



P-ISSN: 2349-8528
 E-ISSN: 2321-4902
 IJCS 2017; 5(4): 286-290
 © 2017 JEZS
 Received: 08-05-2017
 Accepted: 10-06-2017

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International Journal of Chemical Studies

Financial performance and economic viability of cashewnut processing units in Kolhapur district

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Abstract

The Kolhapur district was producing good amount of cashewnut. The annual cashew production of district was 12,420 metric tons. Due to 'National Horticulture Mission' and 'Cashew Development Program' number of cashew processing units has been increased.

There are about 70 cashewnut processing units in Kolhapur district. From this 20 per cent of the cashew processing units were selected randomly for the study. The number of units grouped under small, medium and large processing units based on the per day processing capacity.

The capacity utilization in cashewnut processing units was to the extent of 66.73 per cent of the installed capacity. The solvency ratios were better in medium and large processing units because of high net profit and equity participation. Similarly liquidity ratios were higher in medium and large processing units employing satisfactory position with good velocity of conversion of current assets into cash particularly in case of large processing units. Turnover ratios indicate higher efficiency in large processing units as compared to medium and small units. break-even point in cashew-nut processing units was worked out to be 1459.89 quintal, which was found to be 491.63 quintal in small processing units, 1421.56 quintals in medium processing units and 4944.59 quintals in large processing units. At overall level NPW was worked out to be 60.39 Rs. lakh at 15 per cent rate, However BCR is 1.05 and IRR was 31.24.

Keywords: Capacity utilization, financial performance and economic viability.

1. Introduction

Cashewnut is one of the agricultural produce of commercial importance. Cashew (*Anacardium occidentale* L.) a native of Brazil was introduced in India by the Portuguese

Cashew kernel obtained after processing of raw nut is the economical part known for its high nutritive value, delicious taste, rich in protein, fats and also good source of mineral and vitamins. It is zero cholesterol nuts, as cashew kernels contain 21 per cent protein and 47 per cent of fat of which 82 per cent is unsaturated fatty acids, which are easy to digest. Kernels are also rich source of minerals like calcium, phosphorus and iron. It contains 22 per cent carbohydrates with a right combination of amino acids and it is nutritionally at par with milk, egg and meat without disadvantages of the food of animal origin.

Majority of cashew (96 per cent) produced in Brazil, Africa and India, but most of them are processed in either India or Brazil. Major buyers of cashew kernels are countries with high incomes, where cashew kernels are regarded as a luxury food and quality is the prime determinant of price.

During the year 2014-2015, India exported 1,18,930 M.T. of cashew kernels. Cashew occupies an area of 10.11 lakh hectares in the country for the year 2014-2015 with a production of 7.53 lakh M.T. Maharashtra rank first in area and also rank first in production with 2.43 lakh M.T. Maharashtra is a much advanced state for horticulture with nearly 15.49 lakh ha. area under fruit crops of which, cashew constitutes 1.84 lakh ha. Recently cashewnut processing industry has been flourishing in Kolhapur district due to various government schemes and programme. The suitable environmental conditions for cashew cultivations are the natural gift for the people of Kolhapur district. The presence of cashew has made strong positive impact on the life of the hilly poor people. In Kolhapur district Chandgad, Ajara and Gadhinglaj tahsils contribute about 3700 ha. under cashew cultivation. Agro-units play an important role in economic development, which lead to an efficient decentralization of the economy. therefore the study was carried out on "Economic analysis of cashewnut processing units in Kolhapur district." With the following objectives

Objectives

To assess the financial performance of cashewnut processing units.

The findings under the study will be helpful to different agencies involved in processing of cashewnuts and marketing of cashew kernels for planning of their future policies. It will also provide necessary feed-back to cashew units, policy makers in formulating the plans and policies for the development of cashew processing. The study will be useful to the Government and other institutions from the view of providing proper basic amenities like transport, storage and finance. The study will be very useful for new entrepreneurs to decide products to be processed after studying its benefits and will also be helpful to other investigators and research workers to know the existing position of cashewnut processing in Kolhapur district of Maharashtra state.

Methodology

1. Selection of study area

In the western Maharashtra region particularly Kolhapur district having maximum area under cashew production. The Kolhapur district was producing good amount of cashewnut which was the raw material for cashewnut processing units. To get acquainted with various dimensions of cashewnut processing in Kolhapur district in different sizes of processing units, a study was necessary. Hence Kolhapur district was selected purposively.

2. Selection of sample

From the study area i.e. Kolhapur district a list of cashew processing units was obtained from the District Industrial Centre (DIC) and Superintendent District Agriculture Officer (SDAO) Kolhapur.

a) Selection of processing units

The distribution of cashewnut processing units on the basis of per day processing capacity i.e. Small scale (below 500 kg), medium scale (500 kg to 1000kg) and large scale (above 1000 kg) cashewnut processing unit. There were 70 cashew nut processing units in Kolhapur district as per the list obtained. From each category, 20 per cent units was selected randomly. Thus, the final sample was 14 cashewnut processing units from different categories.

b) Collection of data

The detailed information required for the study was collected from primary and secondary sources in order to accomplish the various objectives of the study.

3. Analysis of data

In order to fulfill the objectives of the study, the collected data was analyzed by using appropriate techniques and tools.

a) Simple Statistical analysis

The data was summarized with the help of statistical tools like averages and percentages to obtain meaningful results.

b) Financial ratios analysis

In this study the ratio analysis technique had been mostly relied upon the test of solvency, liquidity, profitability and turnover of the cashewnut processing units.

1) Test of solvency

The solvency ratios of the cashew processing units were indicate the ability of the unit to meet its medium term and short term obligations. Two solvency ratios were worked out. Such as,

- a. Ratio of total liability to owned funds
- b. Fixed assets to owned funds ratio

2) Test of liquidity

The liquidity ratios measure the ability of the cashewnut processing units to immediate maturing obligations. Three types of ratios was calculated in study.

- a. Ratio of liquid assets to total assets
- b. Ratio of current assets to current liabilities
- c. Acid test ratio

3) Test of profitability

The profitability ratio is a meaningful measurement used to diagnose the financial status of the cashewnut processing units and overall efficiency.

- a. Net profit to total assets ratio
- b. Net profit to owned funds ratio
- c. Net profit to fixed assets ratio

4) Test of turnover

These ratios express the relationship between the level of sales and investment in various assets.

- a. Stock turnover ratio
- b. Working capital turnover ratio
- c. Fixed assets turnover ratio
- d. Total assets turnover ratio

5) Economic viability of processing unit

a. NPV (Net Present Value)

NPV was used in capital budgeting to analyze the profitability of an investment or project.

b. BCR (Benefit Cost Ratio)

A ratio attempting to identify the relationship between the costs and benefits of a proposed project.

c. IRR (Internal Rate of Return)

The discount rate often used in capital budgeting that makes the net present value of all cash flows from a particular project equal to zero.

d. BEP (Break Even Point)

In general, the point at which gains equal losses. At break-even point, the revenues of the business are equal its total costs and its contribution margin equals its total fixed costs.

Result and discussion

1. Classification of cashewnut processing units

Table 1: Classification of cashewnut processing units

Group	Installed capacity (Kg/day)	Total No. of factories	No. of factories studied	Actual working capacity (Kg/ day)
Small	Bellow 500	35	7	252
Medium	500-1000	25	5	579
Large	Above1000	10	2	1924
Total		70	14	

The distribution of cashewnut processing units on the basis of per day processing capacity ie. Small scale (below 500 kg), medium scale (500 kg to 1000kg) and large scale (above 1000 kg) cashewnut processing unit

2. Performance of cashewnut processing units

Capacity utilization, financial ratio analysis and economic viability ratio are considered as most useful techniques in

evaluating the performance of the different categories of cashewnut processing units.

2.1 Capacity utilization in cashewnut processing units

The installed and utilized capacity of the cashew processing units is presented in Table 2.1.

Table 1: Capacity utilization of cashewnut processing units

Sr. No	Particulars	Size of processing units			
		Small	Medium	Large	Overall
1	Installed capacity per day (Kg)	385.71	860	2750	892.86
2	No. of working days	212.86	258.6	295	240.93
3	Annual installed capacity (Kg)	82102.04	222396	811250	236371.02
4	Annual quantity processed (Kg)	53670.41	149729	567728	161413.92
5	Quantity processed per day (Kg)	252.14	579	1924.5	607.79
6	Capacity utilization (Percentage)	65.37	67.33	69.98	66.73

The annual overall installed capacity of the cashew processing unit was 2,36,371.02 kg., but these processing units processed only 1,61,413.92 kg of cashew nuts in a year. Thus, the overall picture of capacity utilization in relation to installed capacity during 2014-2015 indicated that only 66.73 per cent of the total capacity was utilized. On an average the processing units worked for 240.93 days in a year. Thus, their installed capacity per day was 892.86 kg, However the capacity per day was utilized only 607.79 kg. However, the proportion of capacity utilization by percentage was observed to be higher in large processing units which accounting 69.98 per cent of the installed capacity as compared to small and medium processing units that were 65.37 per cent and 67.33 per cent respectively. This revealed that capacity utilization was better in large size processing units. The installed capacity was high in large processing units and low in small

processing units which were directly related to the amount of fixed capital invested.

2.2 Financial performance of cashewnut processing units

The financial performance of the cashewnut processing units was studied by using different ratios viz. solvency ratios, liquidity ratios, profitability ratios and turnover ratios. To determine the solvency position of the cashew processing units, two -ratios namely, total liabilities to owned funds and fixed assets to owned funds ratio were worked out. The ratio of total liabilities to owned funds reflected the amount of money the processing units owes to its creditors as against the money invested by the owners of the enterprise, that is, the extent of debts per rupee of owned funds. The ratios liabilities to owned funds and fixed assets to owned funds were considered.

Table 2: Solvency ratio and liquidity ratio of processing units

Sl. No	Particulars	Size of processing unit			
		Small	Medium	Large	Overall
1)	Solvency ratio				
a)	Total liabilities to owned fund	7.31	10.75	15.57	9.72
b)	Fixed asset to owned fund	0.59	0.75	0.54	0.64
2)	Liquidity ratio				
a)	Liquid asset to total asset	0.45	0.59	0.65	0.53
b)	Current asset to current liabilities	1.05	2.40	2.80	1.78
c)	Acid test ratio	0.48	0.74	2.10	0.80

At the overall level the ratio over the year 2014-2015 was observed to be 9.72. For the small size processing units the average ratio was 7.31, while in medium units was 10.75 and in the large units it was 15.57 during the same period.

The ratio of fixed assets to owned funds was observed to be 0.64 at an overall level. Similarly the average ratio for small, medium and large scale processing units was observed to be 0.59, 0.75 and 0.54 respectively.

The ratio of total liabilities to owned funds on an average at the overall level, worked out to 9.72, which indicated that for every rupee of owned funds, Rs. 9.72 worth of external funds was used. The average ratio was 7.31, 10.75 and 15.57 in small, medium and large processing units, respectively. Which indicated that large amount of external funds was borrowed by the large units as compared to small and medium units. This might be due to high cost involved for purchase of large quantity of raw material.

Tests of liquidity were framed to test the ability of the processing units to meet the current financial obligations. At the overall level, the liquid assets to total assets the ratio was 0.53, which was acceptable for a processing industry, which indicated that they maintained 53 per cent of their total assets in the liquid form during the study period, in order to meet immediate financial requirement, for purchase of raw materials, payment of wages and other expenses. Similarly, the said ratio in small units was 0.45, indicating only 45 per cent of liquid assets maintained in liquid form. However, medium and large processing units maintained 59 per cent and 65 per cent of their total fixed assets in the form of liquid asset. Hence, the performance of medium and large units with respect to liquidity was found to be satisfactory. So, the small processing units should increase their strength.

Table 3: Profitability ratio and turnover ratio of processing units

Sl. No.	Particulars	Size of processing unit			
		Small	Medium	Large	Overall
1)	Profitability ratio				
a)	Net profit to total asset	0.13	0.16	0.22	0.15
b)	Net profit to fixed asset	1.07	1.33	1.80	1.27
c)	Net profit to owned fund	0.63	0.99	0.97	0.81
2)	Turnover ratio				
a)	Stock turnover	6.12	6.07	8.50	6.44
b)	Working capital turn over	1.20	1.26	1.30	1.24
c)	Fixed asset turnover	7.32	6.58	9.02	7.30
d)	Total asset turnover	0.89	0.79	1.10	0.88

The profitability ratios were used to analyze the overall profitability or efficiency of the business organizations. The average ratio for the processing units was found to be, 0.15, indicating 15 per cent rate of return on assets. It meant that the processing units at the overall level were able to generate 15 per cent profit on total assets. The ratio of net profits to fixed assets was worked out to determine the income yielding capacity of the fixed assets. However, the rate of return on assets in small, medium and large units was 13 per cent, 16 per cent and 22 per cent, respectively. The ratio of net profits to owned funds, at overall level was positive (0.81). Similarly it was positive in all the size groups of processing units. It was 0.63 in small, 0.99 in medium and 0.97 in large processing units. This indicated that all the processing units were in a position to protect their equity and generate income on equity.

The operational efficiency of the processing units was compared by using the indicators such as stock turnover, working capital turnover, fixed assets turnover and total assets turnover ratio.

On an average this ratio was 6.44, which was 6.12, 6.07 and 8.50 in small, medium and large processing units, respectively.

The net working capital turnover ratio was worked out to study the relationship between sales and working capital. This ratio measured the efficiency with which the working capital was employed in the processing units. Generally, higher the turnover, greater will be the efficiency and rate of profits. At the overall level, on an average this ratio was 1.24, indicating that average turnover per rupee of working capital was Rs. 1.24. The rate of turnover to working capital was high (1.30) in large units as compared to medium and small units. This might be because of high rate of turnover due to more proportion of working capital, in the total assets held by them, whereas the ratio was little low (1.20) in small processing units due to less proportion of working capital in the total assets held by them. Hence, the small Processing units should try to increase the proportion of working capital in the total assets.

Fixed assets turnover ratio was used to study the utilization of fixed assets to generate sales. The ratio at an overall level, on an average was 7.30. This showed that the cashew processing units at an overall level generated a return of Rs. 7.30 for every rupee of fixed assets held. The average ratio was higher (9.02) in large processing units as compared to medium and small size units that were 6.58 and 7.32, respectively. It indicated higher efficiency in utilization of fixed assets to generate sales in large processing units as compared to medium and small units.

3 Economic viability of cashewnut processing units

The economic viability of the cashewnut processing units was studied by using different ratios viz. break-even point, net present value, benefit cost ratio, internal rate of returns.

Table 4: Economic viability of cashewnut processing units

Sl. No.	Particular	Size of processing units			
		Small	Medium	Large	Overall
1	Annual quantity processed (Qtl.)	536.70	1497.29	5677.28	1614.13
2	Kernel recovery per Qtl. raw nut processed(kg)	24.69	24.89	25.23	24.84
3	Gross returns (lakh Rs.)	86.31	242.86	916.85	260.87
4	Fixed cost (lakh Rs.)	5.92	16.79	103.55	23.75
5	Per kg variable cost (Rs.)	140.76	143.37	136.83	141.13
6	Price received per kg. processed raw nut(Rs.)	152.81	155.18	157.66	154.35
8	Breakeven point (Qtl.)	491.63	1421.56	4971.41	1463.72
9	Margin of safety (Qtl.)	45.07	75.72	705.87	150.41
10	NPV Rs lakh @ (15per cent)	10	28.99	315.24	60.39
11	BCR	1.04	1.04	1.12	1.05
12	IRR	28.12	30.46	44.11	31.24

In general, BEP is the point at which gains equal losses. At break-even point, the revenues of the business are equal its total costs and its contribution margin equals its total fixed costs. NPV is the difference between the present value of cash inflows and the present value of cash outflows. NPV is used in capital budgeting to analyze the profitability of an investment or project. BCR is a ratio attempting to identify the relationship between the costs and benefits of a proposed project.

IRR is the discount rate often used in capital budgeting that makes the net present value of all cash flows from a particular project equal to zero. The break- even point, NPV, IRR, BCR of cashew-nut processing units are estimated and presented in Table 3.

The overall level break-even point in cashew-nut processing units was 1459.89 quintal, which was 491.63 quintal in small processing units, 1421.56 quintals in medium processing units and 4944.59 quintals in large processing units and overall level NPV was worked out to be 60.39 at 15 per cent rate, where as the BCR was accounted to 1.05 and IRR was worked out to 31.24

Conclusions

The suitable environmental conditions for cashew cultivations are the natural gift for the farmer of Kolhapur district. The presence of cashew has made strong positive impact on the life of the hilly poor people. The development of cashewnut industry in this region leads the socio-economic development

of hilly area of the district. Therefore, cashewnut is the "WHITE GOLD" for the hilly people.

1. The solvency ratios were better in medium and large processing units because of high net profit and equity participation. Similarly liquidity ratios were higher in medium and large processing units employing satisfactory position with good velocity of conversion of current assets into cash particularly in case of large processing units.
2. Turnover ratios indicate higher efficiency in large processing units as compared to medium and small units.

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