). Thus, although Tanzania has a comparative advantage in producing vegetables, it does not utilise this advantage in making an impact in the export market.

The potential for increasing production of non-traditional horticulture products in Tanzania is enormous (URT, 2002), given her ideal climatic conditions and abundant labour force. In spite of this potential, Tanzania's export levels fall below that of Kenya. The full exploitation of Tanzania's potential is limited by a host of constraints ranging from poor production organization to poor quality control system (URT, 2002, p.9).

Arusha was chosen as the study area because of its known potential for growing non-traditional horticulture products, and its proximity to Kilimanjaro Airport through which horticulture products for export are transported. The study focused on vegetable farmers, and it set out to answer these questions;

- What constraints do small-scale producers face?
- Who are the key actors in the supply chain of vegetable products?
- Are the smallholder farmers able to meet the supply and quality needs of their buyers?
- What determines profitability of the smallholder?

The policy brief is structured as follows; after the backdrop presented in the first section, section two presents an overview of findings from the study area. Section three discusses estimation results of the determinants of profitability in horticultural smallholder farming, and Section four discusses key policy implications.

1.1 Main Source of Income, Participation of Family Labour in Farming Activities, and Types of Crops Grown

The main source of income of the surveyed farmers is farming (97% of them derive their main income from farming). Although farming is their main source of income, 74% of them engage in other activities to supplement their incomes.

The use of family is prevalent among the surveyed farmers; 66% of them use family labour on their farms. In spite of this, 85% of them use hired labour. A variety of crops are grown by the farmers, with the main horticultural crops being, baby corn, tomatoes, and French beans, and the key non-horticultural crops are maize, coffee and millet.

1.2 Financing of Farming Activities and Marketing Methods Used

Most of the surveyed smallholder farmers used their own savings to start their farming activities (about 50% of them). Some farmers sourced their start-up capital from local money lenders and from friends and relatives. Other sources of capital are a company called Home Veg. and Uwano-Ngarenanyuki Horticultural Cooperative Society.

Although some of the farmers' source of start-up capital is from their own savings, 83% of them did not own a bank account. The predominant reasons for not owning a bank account were; not feeling that they had enough cash to save, and the cash earned from their farming activities was used to meet needs such as paying for children's fees.

The means of saving are not restricted to banks. Some small-scale farmers use local village groups and ROSCAs, others store their savings in fixed assets, and others are not aware of the importance of owning a bank account. For borrowing, half of the respondents rely on relatives when they need to borrow money, compared to just a mere 2% of them who go to a commercial bank. Other lending sources are neighbours and friends, and agricultural cooperatives.

The heavy reliance on informal sources for borrowing money reflects a severe lack of reliable sources of capital for their activities. Since the buying of inputs in horticultural production is important, smallholder farmers require formal sources of capital as informal sources tend to be unreliable and more expensive than formal sources of credit.

The most common marketing outlets are companies (and cooperatives), and consumers at local markets. The role of companies needs to be understood further given the arrangements of providing inputs to the farmers, which require them to pay back by selling their produce to the companies. The common marketing methods are; selling to marketing

cooperatives, farmers personally looking for buyers, and farmers taking the produce to the markets.

1.3 Constraints in Farming and Marketing Activities

A lack of inputs, and a lack of farm implements are the main constraints faced; 51% and 29% of the surveyed farmers face this constraint respectively. Other constraints are; a lack of credit and extension services, lack of water and drought, and crop diseases.

Since horticultural crops require high use of fertiliser, herbicides, pesticides and irrigation, smallholder farmers need knowledge on their use. About a third of the surveyed farmers did not access extension services as they were not available. Even when the services were available, they were of poor quality; of the two-thirds that accessed extension services, 58% of them were *dissatisfied* with the quality of extension services provided. A lack of extension services particularly in horticulture farming can hamper intensification and production levels of crops (Gockowski and Ndoumbé, 2001).

Two-thirds of the farmers were able to meet the needs of buyers. Of those who fail to meet the needs of buyers, they are hampered by drought, lack of pesticides, and crop being rejection due to poor quality (owing to crops exceeding their harvest time, crops having a high level of pesticides, and those affected by worms). Buyers also lodge complaints to the farmers; 40% of the farmers received complaints related to the quality of horticulture products, insufficient supply and high price of products.

A lack of processing firms is another constraint faced by small-holder vegetable farmers; 20% of them indicated a lack of processing firms in their localities, and that if they were available, they would increase their total output between 71% and 100%. This supports a finding by SIDO (<http://www.sido.go.tz>) that a huge surplus of fruits and vegetables

produced in Arusha goes to waste because of lack of a sustainable fruit and vegetable canning/processing plant. Nyambo and Verschoor (2005, p.11) also found that the capacity of vegetable processing is very low in Tanzania, with a small share of vegetables like beans and peas frozen or canned for the export market.

The study found that a significant percentage of them do not sell to foreign firms, and of those who sell to foreign firms, a significant percentage of them fail to meet the standards of the foreign firms, partly due to lack of information on how to get into the export, as well as availability of agents where the farmers sell their produce to. This limits the farmers' ability to get a good price for their produce. Findings from the survey validate these assertions. For example, 72% of the smallholder farmers did not get information on export opportunities, and those who got information obtained it from private companies and cooperatives where they sell some of their crops to.

A key source of information on export opportunities is membership to the Tanzania Horticultural Association (TAHA). The survey found that 79% of the farmers were not members of TAHA, and of the farmers who indicated that they were members of TAHA, 84% of them did not find TAHA useful to them. In terms of existence of companies to channel their produce to, 89% of them knew companies engaged in exporting, and of these farmers, 78% of them had channelled their produce through these companies. The ones who did not use these companies cited receiving a low price, not growing sufficient crops to export, and having contracts with a private company called Home Vegetables Limited as the main reasons.

Vegetable farmers also face challenges in their effort to expand production. Among the surveyed farmers, 72% of them were considering diversifying into the following crops; baby corn and French beans, broccoli and green peppers. Those who were not considering diversifying face constraints relating to low demand, lack of capital,

and land not being suitable for anything else apart from what they were already growing on the land.

1.4 Determinants of Profitability – Results from Econometric Analysis

The determinants of profitability were modelled using the logit regression model, with profit as the dependent variable (equal to one, if farming was profitable, and zero otherwise). The independent variables were; education level, size of farm holding, existence of a processing firm in the area, age, age squared, and use of family labour.

The results of the econometric analysis had the expected signs except for the coefficient on the education variable, and only one variable, existence of a processing firm in the area, was significant at 10%. The results are as follows; farm size positively affects profits. The level of education was expected to positively affect profits, however, it had a negative coefficient, and it was insignificant. This counterintuitive result could be because a significant number of smallholder farmers (75%) have only primary education, and that it is simply sufficient to have a primary education or lower in order to have a profitable farming livelihood. But since variable is not significant, it means that the education level of smallholder farmers does not matter in determining profitability of farming activities.

Another key finding is that the existence of processing firms in an area increases profitability. Age also positively affects profitability, but as a farmer ages, profitability increases only at a decreasing rate. Lastly, family labour has a positive effect on profitability.

1.5 Key Policy Implications

Horticultural production offers Tanzania one of the pathways to poverty reduction. The following are policy implications from the study; firstly,

processing firms can significantly contribute to boosting production levels of horticultural products. They provide a ready market for the crops, and this is an incentive to farmers to expand production; farmers estimated increasing production to 71% and above if processing firms existed. Absence of processing firms denies the local economy of key forward linkages such as packaging for supermarkets that can be instrumental in employment creation.

Secondly, extension services in vegetable growing areas need to be improved in order help smallholder farmers to improve the quality of their produce, a factor that is very important for consumers, especially for export markets that often reject the crops due to crop diseases, pesticide levels and crops that exceed their harvest time. With most farmers having primary or no education, provision of extension services is imperative.

Lastly, while there are cooperatives and companies that provide some farmers with credit for inputs, smallholder farmers require banking facilities that are tailored to their needs. Most farmers started their activities from own savings, and they use relative and friends and informal sources when they require borrowing funds. Such sources are unreliable and costly. Access to reliable credit is essential if smallholders are to expand their operations.

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