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Financial Benchmarking of Small and Medium Agro-Processing and Value Addition Agribusiness Enterprises in Kenya

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Abstract
Financial benchmarking involves financial analysis of an enterprise and comparing the findings to other enterprises in order to assess the competitiveness, productivity and efficiency of such enterprises. The goal is to establish the deviations from average norms and identify entry point for improving an enterprise performance. The study sought to compile some financial ratios that can be used in benchmarking different categories of small and medium agro-enterprises (SMAEs) and value addition agribusinesses in Kenya. The ratios documented include; variable input, paid labour, power and machinery, rent and finance, sundry overheads and net income Twenty enterprises from different sub-sectors were analysed. The sub-sectors analysed included dairy, fruits and vegetables, cereals, other livestock products, and edible nuts and oils. The data used was from an earlier findings of appraisal of SMAEs activities by the Ministry of Agriculture in Kenya. The study also has compiled findings on assessment of the improvement in performance of some of the thirteen enterprises that were benchmarked using some earlier given ratios and which were capacity build based on the deviations identified during benchmarking.
The study shows some variations in the ratios across the different sectors and the level of operation. It also indicates that financial benchmarking can provide an entry point to upscaling the performance of SMAEs. The data acquired in the study can be used to benchmark both small and medium agro-processing and value addition agribuiness enterprises.

Keywords: SMAEs, financial, performance, benchmarking.

1. Introduction

Small and medium enterprises (SMEs) have a key role in transition and developing countries. The SMEs sector is a major contributer to these economies, and typically account for more than 90% of all firms outside the agricultural sector, therefore constituting a major source of employment and generating significant domestic and export earnings. The SME development has been seen as a key instrument in poverty reduction efforts (OECD, 2004).
The agricultural sector is a major driver of Kenya's economic growth; contributing 25% to the country's GDP, without counting indirect contributions through links with manufacturing, transport and communication, wholesale and retail and financial services. The agribusiness sector in particular has been cited as 'the sleeping giant that could realise the potential of the agriculture sector'. Agro-industrial activities create jobs in the places where people actually live and work. For example, most potential agro-processing and value addition sites in Kenya are located in rural areas; this is where processing materials are produced and where 78 percent of Kenya's people live (GoK, 2012).
Small-medium agro-enterprises (SMAEs) or entrepreneurs who work individually in the agricultural sector face huge challenges and do not realise the benefits experienced by well organized businesses that co-operate and collaborate across the value chain. One area identified by the Kenya Agribusiness Strategy of 2012 to overcome such challenges is to make agribusiness systems more competitive, easily adaptable and 'fleet-footed' in order to deal with dynamic markets and the opportunities they bring. One way to achieve

this is for the enterprises to continuously analyse and improve cost structures for processes in order to achieve higher efficiencies and to improve agribusiness competitiveness. These organizations also need to be supported to reach economies of scale and undertake self-regulation. The enterprises need to gauge their performance with the best practices and lead performers in the industry.

Small and medium enterprises operate in isolation and are in most cases not aware of what is happening in their industry, both locally and internationaly. This limits the SMEs competitivenes and could deter the enterprises growth. For continuous improvement, performance and change in environment business, small and medium enterprises have to benchmark themselves with the best in the industry practices and with best performance (Suttapong & Zhilong, 2012).

Benchmarking is the process of comparing the performance criteria and business processes of an enterprise to other businesses within their trade. By comparing the enterprises in a network, the entrepreneur will be able to establish what the average norms are and identify where enterprise are under performing when compared to the norm. According to Wahab and Rahim (2013), benchmarking is vital in facing new challenges and opportunities for success in productivity and profitability. Financial benchmarking is especially attractive and probably one of the most commonly used benchmarking concepts (Marina V. 2014). Financial benchmarking involves financial analysis of an enterprise and comparing the findings to other enterprises in order to assess the competitiveness, productivity and efficiency of an outlet. Different benchmarking ratios have been adopted for different studies. For example Profit Mastery (2016) used the ratios of cost of goods sold, gross margin, staff cost, operating expenses and owner's profit in a study to establish benchmark for evaluating the financial performance of individual franchises. National Good Food Network (NGFN), (2014) also used cost of goods sold, cost of sales, overhead costs, labour and net income in a food hub benchmarking study.

The aim of this paper is to illustrate that financial benchmarking can be used to improve SMAEs operational management and efficiencies and illustrates the need and means of developing the knowledge and ability of such enterprises and entreprenuers to enable them measure performance and assess their financial position. It also shows that benchmarking enhances the overall business performance realized by the SMAEs by helping to change business and management practices that are not value adding. The study also gives some indicative financial bench marking ratios of various cost and income categories of small and medium enterprises.

2. Methodology

The study analysizes the financial performance of some selected enterprises that were supported by the Ministry of Agriculture in Kenya. The study data is drawn from a report of business appraisals that were undertaken on February 26th to 27th 2013, in Nakuru and in Embu, and which involved twenty SMAEs. It seeks to provide some financial performance comparison and benchmarking statistics on the identified enterprises. It also analysizes the effect of capacity development support aimed at improving the selected enterprises performance; these enterprises had been subjected to a performance appraisal and benchmarking in 2009.

The enterprises had been taken through self-assessment of their business health by looking at the margin analysis, profitability analysis, unit cost analysis and a summary of their financial performance. This study analysis the findings and categorizes the results in terms of scale of operation; small scale or medium scale and the sector; either dairy, fruits and vegetables, cereals, other livestock or edible nuts and oils. The cost and income proportion were analysed as a ratio of total sales. The categories of costs and income analysed were; net income, variable input costs, paid labour, power and machinery, rent and finance and sundry overheads.: The net income in this case is calculated as total sales less variable cost and expenses (fixed and overheads).

3. Results and discussion

The twenty enterprises had been selected through the Ministry of Agriculture staff and were those enterprises that had potential for upscaling. The proportion of identified SMAEs from the various sectors were as in figure 1:

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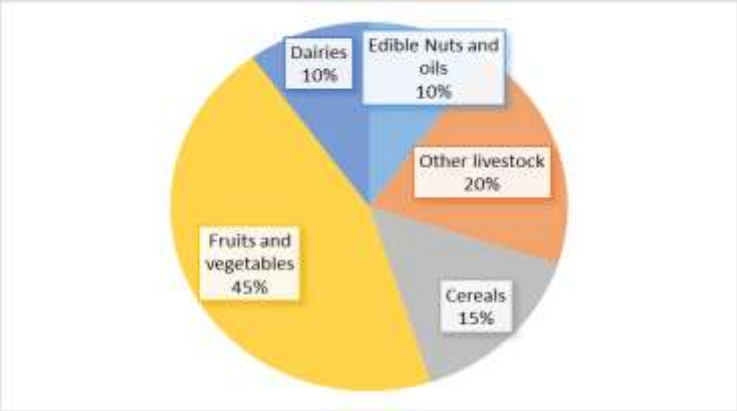

Figure 1: Proportion of selected enterprises and their sectors

Source: Ndirangu, 2013

3.1 Categorisation and turnovers of enterprises

The definition of Small and medium-sized enterprises (SMEs) varies by country and could be based on sales (turnover or output) or on number of employees (OECD, 2004), (Wahab and Rahim 2013). In these study the enterprise were categorised based on the value of turnover or output per year, with those with output below US$ 10,000 p.a being categorised as small scale and those above this being categorised as medium scale. The classification of micro, small and medium scale adopted by Kenya government was found not be ideal for analysing the growth of agribusiness enterprises. Kenya's Micro and Small Enterprises (MSE) Bill 2012 defines micro enterprises as those with turnover of about US$ 4,850 p.a and employing 1-9 people and small scale as those with turnover of between US$ 4,850 to 48,500 or employing 10-50 people. Medium scale enterprise are meant to be those with 51-100 people (UNDP, 2015). Using such range would limit the differentiation of the enterprises under study given the high levels of turnovers in such categorisation.

Table 1: The selected enterprise, products, scale and the turnover

Enterprise	Main products	Turnover p.a (US$)	Scale
Dairy			
D 1	Mozzarella cheese	105,882.4	Medium
D 2	Paneer cheese	58,235.3	Medium
Fruits and Vegetables			
FV 1	Strawberry fruits and juice	784.3	Small
FV 2	Dried mango flakes	1,274.5	Small
FV 3	Sun dried tomatoes	18,627.5	Medium
FV 4	Dried stinging nettle leaves	6,795.3	Small
FV 5	Banana wine and macadamia	23,529.4	Medium
FV 6	Fruit juices and jams	6,776.5	Small
FV 7	Fruit juices	61,176.5	Medium
FV 8	Dried mango flakes	7,902.0	Small
FV 9	Dried mango flakes	2,856.3	Small
Cereals			
C 1	Cereal flours and herbs	50,188.2	Medium
C 2	Cereal flours	48,520.1	Medium
C 3	Cereal Porridge flour	61,176.5	Medium
Other Livestock products			
L 1	Dried beef and chicken meat	4,902.0	Small

L 2	Fresh beef	84,343.1	Medium
L 3	Honey	26,470.6	Medium
L 4	Rabbit meat and sausages	1,905.9	Small
Nuts and oils			
NO 1	Peanut Butter	8,776.5	Small
NO 2	Sunflower oil and cake	21,422.5	Medium

Source: Ndirangu, 2013

The average variable input cost, paid labour cost, power and machinery cost, rent and finance cost, sundry costs and net income, each as proportion of total sales, were calculated for the various types of enterprises and scale of operation and are indicated in table 2.

Table 2: Enterprises comparative proportion of various costs

	Variable Input Costs	**Paid Labour**	**Power & Machinery**	**Rent & Finance**	**Sundry Overheads**	**Net Income**
Dairy						
Small scale	-	-	-	-	-	-
Medium scale	69.0	6.9	0.2	0.7	1.7	21.6
Fruits and vegetables						
Small scale	39.3	34.8	6.7	4.3	6.4	8.3
Medium scale	38.5	13.2	7.0	9.6	1.6	30.1
Cereals						
Small scale	-	-	-	-	-	-
Medium scale	58.3	9.6	2.2	1.5	5.3	23.1
Other livestock products						
Small scale	44.5	18.6	10.8	5.1	3.0	18.1
Medium scale	31.8	19.9	13.6	1.1	9.7	24.1
Edible Oils and nuts						
Small scale	28.3	32.2	10.2	13.4	4.9	10.9
Medium scale	46.7	9	1	16.6	10	16.5

Source: Ndirangu, 2013

The net income for medium scale enterprise ranged from 16.5 to 30.1%, for all sectors, with an average of 23.1%. For small scale the average net income ranged between 8.3 to 18.1% with an average of 12.4%. The high net income in medium scale enterprises could be attributed to economies of scale and probable experience in running of the businesses or the better average operations norms. The data for each cost unit can help identify at which point the enterprise is under performing when compared to the norm of medium scale enterprises, and help small-scale enterprises benchmark with the medium scale enterprises. The analysed data is useful for helping business improve their operations; for example the small scale edible oils and nuts enterprises have a high proportion of their cost going to paid labour compared to medium scale enterprises, and such enterprises can be advised to reduce such cost through hiring of essential labour for increased returns.

The calculated proportion of variuos cost categories were also compared with some earlier given ratios ranges; <30-35% for variable input costs; 15-17.5% for paid labour; 15-17.5% for power and machinery; <15% for rent and finance; <5% for sundry overheads; and >15% for net income as a proportion of the output. The values calculated deviated from these ranges in a number of cases (table 2). The analysis also indicates that different sectors have different proportions of the various cost categories and net income. The study identified that:

- The proprtion of variable input cost for the cereals is at 58.3% way above the given range of 30%-35% . Cereal processing is material dependent with little value addition and therefore only little cost goes into other cost elements.

- The dairy sector is material reliant and the value addition cost is relatively lower than in most other sectors; therefore the dairy enterprises have high proportion of variable input (69%). The labour and other operation costs are lower in this sector.

- The SMAEs in fruits and vegetable sub-sector had varied proportion of costs in the different cost categories. This could be attributed to the diversity in products and the raw materials. Those SMAEs dealing with raw materials such as vegetables, mangoes, stinging nettle leaves, tomatoes, and raw bananas had on average relatively high proportion of input costs.

- On edible oils and nuts the two SMAEs had relative differences in the various cost categories and this could be due to the fact that they deal with different raw materials and products. Other factors could be; NO1 hires machinery for processing its products while NO2 utilizes its own machinery. NO2 also has relatively high production than NO1 and could have been benefiting from economies of scale

- With other livestock value addition activities, the profitability of 75% of the enterprises is above the recommended minimum value. The four SMAEs though dealing with similar sub sector of livestock have different products that are also added value differently. L2 that slaughters animals has most of its costs in labour and machinery, while L1, L4 and L3 have high proportion of their cost in raw material acquisition. Also in this sector, the SMAEs that have slaughtering as the key activity have the labour cost relatively higher than that of other SMAEs.

The values relate with other studies, for example in the NGFN (2014) food hub benchmarking study the labour and net income ratios were 18% and up to 25% respectively. Beside variation between sectors, the values are expected to vary between countries given varied costs of power, labour, raw material costs amongst other factors. Awasthi D *et al.*, (2006) values for an Indian enterprise engaged in processing of vegetables, spices and tubers and with annual sales of US$ 33,800 (thus medium scale) indicate 10.3% as proportion of net income, 4.1% for sundry overheads, 2.9% for rent and finance, 6.9 for % labour, 14.8% for power and machinery and 61% for variable input.

3.2 Applying Financial Bench marking on the SMAEs

A total of thirteen SMAEs, out of of the twenty listed in tables 1 and 2 had been assessed in an initial aapraisal. The exercise involved a participatory approach where the SMAEs assessed themselves and benchmarked against some identified proportion of various cost categories and net income. Each SMAE completed the task using its own business records and compared its proportions against earlier discussed ratios; <30-35% for variable input costs; 15-17.5% for paid labour; 15-17.5% for power and machinery; <15% for rent and finance; <5% for sundry overheads; and >15% for net income. Each of these costs and revenue was worked as a ratio of the output. The enterprise with deviations from any of these measures or with wide variations compared to other enterprises, identified areas of improvement and developed their upgrading plans which were then supported by the Ministry of Agriculture.

Five demand-driven technical and business management training modules derived from priority topics identified in the business appraisals were then designed and delivered in a capacity-building programme for SMAEs. This included capacity building of SMAEs to strengthen their business management skills and their operations. Trainings were done on; business appraisal, planning and management, post-harvest management and value adding technologies; product quality, safety, certification and traceability; logistics management and efficiency; human resource management and marketing . A “learning-by-doing” approach was adopted to strengthen the capacity of the SMAEs.

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The ratios identified in the initial appraisal for the thirteen enterprises have then been compared with those in tables 1 and 2 and which were dtermined at the end of the project.

The net income changes from 2009 to 2013 were only gathered for four enterprises and are as illustrated in figure 2.

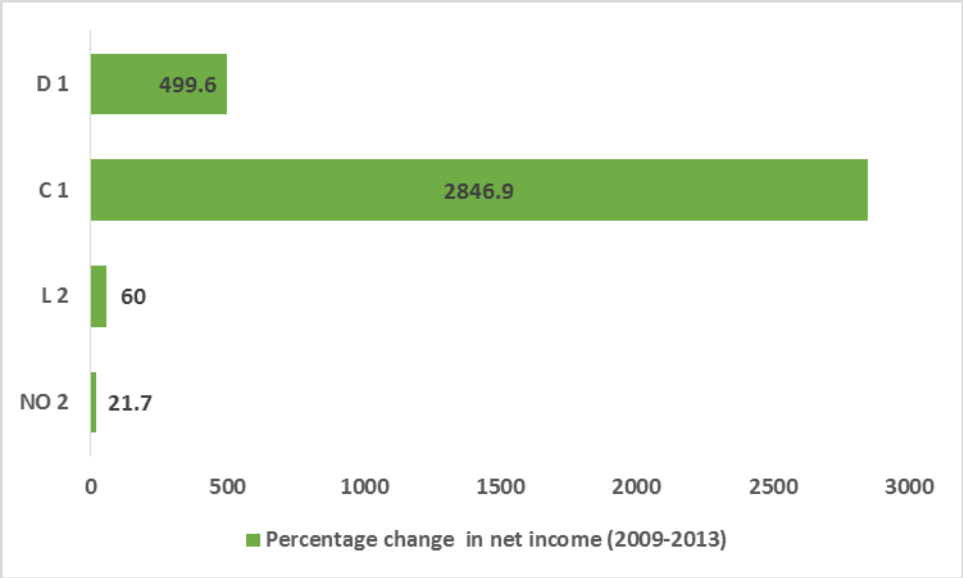

Figure 2: Changes in net income and return on investment of the SMAEs

Source: Ndirangu, 2013

From 2009 to 2013, the net income of NO2 increased by 21.7%. As a proportion of total sales it increased from 12% to 16.5%. The enterprise was able to reduce the proportion of input cost from 58% to 46.7%, and labour from 12% to 9%. However the proportion of cost of rent and finance and sundry overheads increased.

For L2, though the net income increased by 60%, its proportion to sales reduced from 54% to 14.4%. In the initial evaluation, some cost seemed to have been omitted or under estimated. The biggest change in costs was for labour (increasing from 3% to 29.9%), power and machinery (that changed from 0% to 21%) and sundry overheads (that increased from 0% to 15.4%)

C1 had proportion of net income increase from 6% to 16.4% and this could have come about due to reduced costs in raw materials (which reduced from 61% to 57.8%), power and Machinery (which reduced from 13% to 1.65%), rent and finance (which reduced from 13% to 0.195%). The net income increased substantially by 2847%.

The net income of D1 increased by 499.1%, and its proportion to sale increased from 7% to 22.4%. To achieve this the enterprises had reduced cost of raw materials from 72% to 64.6%, labour cost from 9% to 8.3%, power and machinery cost from 1% to 0.25% and sundry overheads from 8% to 3.3%.

4.0 Conclusions

The study has summarised some practical average proportion values of various cost and income categories that can be used to assess the performance of upcoming SMAEs. This categories of ratios are for variable input, paid labour, power and machinery, rent and finance, sundry overheads, and net income. As from the study the proportion of the different ratios varies depending on the type of enterprise. The agro-processing enterprises for which ratios have been identified include: dairy products, fruits and vegetables, other livestock, edible nuts and oils and cereals. Table 1 and 2 can also be used to compare the ratios for specific value addition activities

The study also indicates that financial benchmarking through analysis of SMAEs ratios can be used to capacity build enterprises to improve their performance.

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