

Original Research Article

PERFORMANCE OF MICRO AND SMALL SCALE AGRIBUSINESSES IN NORTHERN GHANA: NON-FINANCIAL ANALYSIS

(note: the title is rather too broad -northern Ghana. Advice to narrow it down
by creating a sub-section as study area or the scope of study to delimit area
covered by the present study)

ABSTRACT

The need for the reduction in poverty status of rural people through the development of agribusiness is of paramount concern to most governments. Agribusiness in Africa is considered the catalyst for economic growth and poverty reduction. It is a business solution to rural poverty if redistribution mechanisms work. The importance of agribusiness to the development of Ghana is quiet clear however very little is done to develop it. The broad question that come to mind is, are they not doing well? Seven objectives were set and these include, To assess the nature and forms of micro and small agribusinesses in Ghana and the relative involvement of women and men, To identify the objectives and challenges of micro and small agribusinesses and to rank them in order of importance, To identify the forms and types of linkages that exists between micro and small agribusinesses, Assess the sources of capital to micro and small agribusinesses, and Assess their business registration, saving, record keeping and business account holding status. Performance of micro and small agribusinesses were assessed using the non-financial method. 200 micro and small agribusinesses were surveyed across the country using multi-stage sampling approach in 2012. It was clear that the entrepreneurs achieved most of the objectives that were identified. Each objective scored below 50%, hence the level of satisfaction was fairly distributed and not concentrated on some few objectives. The level of success was low.

Key words: Micro and Small Agribusiness, Non-Financial and Performance

Introduction

In many instances, agribusiness firms provide marketing, finance, input supply and advisory services to producers or serve as intermediaries for improving producer access to services. In brief, agribusiness development is inevitable. The real issues are not whether, rather they are how to accelerate, how to ensure that maximum benefits are realized, and how to address equity and ensure fairness in the changes that will be taking place (FAO, 2004).

Currently there is a growing concern that priority should be given to agribusiness (the food processing industry) in Ghana. The fact is that export earnings from this industry are substantial. Since women are generally more involved in processing of agricultural products than men in many countries in Africa it is the belief that if women in Africa are given the opportunity, they will contribute substantially in the development of agribusiness (the food processing industry) and solve the persistent problem of malnutrition and poverty in the rural and semi-urban communities (Okorley and Kwartan, 2006).

the study objective must be concise into a sentence and remove tautology 'to'

the methology not explained in the text

you need to be explicit in the recommendation

what about the conclusion

The small business sector is recognized as an integral component of economic development and a crucial element in the effort to lift countries out of poverty (Wolfenson, 2001). The dynamic role of small and medium enterprises (SMEs) in developing countries as engines through which the growth objectives of developing countries can be achieved has long been recognized. It is estimated that SMEs employ 22% of the adult population in developing countries (Daniels & Ngwira, 1992; Daniels & Fisseha, 1992; Fisseha, 1992; Fisseha & McPherson, 1991; Gallagher & Robson, 1993). Agribusiness in Africa is considered the catalyst for economic growth and poverty reduction. It is a business solution to rural poverty if redistribution mechanisms work. The agribusiness initiative is both a strategy to accelerate development and a business solution to rural poverty. The vision of the Food and Agriculture Organization is to make agribusiness a more profitable business entity (FAO, 2004). The importance of agribusiness development to the development of Ghana's economy cannot be overemphasized as government makes it a major priority in the Millennium Challenge Compact (MCC), which was signed with the United States of America in 2006.

With specific reference to Ghana the questions that come to mind are: what is the nature and forms of micro and small agribusinesses in Ghana? How are micro and small agribusinesses performing with respect to their objectives and challenges? Are there any linkages between micro and small-scale agribusinesses? And what is the source of funding to these businesses? What is their business registration, saving, record keeping and business account holding status? It is therefore not far-fetching that seeking answers to these questions becomes very important in this study.

How Should SME's Performance be Measured? th

The lack of separation of ownership and management of a business enterprise is believed to allow the goals of the owner to become the goals of the firm (Naffziger, Hornsby et al. 1994), given the significant freedom 'being your own boss' has in the pursuit of objectives (LeCornu, McMahon et al. 1996). Further, it has been reported that many of the stated reasons for entering a small business are non-financial in nature (Stanworth and Curran 1976). For this reason, Brush (1992, p.22) argued that, the 'assessment of business performance for women owned businesses should include not only financial measures, but should incorporate other measures such as employee satisfaction, social contributions, goal achievement, and effectiveness'. **Note: authors should be cited as Brush (1992:22**

Buttner and Moore (1997, p.34) supported this view noting that the entrepreneurs in their study measured success in terms of 'self-fulfillment and goal achievement. Profits and business growth, while important, were less substantial measures of their success.' Similarly, Kuratko, Hornsby and Naffziger (1997, p.31) argued that the intrinsic goal set suggested by their study emphasized that 'entrepreneurial success should not be solely measured in financial terms'. However, despite this ready acceptance of the importance on non-financial objectives, research seems to have concentrated on traditional economic measures of performance.

As noted by Murphy, Traylor and Hill (1996) one approach to measuring effectiveness is to relate performance to organizational goals. It would appear that this approach might be particularly appropriate for SMEs, where the goals of the organization and of the owner are generally one and the same. (note: SMEs can be misconstrued for small and medium enterprises (SMEs))

Methodology

Analysis of Agribusiness Performance

Employee satisfaction, challenges, social contributions, goal achievement, and effectiveness' have been used to assess the performance Brush (1992, p.22), Buttner and Moore (1997, p.34), (Rosa, Carter et al. 1996; Fasci and Valdez 1998). Success has been measured based on goal/objective achievement Buttner and Moore (1997, p.34).

(note: authors should be cited as Brush (1992:22; Buttner and Moore (1997:34). stale authors

As noted by Murphy, Traylor and Hill (1996), performance will be measured by relating performance to organizational objectives. This approach is particularly appropriate for SMEs, where the goals of the organization and of the owner are generally one and the same. The objectives at the start of business and during operation of business will be identified. Objectives satisfied will be identified and compared with objectives of the enterprise identified and ranked according to importance.

The challenges will also be identified and ranked using the Kendall's coefficient of concordance.

The level of success will be assessed based on the level of satisfaction. The higher the percentage scores the higher the level of success. If the percentage of all objectives scores 50 and above then we will say the businesses is successful with regard to the objective below 50% then it is not successful. Note: why is the use of present tense '-will be'?

also, this methodology is not detailed. it should explain the sample size and sampling technique

The Kendall's Coefficient of Concordance

The Kendall's concordance analysis will be used to identify and rank the objectives and constraints of agribusinesses. It establishes the extent of disagreements and agreements among responses. Note: why is the use of present tense 'will be' instead of reporting speech?

The Kendall's coefficient of concordance (W) is the measure of the degree of agreement among m set of n ranks. W is an index that measures the ratio of the observed variance of the sum of ranks to the maximum possible variance of sum of ranks. The idea behind this index is to find the sum of ranks for each thing being ranked and then to examine the variability of this sum. If the rankings are in perfect agreement, the variability among sums will be a maximum (Mattson, 1986). too stale author for the present study

This is a statistical procedure, which is used to identify and rank a given set of objectives into the most pressing one up to the least pressing one and then measures the degree of agreement/concordance between these constraints and objectives. The identified constraints and objective are ranked according to the most pressing to the least pressing

using numerals; 1,2,3,4...n, in that order. Computing the total rank score for each constraint and objective, the constraint and objective with the least score is ranked as the most pressing whilst the one with the highest score is ranked as the least pressing. The total rank score computed is then used to calculate for the coefficient of concordance (W), to measure the degree of agreement in the rankings (Allen Edwards, 1964). Too stale author

The limits for W cannot exceed 1 and cannot be negative. That is, it can only be positive in sign and ranges from 0 to 1. It will be 1 when the ranks assigned by each judge (entrepreneur) are exactly the same as those assigned by other judges (entrepreneurs). If we let T represent the sum of ranks for each thing being ranked, the variance of the sum of ranks is found by the formula:

$$\text{var}_T = \frac{\sum T^2 - (\sum T)^2 / n}{n} \dots\dots\dots (1)$$

the maximum variance of T is then given by:

$$\text{VarT (max)} = \frac{m^2 (n^2 - 1)}{12} \dots\dots\dots (2)$$

the formula for the coefficient of concordance W is then given by:

$$W = \frac{(\sum T^2 - (\sum T)^2 / n) / n}{m^2 (n^2 - 1) / 12} \dots\dots\dots (3)$$

W is simplified as:

$$W = \frac{12 \left| \sum T^2 - (\sum T)^2 / n \right|}{nm^2 (n^2 - 1)} \dots\dots\dots (4)$$

where; T = sum of ranks for each objective being ranked.

m = number of rankings (entrepreneur) and

n = number of things (factors) being ranked.

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155 **Hypothesis and Significance test for W: (F-Test)**

156 H_{01} : there is no agreement among the objectives identified by each entrepreneur in micro
157 and small agribusiness.

158 H_{11} : there is agreement among the objectives identified by each entrepreneur in micro
159 and small agribusiness.

160 H_{02} : there is no agreement among the challenges identified by each entrepreneur in micro
161 and small agribusiness.

162 H_{12} : there is agreement among the challenges identified by each entrepreneur in micro
163 and small agribusiness. The hypotheses are not statistically put in a testable form. It should
start with 'there is no significant difference between and variable

164 The Coefficient of concordance W is tested for significance using the F distribution.

165 The F ratio is given by: $[(m-1)W]/(1-W)$, with $(n-1)-2/m$, degrees of freedom for the
166 numerator and $m-1[(n-1)-2/m]$, degrees of freedom for the denominator (Allen Edwards,
167 1964).

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170 **RESULTS**

171 This presents the results and discussion on the non-financial measure of agribusiness
172 performance.

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174 **The Nature and Forms of Micro and Small Scale Agribusinesses**

175 For the first objective, analysis of the data regarding the nature and forms of micro and
176 small scale agribusinesses in Northern Ghana and relative involvement of male and
177 female yielded the information presented in Table 4.1, Table 4.2 and Table 4.3

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184 **Table 4.1:** Male and Female Involvement in Agribusiness

Sex	Frequency	Percentages
Male	76	44.97%
Female	93	55.03%
Total	169	100.00%

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From the results above, males form about 45% and females 55% of small and micro agribusinesses. Males are somewhat less involved than their female's counterparts in agribusinesses.

The study revealed the pattern of ownership of agribusinesses shown in Table 4.2

Table 4.2: Ownership Types of Agribusinesses Identified

Type of ownership	Frequency	Percentage
Sole proprietor	155	96%
Partnership	7	4%
Total	162	100%

if the sample size is 200 how did you arrive at 162

There are two main forms of ownership of agribusinesses identified in this study; these include sole proprietorship, which forms about 96%, and partnership, which is 4%. It is quite clear from the results above that sole proprietorship is the main type of ownership of micro and small agribusinesses in Northern Region.

The study identified the agribusiness activities listed in Table 4.3 below,

Table 4.3: Agribusiness Activities Identified

Agribusiness activity	Frequency	Percentage
Crop Farming	19	10.0
Agriculture services	4	2.1
Fish farming	1	0.5
Livestock farming	11	5.7
Hunting/Trapping/Game	1	0.5
Food manufacturing/Processing	46	24.1
Beverage manufacturing/Processing	3	1.6
Tobacco manufacturing/Processing	1	0.5
Retail of farm produce	105	55.0
Total	191	100

Why and how did you arrive at 191 if sample size is 200?

The results indicate that, retail of food is the major activity carried out by many agribusiness entrepreneurs. This as in table 4.3 above represents about 55% of the activities identified. Food manufacturing/processing and crop farming forms about 24% and 10% respectively, the rest are below 10%.

Objectives and Challenges of Micro and Small Agribusinesses.

The second objective of this study is to identify the objectives and challenges of micro and small agribusinesses and to rank them in order of importance. To achieve this objective the views of the entrepreneurs were sought. Table 4.4, 4.5 and 4.6 contain summary of the objectives and constraints, specifying the ranks of respondents. Concerning the non-financial measure of performance, the objectives of proprietors identified before the start of business is shown in table 4.4.

Table 4.4: Ranking of Objectives of Proprietors Identified Before Starting the Business (note: explain how you get so large figures as sum of ranks)

Objectives	Sum of Ranks	Ranking
Increasing security of household income	257	1
Increasing level of household income	298	2
Continue a family tradition/business	649	3
Satisfaction from running own business	709	4
To operate own business	872	5
To fully employ one self	883	6
Improving status in community	908	7
Limited income from other sources	1124	8
Achieving a flow of money quickly	1131	9
Investing in another business	1210	10
Limited other ways to earn income	1322	11

Note: this Table 4.4 is rather confusing e.g the ranking and the figures in the same column
 The objectives are ranked in order of importance from the most important (Increasing security of household income is ranked 1) to the least important (Limited other ways to earn income ranked 11). This is ranked using Kendall's coefficient of concordance sum of ranks for each objective. This is explained in section 3.5.2 of Chapter Three. **note: is there any Chapter in this write-up or its imported from another source?**

The satisfaction of the entrepreneur with regard to his or her objectives set was determined by the survey. This is shown in Table 4.5 a summary of appendix C. A score of 50% and above is considered the pass mark for all the columns. Those ones are bolded in Table 4.5.

256 **Table 4.5:** The Measure of Satisfaction of Entrepreneurs' Initial Business Objectives

Objectives	Satisfied (%)	Dissatisfied (%)	Neither Satisfied Nor Dissatisfied (%)
To increase level of household income:	62.9	18.5	16.9
To increase security of household income:	62.4	18.5	17.4
To expand business:	36	19.1	42.1
To enter new markets:	19.1	15.2	54.5
To start another business:	10.7	11.8	64
To enhance quality of products:	20.3	8.4	53.9
To improve status in community:	33.2	2.2	56.2
To increase share of existing markets:	35.9	10.1	46.6
To enhance business profitability:	50	21.9	23
To develop new products:	9	14.6	50.6
To invest in new equipment/tools:	5.1	19.1	45.5
To invest in new business facility:	10.7	18	52.2
To build the business:	38.7	14.1	40.5
To be an entrepreneur:	42.1	7.3	39.4
Free up time for leisure:	21.9	9	43.8
To understand consumer demand better:	25.3	5.6	55.6
To add value to things already produce:	19.6	12.4	55.1
To invest in another business:	15.2	12.9	60.1
Better fit with other business activities:	24.7	10.1	50
Satisfaction from running own business:	73.6	7.9	14.6

257 **note: the author should remove the tautology of "to"**

258 The study showed that some of the objectives set by proprietors of agribusiness were
 259 achieved as shown in Table 4.5 above. From a list of twenty objectives the study asked
 260 proprietors to identify the objectives they were satisfied with. This was categorized into
 261 four main categories. These include satisfied (Very Satisfied and Satisfied), Dissatisfied
 262 (Very Dissatisfied and Dissatisfied), and Neither Satisfied nor Dissatisfied. Each category
 263 is scored in percentages. Out of the twenty objectives that were listed, the study revealed
 264 that, only four objectives had a percentage score of 50% and above which the
 265 respondents are satisfied with. These are; **are to:-**

- 266 1. To increase level of household income 62.9%
- 267 2. To increase security of household income 62.4%
- 268 3. To enhance business profitability 50.0%
- 269 4. Satisfaction from running own business 73.6%

270 **note: to remove the tautology of 'to'**

271 Comparing these objectives to those identified and ranked during the start of business
 272 and objectives identified during operation of business (appendix B), it is clear that three
 273 out of the four topmost objectives were the same ones that entrepreneurs were satisfied
 274 with. Out of the twenty objectives, entrepreneurs were not certain with ten objectives as
 275 to whether they were satisfied with them or not. For the Dissatisfied column, none of the

objective scored up to the 50% mark. It is evident from the study that the entrepreneurs were generally satisfied with their performance since they were not dissatisfied with any of them. That is no objective scored a pass mark under the dissatisfied column. Challenges affecting performance of entrepreneurs are identified and listed. They are ranked in order of importance.

Table 4.6: Challenges that Affect Entrepreneurs Performance and their Ranking

Challenge	Sum of Ranks	Ranking
Access to working capital	282	1
Access to credit	395	2
Cost of credit	519	3
Financial obligation to family	544	4
Financial obligation to community	736	5
Consequences should the business fail	828	6
Keeping reliable records	927	7
Financial resources within business	1126	8
Access to business sport services	1173	9
Access to training courses	1277	10

Note: explain how you arrive at large figures as sum of ranks

From Table 4.6 above, the results show that, access to working capital, credit and cost of credit are the three topmost challenges to micro and small agribusinesses with access to training courses being the least in terms of their ranking. Using the Kendall's coefficient of concordance, the sum of their ranks is used to rank them as explained under 3.4.3.2. Rank 1 means the most important challenge to the least being ranked 10. Hence access to working capital, access to credit, and cost of credit are the most important challenges with access to training courses being the least important.

Validation of Hypothesis

The Kendall's coefficient of Concordance (W) was used to test the stated hypotheses: 3.4.3.2.

1. There is no agreement among the objectives identified by each entrepreneur in micro and small agribusiness.
2. There is no agreement among the challenges identified by each entrepreneur in micro and small agribusiness

For the first hypothesis, the F-statistic calculated is 174.88 compared to F-statistic ($F_{(10,132)}$) from the table which is 2.32 at 1% level of significance. Hence the null hypothesis is rejected in favor of the alternative hypothesis. This implies there is

Note: the hypotheses are not statistically put in a testable manner - it should be stated as 'there is no significant difference between and variable and could either be accepted or rejected at certain alpha value. Kendall concordance seem not a popular statistical technique

agreement among the objectives identified by entrepreneurs in micro and small agribusiness.

For the second hypothesis, the F-statistic calculated is 252.24 compared to F-statistic ($F_{(9,133)}$) from the table which is 2.41 at 1% level of significance. Hence the null hypothesis is rejected in favor of the alternative hypothesis. This implies there is agreement among the challenges identified by each entrepreneur in micro and small agribusiness.

Linkages between Micro and Small Agribusinesses.

The types of linkages that were identified between micro and small Agribusinesses is listed in table 4.7 whiles the forms of linkage agreement is presented in table 4.8.

Table 4.7: Types of linkages

Linkage type	Frequency	Percentage
Joint procurement of inputs	5	7.58
Joint production of inputs	1	1.52
Joint marketing of products	12	18.18
Savings	1	1.52
Sharing of equipments	4	6.06
Sharing of transportation	16	24.24
Obtaining credit	12	18.18
Contract supply	9	13.64
Sharing of storage facility	6	9.09
Total	66	100.

Out of the businesses sampled only 66 of them, forming about 37% were involved in some form of linkages. Majority of them were not involved in any form of linkages. Sharing of transportation has the highest score of 24% followed by joint marketing of inputs and obtaining credit with scores of 18%. Joint production of inputs and Savings has the lowest scores of about 1.5%.

The nature of linkage agreements is presented in table 4.8

Table 4.8. Forms of Linkage Agreements

Form	Frequency	Percentage
Informal agreements	41	87.23
Cooperatives	1	2.13
Associations	5	10.64
Total	47	100

The linkages identified rank “informal agreements” highest with about 87%, Cooperatives 2%, and Associations 11%. This means that most agribusiness linkage agreements take informal forms.

Sources of Capital to Micro and Small Agribusinesses.

The study identified sources of start up capital for micro and small agribusinesses as shown in Table 4.9 below. This is to identify the main source of start up capital to micro and small agribusinesses.

Table 4.9 Start up Capital

Source	Frequency	Percent
Loan/credit	14	8.24
Household savings	136	80
Proceeds from family farm	6	3.5
Proceeds from non-farm business	4	2.35
Gift from friends/family	10	5.88
Total	170	100

Household savings is a major source of start up capital for most micro and small agribusinesses forming about 80%. Those who had access to credit accounted for about 8% of those surveyed. Hence credit is a big constraint to micro and small agribusinesses as reported by Parker *et al*, (1995) and Aryeetey *et al* (1994).

Again, the sources of working capital to the businesses were identified and shown in Table 4.10 This was to identify the main source of working capital to micro and small agribusinesses.

Table 4.10 Working Capital

Source	Frequency	Percent
Proceeds from business	137	84.05
Friends/Relatives	2	1.23
Loan from rural or community bank	12	7.36
Loan from money-lender	1	0.61
Suppliers	8	4.91
NGO support	1	0.61

Majority of agribusinesses obtain their working capital from proceeds of the business they are currently operating. It forms about 84% of the sources identified. The others form less than 10% of those sampled as is shown in Table 4.10. Hence proceeds from the business are the major source of working capital to micro and small agribusinesses.

Business Features

The status of micro and small agribusinesses with regard to registration, savings, record keeping and business account holding was established.

Every business is expected to be registered. This is to help in the smooth running of the business. Table 4.11 below shows the status of businesses with regards to registration

Table 4.11 Business Registration Status

Registered Status	Frequency	Percent
Not registered	105	59
Registered with Registrar General	0	0
Registered with district assembly	70	39.3
Not Applicable	3	1.7

Most micro and small agribusinesses that is about (59%) of the sampled SME's are not registered with just a few (39%) registered with the District Assembly. None was registered with the Registrar General as shown in Table 4.11. The implication is that since these, micro and small scale agribusinesses are not formally registered they are unable to access credit as in Parker *et al*, 1995 and Aryeetey *et al*, 1994.

It is expected that every good business should have a Business account. This is to help in the prudent management of business funds.

Table 4.12 Business Account Status

Account status	Frequency	Percent
No bank account	108	60.7
Business bank account	15	8.4
Use personal bank account for business	54	30.3

Most of the businesses operate without a business account (about 61%). Personal bank accounts are mostly used for business and this forms about 30% of SME's sampled as shown in Table 4.12 above. Their inability to access bank loans could be attributed to the fact that most of them have no business bank accounts.

It is expected that every good business should have a Business account where it saves. This is to help the business raise funds for expansion and other activities as explained above.

Table 4.13 Business Savings Status

	Frequency	Percent
No	95	53.4
Yes	83	46.6

Out of the businesses surveyed, the result indicates that, about 47% of them save, implying that a majority (about 53%) of them do not save. This can be attributed to the SME's not having bank accounts. Hence their inability to access credit for expansion.

Record keeping is an important activity in operating a business. The study sought to assess the extent to which micro and small agribusinesses are involved in keeping records.

Table 4.14 Record Keeping status

	Frequency	Percent
YES	43	24.7
NO	131	75.3
Total	174	100

Out of the businesses surveyed about 25 percent of them keep records of their activities and about 75 percent of them do not keep records. Lack of data regarding the operation of the business does not encourage financial institutions to advance credit to them. The records help in monitoring and tracking the activities of the business. These can even help in planning of the business.

Conclusions Conclusion

The following conclusions and policy recommendations are made based on the results of the study.

Women are more involved in micro and small agribusinesses than men. Du Rietz and Henrekson (2000) reported that female-owned businesses were just as successful as their male counterparts when size and sector are controlled.

(Note: conclusion does not require citation of authors as if a literature review)

There are two main forms of ownership of agribusinesses identified in this study; these include sole proprietorship, which forms about 96%, and partnership, which is 4%. It is quite clear from the results above that sole proprietorship is the main type of ownership of micro and small agribusinesses in Northern Region. However I will recommend that government should formulate and recommend policies that will encourage partnership because of its enormous advantages.

The result showed that the four most important objectives of the entrepreneurs were achieved. This include; To increase level of household income 62.9%, To increase security of household income 62.4%, To enhance business profitability 50.0%, and Satisfaction from running own business 73.6%. The most important challenges identified are, working capital, Access to credit, and Cost of credit. The result showed that there are a number of linkages that exist in micro and small agribusiness. These mostly take the form of cooperatives, association and informal agreements. It is evident in this study that entrepreneurs do not go into business solely because of financial reward.

The main source of startup capital to these businesses is household savings, as access to finance remained a dominant constraint to small-scale enterprises in Northern Ghana.

(Aryeetey et al, 1994). Proceeds from business are the main source of working capital for the businesses.

The challenges identified to have effects on the performance of agribusinesses are ranked in order of priority from top to bottom with access to working capital being the greatest problem (1) and access to training courses being the least among them.

The forms of linkages that were identified include sharing of transportation which has the highest score of 24% followed by joint marketing of inputs and obtaining credit with score of 18%. Joint procurement of inputs and Savings have the lowest score of 1.5%. Most of these linkages were in the form of informal agreements.

Household savings is a major source of start up capital for most micro and small agribusinesses about 76% with loans being about 8%. Majority of agribusinesses obtain their running capital from proceeds from business. It forms about 85% of the sources identified.

Most businesses are not registered; only 39% were registered with the District Assembly. Most of the businesses operate without a business account. Personal bank accounts are mostly used for businesses. This forms about 30% of people surveyed. Out of the businesses surveyed, about 47% of them save; implying that a majority of them do not save. Only about 24.7% of businesses surveyed kept records.

In conclusion the result of this study has clearly shown that **Note: why saying in conclusion here again?**

Further work is, however, required to capture the effects of farm extension, accessibility to credit and soil conditions when examining the determinants of profit efficiencies. On the non-financial measures of performance more detailed analysis should be done to compare the performance of men and women entrepreneurs.

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