Market Reforms, Research Policies And SADCC Food Security

Edited by

Mandivamba Rukuni & J.B.Wyckoff

University of Zimbabwe UZ/MSU Food Security Research in Southern Africa Project

Market Reforms, Research Policies And SADCC Food Security

Edited by
Mandivamba Rukuni
J.B. Wyckoff

Published by:

UZ/MSU Food Security Research in Southern Africa Project
Department of Agricultural Economics and Extension
University of Zimbabwe
May 1991

Published by:

UZ/MSU Food Security Research in Southern Africa Project
Department of Agricultural Economics and Extension
University of Zimbabwe
P.O. Box MP 167
Mount Pleasant, Harare, Zimbabwe
Telex 26580 UNIVZ ZW
Fax 263-4-732828
Telephone 303211 Ext.1516

ISBN Number 0-7974-1000-7
UNIVERSITY OF ZIMBABWE 1991

Typesetting and page layout:
Daphne Chanakira and Florence Chitepo

Originated by:
Lucas Photolitho

Produced by:
Print Brokers, Box CH 113, Chisipite,
Tel: 796996

SECTION III : GRAIN MARKET POLICY REFORM ISSUES -- THE EVOLVING ROLES OF THE PUBLIC AND PRIVATE SECTORS

SECTION IV : ENHANCING HOUSEHOLD FOOD SECURITY -- ISSUES AND PROSPECTS

Acknowledgements

These proceedings are a result of the dedicated efforts of many individuals throughout the region. Perhaps most important are the food security researchers who conducted the studies and reported their research findings at the Sixth Annual Food Security Research in Southern Africa Conference. The empirical findings generated through their research are providing a solid basis for food security policy throughout the region.

The administrative support provided by the Food Security Project office via Florence Chitepo, Project Assistant, and the Co-Directors, Godfrey Mudimu and Thomas Jayne, was key to the success of the Conference. Backup from Michigan State by Mike Weber, Jim Shaffer, and Janet Munn was well received. Logistical support was provided by Peter Hopkins, Andrew Barnes, Ronnie Sagwete, Louis Dube, Emma Matimati, Joshua Ndlovu, Elijah Dauka and Maxwell Chiwashira.

This Conference is one of the project activities that supports the Food Security Policy network developed by project activities throughout the SADCC region. The support of John Dhliwayo and his SADCC Food Security Technical and Administrative Unit and Tobias Takavarasha and his Economics and Markets Branch, both in the Ministry of Lands, Agriculture and Rural Resettlement is most appreciated. The project is funded by USAID (Southern Africa Regional Programme). Our special gratitude to Douglas Pickett and Joshua Mushauri.

Daphne Chanakira has again contributed her talent doing the Typesetting and page layout. Florence Chitepo assisted in the process and Lovemore Nyabako provided computer support. Our thanks to all of them.

Mandivamba Rukuni
J.B. Wyckoff

12

Farm Management Characteristics Of Communal Farms In Zimbabwe: Implications For Household Food Security

G. Sithole and E.A. Attwood[1]

INTRODUCTION

Nearly three of every five persons in Zimbabwe live and derive their livelihood on farms in the communal farming areas. In other words, 50 percent more people live in communal farming areas in Zimbabwe than in all the rest of the country. The incomes earned by these people, the source of their incomes and the opportunities for improvement are the very heart of national economic and social debates.

The total value of production from the Communal Farming Lands increased from just under $146 million in 1980 to $719 520 million in 1988. A major part of this was due to price changes but the significant growth was in the value of sales rather than in production for own consumption. The latter figure increased by 215 percent while the value of sales rose by 1100 percent from $28 692 million in 1980 to $344 413 million in 1988. This, in the cash economy, serves as the engine of development for the communal sector.

Our knowldge of the economic situation of communal farmers has been inadequate. The Farm Management Section of the Ministry of Lands, Agriculture and Rural Resettlement, therefore, initiated a detailed study of the current economic and financial position of these farmers and their resident families. This report is not exhaustive -- it is an initial assessment rather than a comprehensive statement.

The collection and analysis of physical and financial data on communal farming presents special difficulties. More experience will make it possible to refine the data collection techniques and improve the coverage. However, the report that recently has been published gives a valuable picture of the social and economic circumstances

[1]Chief Economist and Technical Advisor, respectively, Economics and Markets Branch, Ministry of Lands, Agriculture and Rural Resettlement.

of the communal farm family. It also provides a measure of the wide range of production results from different farming activities across the country.

The primary purpose of the survey was to provide the necessary economic and social information required for policy decisions by the Ministry of Lands, Agriculture and Rural Resettlement on the most effective means of improving living standards of people living and working in communal farming areas. Additional analysis of the data collected will further this objective.

RESOURCES AND SOCIAL CONDITIONS

The average communal farm sampled consisted of three hectares of arable land approximately 1km from the household. Arable land varied between 1,5 hectares in the Mutoko area to 4,5 hectares in Zvishavane. Less than half the households have their own garden for producing vegetables. Garden sizes vary widely from one area to another. In general the farmers have adopted beneficial farming practices; 80 percent practice a crop rotation and buy their crop inputs in advance, 70 percent practice winter ploughing and 60 percent apply manure. The average household owns seven cattle and seven goats. One in five hired draft animals although 36 percent owned a scotch-cart for use in their farming programme.

The average farm household surveyed had ten members but two were not regularly resident. In two survey areas, (Nyajena and Zvishavane), the average household was comprised of 12 people of whom two were non resident. Two thirds of the households had at least one non resident member. One third of the household had at least on non resident sending remittances. The average remittance was $20 per household per month.

The head of the household was a male in 85 percent of cases. Nearly 24 percent of male household heads were non-resident. Thus, the role of women was much greater than might appear to be the case. Half the members of the average household are children under 16; the proportion of elderly people over 60 is very small -- less than three percent. Most of the households are situated a considerable way from basic rural needs, *i.e.*, on average, 1km from water, nearly 3km from a local shop or a grinding mill, over 5km from a health clinic and 20km from a tarred road. Forty-six percent of the main water sources go dry in winter for three to four months. Only 37 percent of the households use pit toilets.

ECONOMIC RETURNS PER HOUSEHOLD

The average gross farm income was $1 288. This varied from less than $600 per household in Chirumanzu and Mutoko to over $2 000 in Chirau and Kandeya. The average within areas varies widely from household to household. Allowing for variable costs, averaging just under $500 per farm, and overhead costs, averaging about $60 per farm, the average net income from farming was $735. In addition, net non-farm income averaged $375. Thus, total net household income was $1 110.

However livestock appreciation accounted for $212 leaving net annual disposable income (in cash and in kind) of $900 per household.

These sample averages vary widely from one area to another. In Kandeya and Chirau, net total household incomes averaged over $2 000 *per annum* with livestock appreciation accounting for only a small proportion. In Buhera, and particularly in Chirumanzu, average household incomes were much lower. Allowing for livestock appreciation, the disposable incomes were very low in both of these areas. In these latter areas, the resident household size averaged just over six people.

There are two fundamental factors affecting the incomes of communal farm households. The most important is the basic soil and climatic characteristics of the area being farmed. Chirau and Kandeya are in Natural Region II (though part of Kandeya stretches into Natural Region III), while Mutoko and Chirumanzu are in Natural region IV (with part of Chirumanzu in Natural Region III). The effect of the physical environment is not, however, a complete explanation of the differences in economic results; Zvishavane which is in Natural Region V has better economic results than Buhera, Chirumanzu, Mutoko or Nyajena which are all situated in Natural Regions IV and III.

The second major factor affecting net household incomes of communal farms is the level of non-farm incomes received. Non farm incomes come from a wide range of sources. For the sample as a whole, they account for over one third of total net household income and over 40 percent of net household disposable income. In areas of low net farm incomes, access to outside income sources tend to be limited. Thus, the problems of low farm incomes are more serious in areas such as Chirumanzu and Buhera. On the other hand, Kandeya, which has the highest gross farm income, also has the highest off farm income resulting in average total household incomes more than double the sample as a whole.

The farm area per household is also important. The crop area per farm tends to be small in all areas, but there are wide variations among the different areas. For the whole sample, the average cropped was 3,28 hectares. In Mutoko and Chirumanzu, it was only two hectares. In Kandeya and Nyajena it was just over four hectares. Zvishavane averaged close to five hectares. The effect of physical production characteristics and other factors had a major effect on the output produced on these hectares. In Chirau, the net crop income per hectare was $480 and Kandeya it was $312. On the other hand, in Zvishavane it was under $15 and in Buhera, $44.

EFFECTS ON LABOUR USE

There is no significant relationship between the hours of labour spent on crop operations and the resultant net crop incomes. The farm families in Chirau spent the least time on crop operations (542 hours) and had the highest net crop income per hectare; the four areas with the lowest crop incomes occupied the second, third, fourth and fifth positions in the ranking of areas by time devoted to crop production.

This meant the net incomes earned per hour from crop production varied by an extraordinarily wide margin. The returns per hour of labour spent on crop production in Chirau was over 40 times that in Zvishavane. Even though it may be necessary to interpret the Chirau results with caution, there are still wide differences.

The average net income to own labour was 31 cents per hour for the whole sample. In Chiweshe the returns were 67 cents per hour and in Buhera only nine cents. These average returns cover even wider differences among individual households.

THE ROLE OF LIVESTOCK PRODUCTION

Comparable levels of variability from one area to another also arise with the livestock enterprises. The average number of livestock units per farm for the whole sample is just over seven, varying from 5,4 in Mutoko to over 9,7 in Kandeya. The income per livestock unit varies from $3,2 in Chiweshe to almost $91 in Zvishavane. Livestock are an important asset for the majority of communal farms, but the returns earned from these assets are affected by a wide range of factors. The average return, in terms of income as a proportion of the opening value of livestock, was 12 percent but this varied from under one percent in Chiweshe to over 35 percent in Zvishavane. Most of the livestock income came from the appreciation in the value of the livestock herd due to increasing stock numbers. This was three times as important as actual trading income from livestock. Livestock appreciation is the result of changes in the capital value of the livestock herd rather than a form of disposable income for the farm household.

CROPPING PATTERN

Virtually all the farmers in the sample grew maize. Even in the poorest areas, over half of the total crop area planted was under this crop. The next most important crop was groundnuts, grown by over 70 percent of farmers in the sample, but accounting for only 11,6 percent of the total land area planted. Millet was also of considerable importance with 45 percent growing finger millet (rapoko) and 30 percent growing pearl millet (mhunga). The combined total area of finger and pearl millet accounted for 19 percent of the total area planted.

The rest of the cropping programme for the farms in the sample involved a wide range of crops, many of them grown in very small quantities. Bambara nuts were grown by 35 percent of farmers but accounted for only 3,5 percent of the total area planted. Sunflowers, grown by 20 percent of farmers, accounted for less than five percent of the total area planted and cotton was of comparable significance.

The pattern of input use by crop is also dominated by maize, which accounted for over 60 percent of total variable costs. The next most important crops, in relation to input costs, were millet and cotton accounting for 11-12 percent each and then groundnuts. In the case of all the other crops, the level of input costs was very low. A similar pattern existed with the assessment of own labour used in crop production.

The variable inputs are dominated by two categories--draft animals and fertilizers. Draft power (including the value of own animals used) accounted for over 40 percent of total variable inputs with fertilizers comprising about a quarter.

The importance of non-farm earnings already has been highlighted. These non-farm earnings consisted primarily of selling vegetables (38 percent of farmers) brewing beer (26 percent) and remittances (19 percent). Eighteen percent of the farmers had no off farm earnings. In terms of the contribution to total off farm earnings, remittances and the selling of vegetables are by far the most important. While brewing beer is a relatively widespread activity, it contributed only 6 percent to total off farm income.

IMPLICATIONS FOR FOOD SECURITY

The main sources of income are from three crops -- maize, groundnuts and millet -- and from three sources of off-farm income -- selling vegetables, remittances and brewing. The location of a communal farm is by far the most important explanatory variable of income, both in terms of the level of returns from cropping and in terms of the levels of off-farm incomes. In general, the better areas for crop production are also the better areas for off-farm incomes. This tends to accentuate the variation in farm household incomes between the better and poorer areas. In the poorer areas, the major input into farming is family labour, but the returns per hour are very low.

The contribution of livestock enterprises to farm incomes is generally small. Most of the income is in the form of livestock appreciation which contributes nothing to the disposable income of the farm family in the year in which it arises.

The survey demonstrated vividly the need to improve crop yields. For crops such as mhunga, sorghum and sunflower, the average yields per hectare are less than 400 kgs. Virtually no purchased fertilizers are used on these crops. In years of poor rainfall, the likelihood of any return would be small. But this low return is also a feature of years of reasonable rainfall due to the failure to use fertilizer. The very low yields are also a result of poor yielding varieties. Data on this were not quantified in the survey.

An extension of the survey is presently being planned to increase the representation of communal farms in Region V. This is expected to improve the quality of the data from that region rather than to provide a new dimension. It is also proposed to produce detailed household budgets, in addition to the farm budgets, to improve knowledge of the financial earnings and expenditure of communal farm households.

CONCLUSION

It may be argued that this survey does not reveal any new truths about the economic and social position of communal farming families. However, the fact that the survey gives precise quantitative data on the major financial and demographic parameters

of the lives of communal farming families contributes to a much clearer understanding of the economic realities of life in these areas. It also illustrated the wide variation in financial results from one area to another both at the household income level and in relation to each of the individual cropping enterprises. None of the communal farming areas in the survey could be regarded as prosperous but the families in some areas could live in frugal comfort. In other areas, the standards of living are very poor indeed.

The lack of resources, apart from family labour, is a heavy burden on most -- though not all -- communal farm families. This applies not only to physical resources but also to knowledge as to the best use that can be made of the resources which are available. The growth in the population of these areas only adds to the problem. The extra mouths to be fed are not matched by additional productivity of the farm family labour force.

Improvement in the living standards is not just a matter of agricultural development. Only if additional off-farm employment and off farm income sources can be generated will it be possible to achieve worthwhile progress in improving the economic and social life of the majority of people in these areas. This majority is not just of the people in communal areas -- it is a majority of all the people of Zimbabwe.