Study No. 164

UNDERSTANDING THE GROWTH AND PROSPECTS OF AGRO-PROCESSING INDUSTRIES

(CONSOLIDATED REPORT FOR WEST BENGAL, BIHAR AND MAHARASHTRA)

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PREFACE

The study was undertaken at the instance of Directorate of Economics and Statistics, Ministry of Agriculture, Government of India, Krishi Bhavan, New Delhi as a center initiated coordinated study, the act of coordination being vested upon us. The study was conducted simultaneously in three states viz. West Bengal, Bihar and Maharashtra. The present study is a consolidated report based on the studies undertaken in these three states.

The study is based on both primary and secondary data. As far as secondary data is concerned, the study makes use of NSS data on un-organised manufacturing and Annual Survey of Industries (ASI) data for the organised segment. The primary data was collected from 30 sample processing units selecting at random proportionately spread over food and non-food processing segment of agro-based enterprises. Out of the total of 30units, 18 food processing units were selected and the rest 12 were from non-food processing segment of agro-based enterprises. In Bihar, however, the study was conducted with a sample of 27 processing units (18 food units and 9 non-food units). In selecting processing units, the food-processing activities were broadly divided into three categories viz. primary food processing units mainly grain processing units; spice and horticultural products and livestock based processing units including fish processing. Similarly, non-food processing units were broadly divided into four categories namely, textile products, wood and its products, paper and its products, leather and its products. For each category of enterprise, the dominant processing activity was chosen consulting available secondary data. Sample districts were identified on the basis of the concentration of the selected processing activities.

On the basis of secondary data, the study finds that the strength of agro-based industry is comparatively less than those of non-agro-based industries in the organised sector. However, in the un-organised segment, the dominance of agro-based industry is clearly noticed. Importantly, agro-based industry is largely a house of tiny and small enterprises.

Analysis of primary level survey data reveals that almost all the sample processing units were existing ones. In West Bengal, the average age of the unit varied from 3 to 22 years. The same ranged between 8 to 35 years in Bihar. In Maharashtra, the age of the unit varied from 25 to 60 years. It is also observed that investors are not keen on registering their units. Evidently, the processing units in West Bengal and Bihar are mostly un-registered units. In contrast, most of the sample units in Maharashtra are registered. Notably, OAME units in all the category of enterprises are seen to be unregistered in all the selected states.

A profile of the sample entrepreneurs of the processing units shows that educationally, majority of the entrepreneurs have their education attainment up to 10^{th} standard. However, entrepreneurs engaged in activities which needs technical know-

how are seen to be better educated. As majority of the processing units are existing units, the sample entrepreneurs have previous experience in the present activity. They are found to have learnt and followed the activity traditionally.

Within the category, the size of the investment varied increasingly with the size of the unit. In West Bengal, for all the processing units, the component of working capital got larger share in total investment. In two other states viz. Bihar and Maharashtra, the share of block capital is seen to be more as compared to working capital in majority of the units.

The level of working of the units varied from activity to activity depending on the availability of working capital and seasonality of the activity in terms of input availability and demand for output. Depending on the time taken for processing of the unit, the number of production cycles each unit completes is seen to be different being varied according to the type and size of the activity.

Sample food-processing units are in the main relatively smaller units and have the limited capacity to reach out to various markets. They do not have strong linkages with input-market, rather they have obtained raw materials from the producers directly. Non-food processing units however directly come in contact with the input-market through established trade/ market channel for procuring raw materials. It is only in Maharashtra, where all the units except the cashew units process the raw materials provided to them by the customers at their doorstep and thus do not have strong linkages with either input and output markets. As far as marketing of the produce is concerned, the unit owners (both food and non-food) in West Bengal are found to have linkage with various domestic markets stretching from the home district to various places all over the country apart from having their linkage with the local output-market. In Bihar and partly in Maharashtra, the unit owners marketed their produce in the terminal market through agents/ middlemen. As far as involvement in the export market is concerned, no processing unit in the sample except the DME units of fish processing activity in West Bengal has involvement in the export market.

With regard to the net income derived from the investment, it is observed that all the selected processing activities gave positive net income. The net income is found to have increased with the size of the investment in food-processing units in all the selected states. This particular pattern is not observed among the non-food processing units. With regard to employment, it is observed that labour employment increased with the increase in the size of the unit. Employment creation per 1000 rupees of investment does not indicate systematic pattern. That is, there is no one to one correspondence between the size of investment and employment.

An examination of primary level survey data reveals that processing units face problems in procurement of raw materials and in marketing of the processed products. Apart from the problem of inadequacy of raw materials throughout the year, the sample processing units faced one major problem of variability of prices of raw

materials. On account of variable prices of raw materials, the entrepreneurs find it difficult to fix up the prices of their processed products with the customers in advance. Reportedly, processing units also do not have strong information network to keep track of raw materials prices and availability. In the field of marketing, apart from the dependence on middlemen for marketing the product, the major problem faced by the processing units was reported to be the absence of information network for getting market conditions about the product.

The study thus suggests that apart from easing of infra-structural bottlenecks in the form of developing market infrastructure, roads and cold storage facility, public investment need to be stepped up in developing network linkages purveying information about raw materials prices and availability, marketing of the product, supply-demand condition and above all, technical know-how.

The study team associated with the study consisted of Dr. Jiban Kumar Ghosh, Fazlul Haque Khan and Mr. Vivekananda Datta. Dr. Jiban Kumar Ghosh shouldered the responsibility of conducting the study and took all the pains for consolidation of the report. Fazlul Haque Khan and Mr. Vivekananda Datta helped at the stage of tabulation of data. Sri Nityananda Maji performed the tedious job of typing. Munshi Abdule Khaleque also helped at the stage of typing. The secretarial assistance was received from Sarbasri D. Mondal, P. Das, A. R. Patra and P. Hazra.

On behalf of the centre, the undersigned takes the opportunity to thank the officials of the Government of West Bengal, Bihar and Maharashtra who spared time to give the AERCs necessary information in connection with the study. I am especially thankful to the heads of the participating centers viz. AERCs Bhagalpur and Pune for rendering their co-operation in carrying out the study. I also take this opportunity to thank the sample entrepreneurs of the processing units in the study area of the states of West Bengal, Bihar and Maharashtra for their cooperation at the time of collecting primary data.

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Chapter – I

Introduction

1.1: Background

Dependence on agricultural sector, particularly on crop cultivation has resulted in widespread unemployment and underemployment in the country. The agricultural sector is characterized by ever declining land-man ratio, predominance of small and fragment land holdings and increasing application of labour saving production technologies. Thus it is being increasingly realized now a days that the very capacity of the agricultural sector is not enough to absorb the growing labour force. While the labour absorptive capacity of agriculture tended to be limited, the growth of the labour-intensive rural agro-based non-farm sector is seen as a critical component of rural transformation. In the process, the major role is ascribed to manufacturing activity so as to take advantage of the vast potential rural demand for industrial goods. Government of India has been encouraging certain activities in the sphere of non-farm sector, agro-processing being one of them. Agro-processing is necessarily a process of value adding activity to agricultural production and thus makes agriculture a more effective contributor to industrial growth establishing agriculture-industry linkages. The growth in agro-based industries has a big potential to trigger development through adding value to the farmers' produce, generating employment opportunities and increasing farmers' income. This in turn motivates the farmers for better productivity and opens up possibilities of industrial development. The processed products also have a large export potential.

1.2: Need for the Present Study

Agro-processing involves transformation of the raw materials into final consumer goods or intermediate goods and thus results in increase in value addition. On the other side, the demand for processed food is increasing in recent years with the growth of population, rapid urbanization and changing life styles. Agro-processing industries thus offer enormous potential to boost an economy. In India, the processing units based on grains, horticultural products, livestock products, fish have ample opportunities. However such potential is hardly exploited. This underscores the need for undertaking the study.

Agro-processing industry in India is largely a house of small-scale enterprises. They are highly heterogeneous in terms of capital investment, technology in use, scale of operation, quality and quantum of output, composition and level of employment. More importantly, levels of productivity among tiny and small enterprises are also low. There must be a host of institutional, technological and marketing constraints that

are holding up productivity of the agro-industry units to low levels. There is therefore need to address these constraints so that productivity of the agro-industry sector may be improved. Moreover, the growth profile of the number of agro-based enterprises is uneven across the regions of India. As a whole, the strength of agro-based industry is comparatively less than those of non-agro-based industries. It is this trend in the growth of agro-based manufacturing enterprises calls for undertaking the study with the broad objective of studying the problems and prospects of agro-processing industries.

1.3: Objectives of the Study

The present study has been taken up keeping up the following objectives in mind.

1. To present a profile of the agro-processing industries and the recent trend.
2. To study the economics of agro-processing units.
3. To analyse the marketing behavior of agro-processed products.
4. To study the employment potential from agro-processing industries.
5. To analyse the constraints on acceleration of production.
6. To review the export performance of various agro-based commodities and constraints faced in accelerating the growth of export from the sector.

1.4: Data Base

The study is based on both secondary and primary data. In order to gain a comprehensive view of the agro-processing sector, the study makes use of secondary data such as the quinquennial National Sample Survey data on unorganized manufacturing and Annual Survey of Industries data for the organized segment. In India, bulk of the units in agro-processing sector are small and unregistered. Considering this, primary level data from the selected processing units are collected in order to capture the problems at the grass root level so that recommendation for policy formulation can be made for the promotion of agro-based industries. Since tiny and small-scale agro-based industrial enterprises are highly heterogeneous, the present study intends to look into each of the three sizes namely OAMEs, NDMEs and DMEs that are provided for in the NSS survey reports on unorganized manufacturing. Own account manufacturing enterprises (OAMEs) are those units which are run without the help of any hired worker. An enterprise run with the assistance of at least one hired worker employed on a fairly regular basis is called an establishment. An establishment that employs less than six workers is known as a Non-Directory Manufacturing Establishment (NDME) while the one employing a total of six or more workers is categorized as a Directory Manufacturing Establishment (DME). Directory manufacturing establishments with power employing ten or more workers and units without power employing twenty or more workers are categorized as organized manufacturing enterprises covered by Annual Survey of Industries. Our sample agro-

processing enterprises are mainly unorganized enterprises covering the three layers namely OAMEs, NDMEs and DMEs respectively.

1.5: Sampling Design, Methodology and Coverage of the Study

The study has been carried out in three selected states namely West Bengal, Bihar and Maharashtra. Primary data was collected from the selected agro-processing units. As the products of agro-industries are both edible and non-edible, the agro-industries are classified into agro-food industries (or food-processing industries) and agro non-food industries. Thus, in order to have a comprehensive and total view of agro-processing sector, primary data are collected from the selected processing units chosen from both agro-food industries and agro-non-food industries. Altogether, 30 sample processing units are studied in each state except in Bihar where 27 sample processing units are covered selecting at random proportionately spread over food and non-food processing segments of agro-based enterprises. Considering the dominance of food processing activity in the total number of agro-based industries, 18 processing units are selected within the group of food processing and the rest 12 are from non-food processing segment of agro-based enterprises. In case of Bihar however 9 units from non-food processing segment are selected. In selecting processing units, the food-processing activities are broadly divided into three categories viz. primary food processing units mainly grain processing units; spice and horticultural products and livestock based processing units including fish processing. Similarly, non-food processing units are broadly divided into four categories namely, textile products, wood and its products, paper and its products, leather and its products. For each category of enterprise, the dominant processing activity was selected consulting available secondary data. Sample districts are identified on the basis of the concentration of units of activities. In the case of food-processing component of agro-based enterprises, for each selected processing enterprise, six units of different sizes namely OAMEs, NDMEs and DMEs with their distribution as 3:2:1 are covered. Within non-food processing segment of agro-based industry, for each selected processing unit, three units of different sizes namely OAMEs, NDMEs and DMEs in the ratio of 1:1:1 are selected. The units in the suggested proportion could not be selected in Maharashtra due to non-availability of entrepreneurs of a particular category at the time of survey. Details of the sample processing units and the selected districts across the selected states are given below.

Sample Processing Units and the Selected Districts of the States Covered in the Study

Processing Activity	West Bengal		Bihar		Maharashtra	
	Selected District	Number of Sample Units	Selected District	Number of Sample Units	Selected District	Number of Sample Units
Food Processing:						
a) Grain processing units	Burdwan	6	Rohtas	6	Ratnagiri	6
b) Spice and horticultural products	Malda	6	Muzaffarpur	6	Ratnagiri	6
c) Livestock based processing units	South 24 parganas	6	Khagaria	6	Ratnagiri	6
Total		**18**		**18**		**18**
Non-food Processing:						
a) Textile products	North 24 parganas	3	Bhagalpur	3	Pune	3
b) Wood and its products	North 24 parganas	3	Patna	3	Pune	3
c) Paper and its products	North 24 parganas	3	Not covered	Not covered	Pune	3
d) Leather and its products	South 24 parganas	3	Patna	3	Mumbai City	3
Total		**12**		**9**		**12**
Total Sample Size		**30**		**27**		**30**

Primary data from the selected processing units are collected through canvassing structured schedule and questionnaire prepared for the purpose of the study. Data are analyzed through simple tabular analysis.

The present study has been proposed by the Agro-Economic Research Centre, Visva-Bharati, Santiniketan and undertaken at the instance of Directorate of Economics and Statistics, Ministry of Agriculture, Government of India. The study is conducted by the A.E.R.Cs Visva-Bharati, Bhagalpur and Pune in their target states viz. West Bengal, Bihar and Maharashtra respectively where A.E.R.C. Visva-Bharati played the leading role in organizing the study through conceptualizing, designing and coordinating the study across the participating centres. This is an consolidated study report based on the studies conducted by A.E.R.Cs Visva-Bharati, Bhagalpur and Pune.

The study is divided into seven chapters. Chapter-I on introduction spells out background, objectives, data-base, sampling design, methodology and coverage of the study. Chapter-II outlines the status of agro-based industries in the selected states. Chapter-III presents the profile of selected processing activities. Chapter-IV discusses the cost of investment and its financing. Chapter-V deals with the economics of investment in agro-processing units. Chapter-VI analyses the problems and prospects of agro-processing units. Finally, Chapter-VII recapitulates overall findings of the study and provides the broad policy implications emerging from the study.

Chapter – II

Status of Agro-based Industries

Agro-processing activity has long been influenced by a host of factors such as increasing human population, increase in incomes, the pace of urbanization, growing volume of commercialized agricultural products. On the other, gradual shift from field crop production to allied activities such as animal husbandry, fishing, forestry etc. has induced to diversify the base of agro-industrialization. Moreover, the widespread relaxation of trade and foreign direct investment restrictions after the implementation of economic reforms in July 1991, provided stimuli for capital investment in export oriented agro-based industries. Despite all these, our country is far from realizing the full potential of this sector. It is therefore necessary to have a close look at the growth and structure of agro-based manufacturing enterprises and to identify the rising and the declining segments of the industry to gain a purposeful policy perspective for the future. From this point of view, the present chapter intends to examine the present status of agro-based manufacturing industries in the selected states of West Bengal, Bihar and Maharashtra using data for organised and unorganised segments of manufacturing enterprises.

2.1: A Macro- view of Agro-based Industry in India

Given the structure of Indian economy with heavy weight attached to its agriculture, agro-based enterprises are dominating its industrial sector. In 2000-01, agro-based enterprises accounted for 87.20 percent of the total manufacturing industrial units (table-2.1.1).The dominance of agro-based industries featured prominently in the unorganised segment of Indian industry, more markedly in the rural areas. In rural sector, as many as 88.77 per cent of the un-organised manufacturing units was contributed by agro-based manufacturing enterprises. The situation is not markedly different in urban areas. In urban areas too, agro-based industry predominate with their 84.57 per cent share in the total number of unorganised manufacturing units. In short, agro-based industries dominate in the industrial sector of Indian economy, standing out more prominently in the rural sector of India.

Importantly, agro-based industry is largely confined to the unorganised segment of manufacturing enterprises largely featuring the characteristics of small and tiny enterprises. As table – 2.1.1 shows, in 2000-01, the unorganised segment of the agro-industrial enterprises had as many as 99.60 per cent of total agro-based manufacturing industrial units. Moreover, unorganised sector is in the main

Table – 2.1.1

Share of Agro-based Manufacturing Enterprises in the Organised and Unorganised Segments of India (2000-01)

Item	Percentage shares of agro-based manufacturing enterprises		
	Rural	Urban	Combined sectors
Share of agro-based industry within:			
Organised manufacturing	-	-	45.69
Unorganised manufacturing	88.77	84.57	87.52
Total manufacturing	-	-	87.20
Share of unorganised agro-based industries to total agro-based enterprises	-	-	99.60

Data Source: 1. For Unorganised sector National Sample Survey (NSS) 56th round July 2000-June 2001, Report no. 478(56/2.2/2), Ministry of Statistics and Programme Implementation, Government of India
2. For organised sector. Annual Survey of Industries 2000-01 vol. – 1, Government of India, Ministry of Statistics and Programme Implementation, Central Statistical Organization, Kolkata.

represented by agro-based industries with their relative share being 87.52 percent in total manufacturing units. In other words, analysis of the agro-based manufacturing enterprises is in the main an analysis of the unorganized manufacturing enterprises.

2.2: Nature, Composition and Trend in Agro-based Industries

West Bengal:

Given the structure of the Indian Economy, especially in view of the importance of agriculture in the national economy, agro-industry is expected to continue to be the dominant constituent of its industrial sector. The state of West Bengal however revealed an exception to this when we look at the Annual Survey of Industries data (table-2.2.1A) for the organised sector. Based on annual survey of industries data for the organized segment, it is found that the strength of agro-based industry is comparatively less than those of non-agro based industries in West Bengal. In the year 2000-01, the year for which the latest data are available, organised segment of agro-based industries shared 42.99 percent in terms of enterprises. For their non-agro based industries counterpart, the figure stood at 57.01 percent. Within the group of agro-based industries, food-processing industries predominate with their relative share being 57.62 percent in the total number of agro-based enterprises. During the concerned period between 1994-95 and 2000-01, food processing units in number increased by 38.57 per cent while in the corresponding period, the number of non-food processing industries grew at the rate of 10.78 per cent. Thus in terms of growth of enterprises, non-food processing industries, lagged behind food processing industries.

A close look at the compositional change of organised segment of manufacturing enterprises reveals that within the group of food-processing industries, manufacture of beverages, tobacco, and tobacco products increased at a fairly high rate, the percentage increase being 271.77 percent (table 2.2.1A) during the period under study. In the non-food processing segment, manufacturing of leather and its products recorded highest increase of 65.44 per cent followed by manufacture of textile products (8.70 per cent). Manufacture of paper and its products has recorded a decline in the number of enterprises by 4.94 per cent. Thus in the organised segment of agro-based manufacturing enterprises, food-processing and non food-processing units witnessed varying degree of increase during the 7 year period between 1994-95 and 2000-01. Clearly, in recent years beverages and tobacco have been surging ahead under the organised food processing component. Among the non-food processing enterprises, the number of units manufacturing leather products increased phenomenally during the reference period, although, the number of units manufacturing textile products increased their numerical strength during the same period. With relatively greater share of non-agro based manufacturing units, the organised segment of manufacturing witnessed a decline of 0.83 per cent in the number of non-agro based enterprises during the period between 1994-95 and 2000-01. In other words, the organised segment housing relatively larger sized enterprises is now tending to concentrate more and more on agro-based industrial enterprises witnessing varying degree of increase in the selected groups of enterprises during the concerned period.

Under the unorganised segment of manufacturing enterprises, the dominance of agro-based industries is featured prominently. In 2000-01, as many as 86.30 per cent of the total manufacturing units in the unorganized segment is contributed by agro-based manufacturing enterprises (table-2.2.1B). Moreover, unorganized sector is in the main represented by food-processing industries with their relative share in units being 59.37 per cent in the total agro-based industries. The growth profile of the manufacturing enterprises in the unorganized segment during the reference period between 1994-95 and 2000-01 reveals that while the number of agro-based industries increased at a fairly high rate with the percentage increase of 54.20 per cent, their non-agro based counterpart witnessed very small increase (percentage increase of 1.16 per cent) in the number of units. Within the group of agro-based manufacturing enterprises, food-processing and non-food processing enterprises recorded the varying degree of increase, the percentage increase being 56.07 per cent for food-processing industries and 51.53 per cent for non-food industries. Clearly, food-processing industries have grown faster than the non-food processing industries in the unorganized segment of manufacturing enterprises. It follows that the unorganized

sector is now tending to concentrate more and more on food-processing industries with 40.63 per cent share in units of its non-food processing counterpart. Under the unorganized manufacturing, changes in the number of enterprises engaged in the manufacture of beverages-tobacco during 1994-95/2000-01 was as high as 140.68 per cent against only 2.15 per cent for those engaged in manufacture of food-products (table-2.2.1B). Within the group of non-food processing unorganized agro-based enterprises, the number of units manufacturing textile products increased appreciably with the percentage change being 113.83 per cent during the period under study. The other segment of the non-food processing agro-based enterprises namely wood-based manufacturing units also recorded improvement in the number of units by 12.83 per cent during the post 1994-95 years. Unlike other components of non-food processing enterprises in the unorganized segment, number of units engaged in manufacture of paper and its products and those engaged in manufacturing leather and leather products declined by 21.47 per cent and 1.55 per cent respectively. The total effect of all these changing trends is that under the unorganized segment, agro-based industrial enterprises increased at a much faster rate than those of non-agro based industrial units. Within the group of agro-based enterprises, food-processing units increased their numerical strength appreciably. It was thus very similar to that observed in the organised segment in respect of compositional change of manufacturing enterprises during the reference period.

Bihar:

In Bihar, change in the number of working units for different categories of industries has been measured by taking into account data available for the concerned years 1994-95 and 2000-01 for the unorganized manufacturing sector furnished by National Sample Survey Organization. On having a look at the table-2.2.1B, it is clear that in the year 1994-95, agro based industries (including agro food and agro non-food) dominated sharing 53.00 per cent (7, 11,279) in the number of total working units while non-agro based industries shared 47.00 per cent of total agro based industries. Among the agro-based industries, the share of agro food processing industries was estimated to be higher (28.45 percent) than agro non-food processing industries (24.55 percent).

Data contained in the table for the year 2000-01 be taken significant decline in the number of working units under the groups of ‘agro food,’ ‘agro non-food’ and ‘non-agro based industries’ as compared to that of 1994-95. On overall level, though the decline was to the tune of 39.75 per cent, it varied from 93.15 per cent in case of manufacturing of leather and leather based products to a low of 17.14 per cent in case of textile and its products and 7.89 per cent for ‘total non-agro based industries.’ In the reference year, the share of non-agro based industries in Bihar is seen to have

made good efforts to surfeit the economy of Bihar by achieving expansion in size estimated at 5,80,974 (71.85 percent) (table 2.2.1B). However, decline in the number of working units based on agro-food (15.55percent) and agro non-food based processing activities (12.45percent), i.e., about 1.89 times less than the existing strength of 1994-95 suggest state of uncertainty in the field of unorganized manufacturing industries based on processing of agro food and agro non-food commodities (particularly OAMEs) during the period 1994-95 to 2000-01. Some other factors for this decline might be attributed to collapse of infrastructural facilities, lack of promotional policies for this sector, fall in demand of processed agro food and agro non-food and items (particularly in absence of standardization or brand name), poor power and 'law and order' positions in the state.

Maharashtra:

In Maharashtra, it is observed that the unorganised sector clearly dominates the organised sector as far as the number of the units is concerned in both the years. The number of all industries in the unorganised sector in the state is 46 and 66 times higher than those in the organised sector in 1994-95 and 2000-01 respectively. It can be seen that in the organized sector (table-2.2.1A), non agro-based industries are dominating with their share being around 70 percent. However, in the unorganised sector (table-2.2.1B), the agro-based industries are seen to be dominating the non agro-based industries and their number has greatly increased (92.87 percent) over the period whereas that of non agro-based industries has fallen (the percentage change being –19.98 over the period). Further, in the organised sector, within the agro-based industries, the share of food processing industries is observed to be around 30 percent in 1994-95 and has increased to 42.59 percent in 2000-01. This is because the number of food based industries has increased, however, that of all non food agro-based industries (except leather based industries) has decreased. In the unorganised sector, the share of food processing industries which was around 35.23 percent in 1994-95 has declined to 25.84 percent in 2000-01 as the number of non food agro-based industries has increased by a larger extent (120.82 percent as compared to 41.49 percent for the food processing industries). This is mainly due to the increase in the textiles related industries. Thus, the broad features of the industrial sector of the state of Maharashtra are that the food processing industries are growing at a faster pace considering both the sectors. Among the non food industries, wood and paper units are seen to have adversely affected in terms of numbers in both the sectors. However, the leather units have registered a positive increase in both the sectors.

Table -2.2.1A
Nature and Composition of Agro-based Industries in the Selected States: Organized Sector

(Numbers)

Sl. No	Industry	West Bengal			Bihar			Maharashtra		
		1994-95	2000-01	% Change	1994-95	2000-01	% Change	1994-95	2000-01	% Change
1	Manufacture of food products	965 (17.25)	1048 (17.20)	8.60	--	--	--	979 (5.25)	2146 (11.58)	119.20
2	Manufacture of beverages, tobacco and tobacco products	124 (2.22)	461 (7.57)	271.77	--	--	--	769 (4.12)	89 (0.48)	-88.37
3	**Food processing industries (1+2)**	1089 (19.47)	1509 (24.77)	38.57	--	--	--	1748 (9.37)	2235 (12.06)	30.84
4	Manufacture of textile & its products	322 (5.76)	350 (5.75)	8.70	--	--	--	2523 (13.52)	2065 (11.15)	-18.15
5	Manufacture of wood and wood products, furniture and fixtures	220 (3.93)	227 (3.73)	3.18	--	--	--	252 (1.35)	177 (0.96)	-29.76
6	Manufacture of paper & paper products, printing publishing & allied industries	324 (5.79)	308 (5.06)	-4.94	--	--	--	1217 (6.52)	652 (3.52)	-46.43
7	Manufacture of leather and leather and fur products (except repair)	136 (2.43)	225 (3.69)	65.44	--	--	--	75 (0.40)	119 (0.64)	58.67
8	**Non-food processing industries (4 to 7)**	1002 (17.92)	1110 (18.22)	10.78	--	--	--	4067 (21.79)	3013 (16.26)	-58.70
9	**Total agro-based industries (3+8)**	2091 (37.39)	2619 (42.99)	25.25	--	--	--	5815 (31.16)	5248 (28.33)	-27.87
10	**Total non-agro-based industries**	3502 (62.61)	3473 (57.01)	-0.83	--	--	--	12847 (68.84)	13278 (71.67)	27.16
11	**All industries (9+10)**	5593 (100.00)	6092 (100.00)	8.92	--	--	--	18662 (100.00)	18526 (100.00)	-0.71

Data Source: 1. Annual Survey of Industries (ASI) data for organised manufacturing

Note: Figures in brackets indicate percentages

Table -2.2.1B
Nature and Composition of Agro-based Industries in the Selected States: Un-organized Sector

(Numbers)

Sl. No	Industry	West Bengal			Bihar			Maharashtra		
		1994-95	2000-01	% Change	1994-95	2000-01	% Change	1994-95	2000-01	% Change
1	Manufacture of food products	550607 (28.84)	562432* (20.48)	2.15	278474 (20.75)	89634 (11.09)	-67.81	168179 (19.45)	232674 (18.78)	38.35
2	Manufacture of beverages, tobacco and tobacco products	350937 (18.38)	844643 (30.76)	140.68	103336 (7.70)	37264 (4.61)	-63.94	2566 (0.30)	8913 (0.72)	247.35
3	**Food processing industries (1+2)**	901544 (47.23)	1407075 (51.24)	56.07	381810 (28.45)	126898 (15.69)	-66.76	170745 (19.75)	241587 (19.50)	41.49
4	Manufacture of textile & its products	258428 (13.54)	552602 (20.12)	113.83	18117 (1.35)	15011 (1.86)	-17.14	80589 (9.32)	473040 (38.18)	486.98
5	Manufacture of wood and wood products, furniture and fixtures	326796 (17.12)	368717 (13.43)	12.83	255658 (19.05)	80939 (10.01)	-68.34	192460 (22.26)	180570 (14.58)	-6.18
6	Manufacture of paper & paper products, printing publishing & allied industries	39571 (2.07)	31074 (1.13)	-21.47	6710 (0.50)	1430 (17.68)	-78.69	18835 (2.18)	5604 (0.45)	-70.25
7	Manufacture of leather and leather and fur products (except repair)	10618 (0.56)	10453 (0.38)	-1.55	48984 (3.65)	3352 (0.41)	-93.15	22045 (2.55)	34012 (2.75)	54.29
8	**Non-food processing industries (4 to 7)**	635414 (33.29)	962846 (35.06)	51.53	329469 (24.55)	100732 (12.46)	-69.43	313929 (36.31)	693226 (55.96)	120.82
9	**Total agro-based industries (3+8)**	1536957 (80.51)	2369921 (86.30)	54.20	711279 (53.00)	227630 (28.15)	-68.00	484674 (56.05)	934813 (75.46)	92.87
10	**Total non-agro-based industries**	372027 (19.49)	376340 (13.70)	1.16	630756 (47.00)	580974 (71.85)	-07.89	380005 (43.95)	304068 (24.54)	-19.98
11	**All industries (9+10)**	1908984 (100.00)	2746261 (100.00)	43.86	1342035 (100.00)	808604 (100.00)	-39.75	864679 (100.00)	1238881 (100.00)	43.28

Data Source: 1. National Sample Survey (NSS) data for unorganised manufacturing

Note: The latest available NSS data for the unorganised segment is for the year 2000-01.

*for West Bengal Sl.No.1 includes beverages also,

Figures in brackets indicate percentages

The non agro-based industries have registered growth in the organised sector and have experienced a decline in the unorganised sector. On the whole, the unorganised sector is expanding whereas there is a definite decline in the size of the organised sector.

2.3: Structure of Agro-based Industries

So far the analysis has not looked into locational characteristics of enterprises. In fact, the rural sector lags behind the urban counterpart in respect of the availability of infra-structural and institutional support items. Accordingly, enterprises located in rural areas might suffer from special locational handicaps having important bearing on the performance of rural enterprising units. Moreover household based tiny and small enterprises might suffer from diseconomies of scale more acutely by rural enterprises than their urban counterparts. We thus need to look into locational characteristics of manufacturing enterprises as well as composition of enterprises in terms of three sub-groups within the unorganised sector namely OAMEs, NDMEs and DMEs both among the rural and urban enterprises.

2.3.1: Locational Characteristics of Enterprises

West Bengal:

Going by the distribution of enterprises as rural and urban in West Bengal it is apparent that unorganised manufacturing enterprises are mostly located in rural areas (table-2.3.1A). Considering all the manufacturing units together, the share of rural units accounted for 77.33 per cent in West Bengal as recorded in the year 2000-01. The proportion of rural units was comparatively higher (80.21 per cent) in the year 1994-95. A comparison of agro-based and non-agro based manufacturing enterprises reveals that a greater proportion of units (79.70 per cent) are located in rural areas in the case of agro-based industries as compared to non-agro based industries (62.39 per cent). Notably, however, non-agro based industries are tending to concentrate more in rural areas, the proportion of rural units being increased from 52.27 per cent in 1994-95 to 62.39 per cent in 2000-01. The position is markedly opposite in the case of agro-based enterprises. Within the group of agro-based manufacturing units, the differences in the rural-urban concentration between food-processing segment and non-food processing segment need to be stressed. The number of enterprises engaged in food-processing activities are located more (83.86 per cent) in rural areas as compared to their non-food processing counterpart (73.63 per cent). Among the non-food processing enterprises, units manufacturing wood-based products are extraordinarily located in rural areas (91.80 per cent) as compared to other components of non-food processing segment. In sum, given the dominance of agro-industrial enterprises in

Table: 2.3.1A
Characteristics of Enterprises by Rural-Urban Location in West Bengal: Unorganised Manufacturing Sector

	1994-95			2000-2001		
Description	Rural	Urban	Total	Rural	Urban	Total
Manufacture of food products	503759	46847	550607	495747*	66685*	562432*
	(91.49)	(8.51)	(100.00)	(88.14)	(11.86)	(100.00)
Manufacture of beverages, tobacco and	315424	35513	350937	684192**	160451**	844643**
tobacco products	(89.88)	(10.12)	(100.00)	(81.00)	(19.00)	(100.00)
Food processing industries	819183	82361	901544	1179939	227136	1407075
	(90.86)	(9.14)	(100.00)	(83.86)	(16.14)	(100.00)
Manufacture of textile & its products	203647	54781	258428	346237	206364	552602
	(78.80)	(21.20)	(100.00)	(62.66)	(37.34)	(100.00)
Manufacture of wood and wood	289394	37402	326796	338499	30218	368717
Products, furniture and fixtures	(88.55)	(11.45)	(100.00)	(91.80)	(8.20)	(100.00)
Manufacture of paper & paper products,	21437	18134	39571	20966	10108	31074
printing publishing & allied industries	(54.17)	(45.83)	(100.00)	(67.47)	(32.53)	(100.00)
Manufacture of leather and leather	3062	7556	10618	3230	7223	10453
and fur products(except repair)	(28.84)	(71.16)	(100.00)	(30.90)	(69.10)	(100.00)
Non-food processing industries	517540	117874	635414	708933	253913	962846
	(81.45)	(18.55)	(100.00)	(73.63)	(26.37)	(100.00)
Total agro-based industries	1336723	200235	1536957	1888872	481049	2369921
	(86.97)	(13.03)	(100.00)	(79.70)	(20.30)	(100.00)
Total non-agro-based industries	194460	177566	372027	234785	141555	376340
	(52.27)	(47.73)	(100.00)	(62.39)	(37.61)	(100.00)
All industries	1531183	377801	1908984	2123657	622603	2746261
	(80.21)	(19.79)	(100.00)	(77.33)	(22.67)	(100.00)

Data Source: National Sample Survey (NSS) data for unorganised manufacturing sector in India for the respective years
Note: Figures in brackets indicate percentages
*includes beverages also, **includes tobacco products

the unorganized sector, agro-based industry in the segment has a strong presence in the rural sector of West Bengal. In Bihar un-organised manufacturing sector data separately for rural and urban areas is not analyzed.

Maharashtra:

Table 2.3.1B shows the unorganised sector data for the rural and urban areas in Maharashtra. Overall, in the state, it is found that the rural sector is dominating the food processing sector as well as agro-based non food processing sector in both the years viz. 1994-95 and 2000-01. This indicates increased activity in the rural areas.

Table: 2.3.1B
Location-wise Estimated Number of Enterprises in Maharashtra : 1994-95 and 2000-01

	1994-95			2000-2001		
Description	Rural	Urban	Total	Rural	Urban	Total
Food Products	99117	60803	159920	151522	81155	232677
	(61.98)	(38.02)	(100.00)	(65.12)	(34.88)	(100.00)
Beverages, etc	388	6234	6622	593	8321	8914
	(5.86)	(94.14)	(100.00)	(6.65)	(93.36)	(100.00)
Food Processing	99505	67037	166542	152115	89476	241591
	(59.75)	(40.25)	(100.00)	(62.96)	(37.04)	(100.00)
Cotton-wool-jute textile	20722	48676	69398	31678	64969	96647
	(29.86)	(70.14)	(100.00)	(32.78)	(67.22)	(100.00)
Textile Products	130608	132409	263017	199663	176731	376394
	(49.66)	(50.34)	(100.00)	(53.05)	(46.95)	(100.00)
Wood and its Products	101070	19526	120596	154507	26062	180569
	(83.81)	(16.19)	(100.00)	(85.57)	(14.43)	(100.00)
Paper & its Products	226	3940	4206	346	5258	5604
	(5.37)	(94.63)	(100.00)	(6.17)	(93.83)	(100.00)
Leather & its Products	12880	10730	23610	19690	14322	34012
	(54.55)	(45.45)	(100.00)	(57.89)	(42.11)	(100.00)
Non-food Processing	265507	215280	480787	405884	287342	693226
	(55.22)	(44.78)	(100.00)	(58.55)	(41.45)	(100.00)
Total Agro-based	365013	282317	647330	557998	376817	934815
	(56.39)	(43.61)	(100.00)	(59.69)	(40.31)	(100.00)
Total Non-Agro-based	72017	145333	217350	110094	193981	304075
	(33.13)	(66.87)	(100.00)	(36.21)	(63.80)	(100.00)
All Industries	437030	427650	864680	668092	570798	1238890
	(50.54)	(49.46)	(100.00)	(53.93)	(46.07)	(100.00)

Data Source: National Sample Survey (NSS) data for unorganised manufacturing 1994-95 and 2000-01
Note: Figures in brackets indicate percentages

2.3.2: Type of Enterprises

Since tiny and small-scale enterprises are highly heterogeneous in terms of scale of operation, the size of capital investment and employment, it is necessary to have a look into different types of enterprises namely OAMEs, NDMEs and DMEs that are provided for the NSS Survey Reports on un-organised manufacturing.

West Bengal:

Table – 2.3.2A presents the structure of the un-organised sector manufacturing enterprises in terms of types of units, namely, OAMEs, NDMEs and DMEs in West Bengal. Evidently, the un-organised segment of manufacturing enterprises in West Bengal is preponderantly a house of small and tiny enterprises. For the whole of unorganized sector manufacturing enterprises, the proportion of OAMEs is much higher (89.59 per cent) as compared to NDMEs (7.78 per cent) and DMEs (2.63 per cent). Agro-based industries as a whole have as many as 92.57 per cent of the units working as OAMEs. Further, within the

group of agro-based industries, the share of OAMEs in the case of food processing sector units is seen to be 95.24 per cent as against the figure of 88.66 per cent for the non-food processing component. Thus within the unorganized agro-industrial segment, agro industry in general and its food processing component in particular are dominated by OAMEs clearly representing the house of household-based tiny and small enterprises.

Table-2.3.2A

Characteristics of Enterprises by type of Enterprise in the Unorganized Manufacturing Sector of West Bengal: 2000-01

Description	OAME	NDME	DME	Total
Food Products & Beverages	503716	50983	7734	562432
	(89.56)	(9.06)	(1.38)	(100.00)
Tobacco Products	836421	6127	2095	844643
	(99.03)	(0.73)	(0.25)	(100.00)
Food Processing	1340136	57110	9829	1407075
	(95.24)	(4.06)	(0.70)	(100.00)
Textile	478234	50082	24285	552602
	(86.54)	(9.06)	(4.39)	(100.00)
Wood & its products	352459	12963	3295	368717
	(95.59)	(3.52)	(0.89)	(100.00)
Paper & its products	20182	8276	2616	31074
	(64.95)	(26.63)	(8.42)	(100.00)
Leather & its products	2787	3662	4005	10453
	(26.66)	(35.03)	(38.31)	(100.00)
Non-Food Processing	853661	74983	34201	962846
	(88.66)	(7.79)	(3.55)	(100.00)
Total agro-based industries	2193798	132093	44030	2369921
	(92.57)	(5.57)	(1.86)	(100.00)
Total non-agro based industries	266528	81542	28270	376340
	(70.82)	(21.67)	(7.51)	(100.00)
All Industries	2460326	213635	72300	2746261
	(89.59)	(7.78)	(2.63)	(100.00)

Data Source: National Sample Survey (NSS) data for unorganised manufacturing sector in India, 2000-2001,
Note: Figures in brackets indicate percentages

Maharashtra:

When we look into the structure of unorganised sector industries in terms of various types of units such as OAMEs, NDMEs and DMEs in Maharashtra (table-2.3.2B, it can be observed that for almost all the segments of industries, OAMEs are the predominant category of units. In the case of agro-based industries the share of OAME units was 84.27 percent in 2000-01. Within the agro-based industries, food sector has 84.56 percent and non-food sector has 84.16 percent of the units working as OAMEs in the corresponding period. In the non-food processing segment where the OAME units are relatively small is paper and its products.

Table-2.3.2B
Estimated Number of Enterprises by Type of Enterprise in Maharashtra : 2000-01

Description	OAME	NDME	DME	Total
Food products	196259	29558	6861	232674
	(84.35)	(12.70)	(2.95)	(100.00)
Beverages, etc.	8039	80	794	8913
	(90.19)	(0.90)	(8.91)	(100.00)
Food Processing	204298	29639	7655	241587
	(84.56)	(12.27)	(3.17)	(100.00)
Cotton-wool-jute textile	54506	22642	19499	96647
	(56.40)	(23.43)	(20.18)	(100.00)
Textile products	335641	31651	9111	376393
	(89.17)	(8.41)	(2.42)	(100.00)
Wood & its products	136661	9482	3697	180570
	(91.20)	(6.33)	(2.47)	(100.00)
Paper & its products	2390	2035	1818	5604
	(38.28)	(32.60)	(29.12)	(100.00)
Leather & its products	26386	3292	1319	34012
	(85.12)	(10.62)	(4.26)	(100.00)
Non-Food Processing	555584	69103	35445	693227
	(84.16)	(10.47)	(5.37)	(100.00)
Total agro-based industries	759881	98741	43100	934814
	(84.27)	(10.95)	(4.78)	(100.00)
Total non-agro based industries	212984	71744	52448	304064
	(63.17)	(21.28)	(15.56)	(100.00)
All Industries	972865	170485	95548	1238878
	(78.53)	(13.76)	(7.71)	(100.00)

Data Source: National Sample Survey (NSS) data for unorganised manufacturing sector in India, 2000-2001,
Note: Figures in brackets indicate percentages

Chapter – III

A Profile of Selected Processing Activities

Apart from the use of secondary data on organised and un-organised manufacturing segment, primary data was collected from the selected processing units chosen from both agro-food industries and agro-non-food industries. All together, 30 sample processing units in the selected states (27 units in Bihar) was studied selecting at random spread over food and non-food processing segment of agro-based enterprises. This chapter presents a profile of sample entrepreneurs of agro-processing activities.

3.1: Selection of Activities

As the products of agro-industries are both edible and non-edible, the agro-based industries are classified into agro-food industries (or food-processing industries) and agro non-food industries. For the purpose of selection of activities, the food processing activities are broadly divided into three categories viz. primary food processing units mainly grain processing units; spice and horticultural products and livestock based processing units including fish processing. Similarly, non-food processing units are broadly divided into four categories namely, textile products, wood and its products, paper and its products, leather and its products. As the presence of any big/medium paper mill/paper based processing, enterprises could not be recorded in a good operative condition under public/private sector in Bihar, the study of agro non-food processing industries has been restricted to three types of activities/enterprises only. The details of the sample units chosen for the study in respect of West Bengal, Bihar and Maharashtra are given in tables – 3.1.1A, 3.1.1B and 3.1.1C respectively.

3.2: Profile of Sample Entrepreneurs of Agro-Processing Activities

3.2.1: Socio-Economic Profile of the Sample Entrepreneurs

The socio-economic profile of the sample entrepreneurs is analyzed by using the variables like social group, age, education, land-holding and previous experience. The following analyses present the socio-economic background of the sample entrepreneurs in the selected states of West Bengal, Bihar and Maharashtra.

West Bengal:

In West Bengal it is observed that majority of the sample entrepreneurs belong to the category “others” i.e. other than SC & ST and OBC (table-3.2.1A). It is only in the case of fish processing activity, majority of the entrepreneurs belong to SC & ST category. As may be noticed, entrepreneurs mostly belong to the

Table – 3.1.1A
District-wise and Activity-wise Selection of Sample Processing Units in West Bengal

(Numbers)

Processing Activity	Burdwan			Malda			North 24 Parganas			South 24 Parganas			Total			
	OAMME	NDME	DME	OAMME	NDME	DME	OAMME	NDME	DME	OAMME	NDME	DME	OAMME	NDME	DME	ALL
A) Food Processing																
1. Paddy Processing	3	2	1	-	-	-	-	-	-	-	-	-	3	2	1	6
2. Fruit (Mango) Processing	-	-	-	3	2	1	-	-	-	-	-	-	3	2	1	6
3. Fish Processing	-	-	-	-	-	-	-	-	-	3	2	1	3	2	1	6
Total	3	2	1	3	2	1	-	-	-	3	2	1	9	6	3	18
B) Non-Food Processing																
1. Paper Product	-	-	-	-	-	-	1	1	1	-	-	-	1	1	1	3
2. Jute-based Textile Product	-	-	-	-	-	-	1	1	1	-	-	-	1	1	1	3
3. Wood Product	-	-	-	-	-	-	1	1	1	-	-	-	1	1	1	3
4. Leather Product	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	3
Total	-	-	-	-	-	-	3	3	3	1	1	1	4	4	4	12
All Activities	3	2	1	3	2	1	3	3	3	4	3	2	13	10	7	30

Data Source: Primary survey data

Table No. 3.1.1B

District wise and Activity wise Selection of Sample Processing Units in Bihar (Number)

Processing Activity		District – I			District – II			District – III			District – IV			District – V			District - VI			Total			
		OAME	DME	NDME	OAME	DME	NDME	OAME	DME	NDME	OAME	DME	NDME	OAME	DME	NDME	OAME	DME	NDME	OAME	DME	NDME	Total
A.	Food Processing	03	01	02																			
1.	Paddy Based Processing Activity (Grain Processing Units, i.e., Rice Mill)																						
2.	Horticultural Products (Litchi Based)				03	01	02																
3.	Livestock Based Processing Units (Dairy Related Activity)							03	01	02													
B.	Non-Food Processing																						
1.	Textile Products (Silk Cloth Manufacturing)										01	01	01										
2.	Wood and Its Products													01	01	01							
3.	Leather and its Products (Footwear Making Activity)																01	01	01				
	All Activities	03	01	02	03	01	02	03	01	02	01	01	01	01	01	01	01	01	01	12	06	09	27

District – I :Represents Rohtas, District – II is meant for Muzaffarpur, District – III Khagaria, District – IV Signifies Bhagalpur, District – V Symbolizes Patna, District – VI is also meant for Patna district.

Table 3.1.1C: District wise and Activity wise Selection of Sample Processing Units in Maharashtra

(Numbers)

Processing Activity	Ratnagiri			Mumbai			Pune			Total			
	OAME	NDME	DME	OAME	NDME	DME	OAME	NDME	DME	OAME	NDME	DME	ALL
A) Food Processing													
1. Cashew	2	3	1	0	0	0	0	0	0	2	3	1	6
2. Fish	3	2	1	0	0	0	0	0	0	3	2	1	6
3. Rice Mill	3	2	1	0	0	0	0	0	0	3	2	1	6
Total	8	7	3	0	0	0	0	0	0	8	7	3	18
B) Non-Food Processing													
1. Leather	0	0	0	1	1	1	0	0	0	1	1	1	3
2. Paper	0	0	0	0	0	0	1	1	1	1	1	1	3
3. Textile	0	0	0	0	0	0	2	1	0	2	1	0	3
4. Wood	0	0	0	0	0	0	1	1	1	1	1	1	3
Total	0	0	0	1	1	1	4	3	2	5	4	3	12
All Activities	8	7	3	1	1	1	4	3	2	13	11	6	30

middle age group of 25-45 years age, here again, with the exception of fish processing units where sample entrepreneurs belong to the age group of 45-60 years. Notably, none of the sample entrepreneurs was below 25 years. The education of the entrepreneurs leaves a lot to be desired. It can be observed that majority of the entrepreneurs have studied only up to middle level i.e. up to 10^{th} standard. However, most of the entrepreneurs engaged in jute-based textile units are better educated having studied beyond 10^{th} standard. Average education level of the entrepreneurs of food processing units is observed to be relatively low and they have learnt the processing activity traditionally. As far as land holding is concerned, majority of the sample entrepreneurs engaged in food processing activity possessed some amount of land (less than 1ha) while entrepreneurs engaged in non-food processing activities, mostly do not possess land. Entrepreneurial households engaged in food processing activities have rural base and possess land combining both farm and non-farm activities. On the other hand, entrepreneurial households engaged in non-food processing activities are urban-based and do not possess land having the processing activity as the main occupation. The experience that the entrepreneurs had in their present activity is also discernible from table – 3.2.1A. It is observed that all the sample processing units covered under the study were existing ones. Thus it is found that all the sample entrepreneurs had previous experience/ knowledge ranging between 5 to 20 years. While majority of the entrepreneurs of the sample food processing units have learnt and followed the activity traditionally, majority of the entrepreneurs of

Table – 3.2.1A
Socio Economic Profile of the Sample Entrepreneurs in West Bengal

(Numbers)

Sl. No.	Variables	Category	Food Processing Units Reporting			Non-Food Processing Units Reporting			
			Processing Activity-I (Fruit) (6)	Processing Activity-II (Paddy) (6)	Processing Activity-III (Fish) (6)	Processing Activity-IV (Leather) (3)	Processing Activity-V (Paper) (3)	Processing Activity-VI (textile) (3)	Processing Activity-VII (Wood) (3)
1	Social Group	SC & ST	2 (33.33)	– (-)	4 (66.67)	1 (33.33)	1 (33.33)	1 (33.33)	– (-)
		OBC	– (-)	2 (33.33)	– (-)	– (-)	– (-)	– (-)	– (-)
		Others	4 (66.67)	4 (66.67)	2 (33.33)	2 (66.67)	2 (66.67)	2 (66.67)	3 (100.00)
2	Age (Yrs.)	<25	– (-)	– (-)	– (-)	– (-)	– (-)	– (-)	– (-)
		25-45	4 (66.67)	3 (50.00)	1 (16.67)	2 (66.67)	2 (66.67)	3 (100.00)	2 (66.67)
		45-60	2 (33.33)	3 (50.00)	5 (83.33)	1 (33.33)	1 (33.33)	– –	1 (33.33)
		>60	– (-)	– (-)	– (-)	– (-)	– (-)	– (-)	– (-)
3	Education	Illiterate	– (-)	– (-)	– (-)	– (-)	– (-)	– (-)	– (-)
		Up to 10th Standard	4 (66.67)	4 (66.67)	5 (83.33)	3 (100.00)	2 (66.67)	1 (33.33)	2 (66.67)
		Above 10th Standard	2 (33.33)	2 (33.33)	1 (16.67)	– –	1 (33.33)	2 (66.67)	1 (33.33)
		Tech Qualified	- (-)	– (-)	– (-)	– (-)	– (-)	– (-)	– (-)
4	Land Holding	Nil	1 (16.67)	– (-)	2 (33.33)	2 (66.67)	3 (100.00)	2 (66.67)	1 (33.33)
		<1 ha	2 (33.33)	3 (50.00)	3 (50.00)	1 (33.33)	– (-)	– (-)	1 (33.33)
		1-2 ha	2 (33.33)	2 (33.33)	1 (16.67)	– (-)	– (-)	1 (33.33)	1 (33.33)
		2-4 ha	1 (16.67)	1 (16.67)	– (-)	– (-)	– (-)	– (-)	– (-)
		4-10 ha	– (-)	– (-)	– (-)	– (-)	– (-)	– (-)	– (-)
		>10 ha	– (-)	– (-)	– (-)	– (-)	– (-)	– (-)	– (-)
		Secondary							

Contd table3.2.1A…

Contd table3.2.1A…

5	Previous Experience in Selected Activity	Nil	–	–	–	–	–	–	–
		<5 yrs.	–	–	–	–	–	1 (33.33)	–
		5-10 yrs.	3 (50.00)	1 (16.67)	– (-)	1 (33.33)	1 (33.33)	1 (33.33)	1 (33.33)
		10-20 yrs.	2 (33.33)	3 (50.00)	4 (66.67)	2 (66.67)	2 (66.67)	1 (33.33)	1 (33.33)
		20-30 yrs.	1 (16.67)	1 (16.67)	2 (33.33)	– (-)	– (-)	– (-)	1 (33.33)
		>30 yrs.	– (-)	1 (16.67)	– (-)	– (-)	– (-)	– (-)	– (-)
6	Nature of Experience	Learned Traditionally	3 (50.00)	4 (66.67)	3 (50.00)	– (-)	– (-)	– (-)	1 (33.33)
		Working Experience	2 (33.33)	1 (16.67)	2 (33.33)	1 (33.33)	1 (33.33)	1 (33.33)	2 (66.67)
		Trained	1 (16.67)	1 (16.67)	1 (16.67)	2 (66.67)	2 (66.67)	2 (66.67)	– (-)

Note : Figures in brackets indicate percentages

non-food processing units was found received institutionalized training and gained working experience in carrying out the activity.

Bihar:

In Bihar (table-3.2.1B), entrepreneurs who belong to the category of 'others' is reported in the case of food processing units while in the non-food processing segment, majority of the entrepreneurs reported to be SC and ST. As far as education is concerned, it can be observed that majority of entrepreneurs are literates. Many of them have taken education above 10^{th} standard in case of food processing units while majority of entrepreneurs have been educated upto the 10^{th} standard in case of non-food processing units. As far as land holding is concerned, it can be observed that entrepreneurs engaged in non-food processing agro-based activities possess relatively smaller amount of land between 1-2ha as compared to those of households engaged in food processing activities. It is only the entrepreneurs engaged in food processing activities mostly possess land 2ha and above those who are dependent upon agriculture for their survival. Further, it can be observed that majority of units are existing ones and the entrepreneurs have experience of more than 10 years. This is particularly observed in the case of dairy related processing units where the business is carried on traditionally and members of household have learnt business traditionally. Non-food processing units are

Table No. 3.2.1B
Socio Economic Profile of Sample Entrepreneurs in Bihar

(Numbers)

SN	Variables	Category	Food Processing Units Reporting			Non Food Processing Units Reporting		
			Processing Activity –I (6)	Processing Activity – II (6)	Processing Activity – III (6)	Processing Activity – IV (3)	Processing Activity – V (3)	Processing Activity – VI (3)
1.	Social Group	SC/ST	--	--	--	03 (Momin) (100.00)	--	03 (100.00)
		OBC	03 (50.00)	02 (33.34)	01 (16.66)	--	03 (100.00)	--
		Others	03 (50.00)	04 (66.66)	05 (83.34)	--	--	--
2.	Age (Years)	< 25						
		25-45	02 (33.34)	03 (50.00)	03 (50.00)	--	01 (33.33)	01 (33.33)
		45-60	03 (50.00)	02 (33.34)	03 (50.00)	02 (66.67)	02 (66.67)	02 (66.67)
		>60	01 (16.66)	01 (16.66)	--	01 (33.33)	--	--
3.	Education	Illiterate	--	--	01 (16.66)	--	--	--
		Up to 10th Standard	02 (33.34)	01 (16.66)	03 (50.00)	03 (100.00)	02 (66.67)	02 (66.67)
		Above 10th Standard	03 (50.00)	03 (50.00)	02 (33.34)	--	01 (33.33)	--
		Technically Qualified	01 (16.66)	02 (33.34)	--	--	--	01 (33.33)
4.	Land Holding	Nil	--	--	--	--	--	--
		< 1 ha	--	--	--	02 (66.67)	03 (100.00)	03 (100.00)
		1-2 ha	02 (33.34)	--	02 (33.34)	01 (33.33)	--	--
		2-4 ha	01 (16.66)	02 (33.34)	01 (16.66)	--	--	--
		4-10 ha	02 (33.34)	01 (16.66)	03 (50.00)	--	--	--
		>10 ha	01 (16.66)	03 (50.00)	--	--	--	--
		Secondary	--	--	--	--	--	--
5.	Previous Experience in Selected Activity	Nil	--	--	--	--	--	--
		< 5 years	--	--	--	--	--	--
		5-10 years	01 (16.67)	02 (33.33)	01 (16.66)	01 (33.33)	01 (33.33)	01 (33.34)
		10-20 yrs	03 (50.00)	04 (66.67)	02 (33.34)	01 (33.33)	02 (66.67)	01 (33.33)
		20-30 yrs	01 (16.66)	--	03 (50.00)	--	--	01 (33.33)
		>30 years	01 (16.67)	--	--	01 (33.34)	--	--
6.	Nature of Experience	Learned Traditionally	03 (50.00)	01 (16.66)	04 (66.67)	02 (66.67)	02 (66.67)	01 (33.33)
		Working Experience	03 (50.00)	04 (66.67)	02 (33.33)	01 (33.33)	01 (33.33)	01 (33.34)
		Trained	--	01 (16.67)	--	--	--	01 (33.33)

Note: Figures in brackets indicate percentages.

relatively new units although there are some instances of learning business activity traditionally.

Maharashtra:

In Maharashtra (table-3.2.1C), it can be seen that most of the entrepreneurs belong to the category 'others' which also includes people from other religions (e.g. Muslims which are involved in fish processing). 67 percent of the leather entrepreneurs belong to the SC/ST category as tanning of the animal skin has been the traditional business of this community. It is also interesting to note that only two entrepreneurs out of a total thirty belong to this particular category. This indicates lower occupational mobility in this particular community. As far as education is concerned, it can be observed that majority of the entrepreneurs are educated. Majority of them have been educated upto the 10th standard. It can also

Table – 3.2.1C
Socio Economic Profile of the Sample Entrepreneurs in Maharashtra

(Numbers)

Sl. No.	Variables	Category	Food Processing Units Reporting			Non-Food Processing Units Reporting			
			Processing Activity-I (Cashew) (6)	Processing Activity-II (Fish) (6)	Processing Activity-III (Rice Mill) (6)	Processing Activity-IV (Leather) (3)	Processing Activity-V (Paper) (3)	Processing Activity-VI (Textile) (3)	Processing Activity-VII (Wood) (3)
1	Social Group	SC & ST	— (-)	— (-)	— (-)	2 (67)	— (-)	— (-)	— (-)
		OBC	2 (33)	— (-)	5 (83)	— (-)	— (-)	1 (33)	1 (33)
		Others	4 (67)	6 (100)	1 (17)	1 (33)	3 (100)	2 (67)	2 (67)
2	Age (Yrs.)	<25	1 (17)	— (-)	1 (17)	— (-)	— (-)	— (-)	— (-)
		25-45	2 (33)	4 (67)	4 (67)	— (-)	— (-)	— (-)	2 (67)
		45-60	3 (50)	2 (33)	1 (17)	3 (100)	1 (33)	3 (100)	1 (33)
		>60	— (-)	— (-)	— (-)	— (-)	2 (67)	— (-)	— (-)
3	Education	Illiterate	— (-)	— (-)	— (-)	— (-)	— (-)	— (-)	— (-)
		Up to 10th Standard	2 (33)	6 (100)	2 (33)	3 (100)	2 (67)	3 (100)	3 (100)
		Above 10th Standard	3 (50)	— (-)	4 (67)	— (-)	1 (33)	— (-)	— (-)
		Tech Qualified	1 (17)	— (-)	— (-)	— (-)	— (-)	— (-)	— (-)

Contd table3.2.1C…

Contd table3.2.1C…

4	Land Holding	Nil	1 (17)	6 (100)	1 (17)	1 (33)	3 (100)	3 (100)	3 (100)
		<1 ha	3 (50)	– (-)	3 (50)	– (-)	– (-)	– (-)	– (-)
		1-2 ha	– (-)	– (-)	– (-)	2 (67)	– (-)	– (-)	– (-)
		2-4 ha	– (-)	– (-)	– (-)	– (-)	– (-)	– (-)	– (-)
		4-10 ha	2 (33)	– (-)	1 (17)	– (-)	– (-)	– (-)	– (-)
		>10 ha	– (-)	– (-)	1 (17)	– (-)	– (-)	– (-)	– (-)
		Secondary	–	–	–	–	–	–	–
5	Previous Experience in Selected Activity	Nil	3 (50)	– (-)	– (-)	– (-)	– (-)	1 (33)	– (-)
		<5 yrs.	2 (33)	– (-)	3 (50)	– (-)	– (-)	1 (33)	2 (67)
		5-10 yrs.	– (-)	– (-)	1 (17)	2 (67)	3 (100)	– (-)	– (-)
		10-20 yrs.	1 (17)	2 (33)	2 (33)	– (-)	– (-)	1 (33)	1 (33)
		20-30 yrs.	– (-)	2 (33)	– (-)	– (-)	– (-)	– (-)	– (-)
		>30 yrs.	– (-)	2 (33)	– (-)	1 (33)	– (-)	– (-)	– (-)
6	Nature of Experience	Learned Traditionally	– (-)	6 (100)	1 (17)	2 (67)	1 (33)	2 (67)	1 (33)
		Working Experience	– (-)	– (-)	3 (50)	– (-)	2 (67)	1 (33)	2 (67)
		Trained	6 (100)	– (-)	2 (33)	1 (33)	– (-)	– (-)	– (-)

Note : Figures in brackets indicate percentages

be observed that the entrepreneurs possessing cashew processing units, rice mills and paper-based (binding) units have taken education above 10th standard. Thus, the entrepreneurs engaged in activities which need technical know-how, relatively heavy investments in terms of machinery are seen to be better educated. As far as land holding size is concerned, it can be seen that urban-based households engaged in non-food processing agro-based activities do not possess land. It is only the households in rural areas of a Konkan engaged in cashew processing and rice milling possess land.

These households depend upon agriculture and agro-based activities for their survival and hence possesses land. Families engaged in fish processing also do not possess land. It is also observed that majority of the units are existing units and have experience of more than 5 to 10 years back. This is specifically true in case of fish and leather units as the business is carried on traditionally and hence the household members have learnt the business traditionally. It can be noted that the cashew units are the newly established units and all the entrepreneurs have been trained as running the business needs technical training and knowledge about the machinery.

3.2.2: Motivating Factors Behind Taking up the Business Activity

West Bengal:

The motivating factors influencing the investment decision of entrepreneurs in the selected processing activity were ascertained in course of primary survey of the sampling units. Major factors behind choosing the particular activity in West Bengal are presented in table – 3.2.2A. As may be seen from the table-3.2.2A, getting employment is the major motivating factor behind choosing the food processing activity (83.33 per cent) in West Bengal. The other equally important factor emerged was previous experience in the business activity which has motivated to carry on the activity traditionally (83.33 per cent). For non-food processing activities, the major factor which influenced the entrepreneurs to take up the activity was higher profit margin accruable from the activity (83.33 per cent). Existence of local demand for the product appeared to be the other equally important factor (83.33 per cent) for undertaking the activity. Again, nearly, 58.33 per cent of the entrepreneurs have reported previous experience as the motivating factor behind choosing the non-food processing activity.

Bihar:

The factors which have motivated the entrepreneurs to take up the business activity in Bihar are reported in table-3.2.2B. In case of food processing units majority of entrepreneurs reported having previous experience in the business that has motivated them to carry on business activity traditionally. However, majority of the entrepreneurs of non-food processing activities have reported higher profit margin as the motivating factor for undertaking the activity.

Maharashtra:

Table-3.2.2C shows the factors which motivated the entrepreneurs to take up the business in Maharashtra. It can be seen that majority of the entrepreneurs have reported getting employment as the motivating factor. Similarly majority has reported that previous experience in the business and traditional nature of the business has

motivated them to continue with activity. The units engaged in cashew processing have however reported other factors namely demonstration effect, higher profit margin as motivating factors as the units are newly established.

Table – 3.2.2A
Motivating Factors for the Sample Entrepreneurs in West Bengal

(Numbers)

Name of the Processing Activity	Type of enterprise (OAME/ NDME/ DME)	Entrepreneurs Reporting							
		Traditionally followed	Previous experience	Demonstration effect	Persuasion by others	Higher profit margin	Demand for the product	Lack of other avenues	To get employment
Fruit (mango) processing	OAME	3 (100.00)	2 (66.67)	2 (66.67)	– (--)	– (--)	– (--)	2 (66.67)	3 (100.00)
	NDME	1 (50.00)	1 (50.00)	1 (50.00)	1 (50.00)	1 (50.00)	2 (100.00)	– (--)	2 (100.00)
	DME	1 (100.00)	1 (100.00)	– (--)	– (--)	1 (100.00)	1 (100.00)	– (--)	– (--)
	All	5 (83.33)	4 (66.67)	3 (50.00)	1 (16.67)	2 (33.33)	3 (50.00)	2 (33.33)	5 (83.33)
Paddy processing	OAME	3 (100.00)	3 (100.00)	3 (100.00)	– (--)	– (--)	– (--)	2 (66.67)	3 (100.00)
	NDME	2 (100.00)	2 (100.00)	1 (50.00)	– (--)	– (--)	– (--)	1 (50.00)	2 (100.00)
	DME	– (--)	1 (100.00)	– (--)	– (--)	1 (100.00)	1 (100.00)	– (--)	– (--)
	All	5 (83.33)	6 (100.00)	4 (66.67)	– (--)	1 (16.67)	1 (16.67)	3 (50.00)	5 (83.33)
Fish processing	OAME	3 (100.00)	3 (100.00)	3 (100.00)	– (--)	– (--)	– (--)	2 (66.67)	3 (100.00)
	NDME	1 (50.00)	1 (50.00)	1 (50.00)	– (--)	– (--)	– (--)	1 (50.00)	2 (100.00)
	DME	– (--)	1 (100.00)	– (--)	– (--)	1 (100.00)	1 (100.00)	– (--)	– (--)
	All	4 (66.67)	5 (83.33)	4 (66.67)	– (--)	1 (16.67)	1 (16.67)	3 (50.00)	5 (83.33)
Leather and its products	OAME	1 (100.00)	1 (100.00)	1 (100.00)	– (--)	– (--)	– (--)	1 (100.00)	1 (100.00)
	NDME	– (--)	– (--)	1 (100.00)	1 (100.00)	1 (100.00)	1 (100.00)	– (--)	1 (100.00)
	DME	– (--)	1 (100.00)	– (--)	– (--)	1 (100.00)	1 (100.00)	– (--)	– (--)
	All	1 (33.33)	2 (66.67)	2 (66.67)	1 (33.33)	2 (66.67)	2 (66.67)	1 (33.33)	2 (66.67)

Contd.table-3.2.2A

Paper and its products	OAME	1 (100.00)	– (--)	– (--)	– (--)	1 (100.00)	1 (100.00)	– (--)	1 (100.00)
	NDME	– (--)	1 (100.00)	1 (100.00)	– (--)	1 (100.00)	1 (100.00)	– (--)	– (--)
	DME	1 (100.00)	– (--)	– (--)	– (--)	1 (100.00)	1 (100.00)	– (--)	– (--)
	All	2 (66.67)	1 (33.33)	1 (33.33)	– (--)	3 (100.00)	3 (100.00)	– (--)	1 (33.33)
Textile product (Jute)	OAME	– (--)	1 (100.00)	1 (100.00)	1 (100.00)	1 (100.00)	1 (100.00)	1 (100.00)	1 (100.00)
	NDME	– (--)	– (--)	1 (100.00)	– (--)	1 (100.00)	1 (100.00)	– (--)	– (--)
	DME	– (--)	1 (100.00)	1 (100.00)	– (--)	1 (100.00)	1 (100.00)	– (--)	– (--)
	All	– (--)	2 (66.67)	3 (100.00)	1 (33.33)	3 (100.00)	3 (100.00)	1 (33.33)	1 (33.33)
Wood and its products	OAME	1 (100.00)	1 (100.00)	– (--)	– (--)	– (--)	– (--)	1 (100.00)	1 (100.00)
	NDME	1 (100.00)	1 (100.00)	– (--)	– (--)	1 (--)	1 (--)	– (--)	1 (--)
	DME	– (--)	– (--)	– (--)	1 (100.00)	1 (100.00)	1 (100.00)	– (--)	– (--)
	All	2 (66.67)	2 (66.67)	– (--)	1 (33.33)	2 (66.67)	2 (66.67)	1 (33.33)	2 (66.67)
Note : Figures in brackets indicate percentages of total entrepreneurs in the category of enterprise.									

Table No. 3.2.2B
Motivating Factors for the Sample Entrepreneurs (Number) in Bihar

SN	Name of the Processing Activity	Type of Enterprise (OAME/ NDME/ DME)	Traditionally Followed (1)	Previous Experience (2)	Demonstration/ Effect (3)	Persuasion by Others (4)	Higher Profit Margin (5)	Demand for The Product (6)	Lack of other Avenues (7)	To get Employment (8)
A	**Food Processing**									
1.	Grain Processing Activity (Paddy)	OAME	1 (16.67)	1 (16.67)	--	--	--	--	1 (16.67)	-
		NDME	--	1 (16.67)	--	--	1 (1.65)	--	--	--
		DME	--	1 (16.67)	--	--	--	--	--	--
2.	Horticultural based Processing Activity (Litchi)	OAME	--	1 (16.67)	1 (16.67)	--	--	--	--	1 (16.66)
		NDME	1 (16.67)	--	--	--	--	1 (16.66)	--	--
		DME	--	--	--	--	1 (16.67)	--	--	--
3.	Livestock based Processing Activity (Dairy)	OAME	3 (50.00)	--	--	--	--	--	--	--
		NDME	--	--	--	--	1 (16.67)	1 (16.66)	--	--
		DME	--	1 (16.67)	--	--	--	--	--	--
B.	**Non-food Processing**									
1.	Textile based Processing Activity (Silk)	OAME	1 (33.33)	--	--	--	--	--	--	--
		NDME	--	--	--	--	--	1 (33.34)	--	--
		DME	--	--	--	--	1 (33.33)	--	--	--
2.	Wood based Processing Activity	OAME	1 (33.34)	--	--	--	--	--	--	--
		NDME	--	--	--	--	1 (33.33)	--	--	--
		DME	--	--	--	--	1 (33.33)	--	--	--
3.	Leather based Processing Activity (Shoe/Foot wearing)	OAME	1 (33.33)	--	--	--	--	--	--	--
		NDME	--	1 (33.34)	--	--	--	--	--	--
		DME	--	--	--	--	1 (33.33)	--	--	--

Note: Figures in brackets indicate percentages of total entrepreneurs in the category of enterprise.

Table – 3.2.2C
Motivating Factors for the Sample Entrepreneurs in Maharashtra

(Numbers)

Name of the Processing Activity	Type of enterprise (OAME/ NDME/ DME)	Entrepreneurs Reporting							
		Traditionally followed	Previous experience	Demonstration effect	Persuasion by others	Higher profit margin	Demand for the product	Lack of other avenues	To get employment
Cashew Processing	OAME	– (--)	– (--)	– (--)	– (--)	1 (50)	– (--)	– (--)	2 (100)
	NDME	– (--)	– (--)	2 (67)	2 (67)	2 (67)	1 (33)	– (--)	3 (100)
	DME	– (--)	– (--)	1 (100)	– (--)	– (--)	– (--)	1 (100)	1 (100)
	All								
Fish Processing	OAME	3 (100)	1 (33)	– (--)	– (--)	– (--)	– (--)	– (--)	3 (100)
	NDME	2 (100)	1 (50)	– (--)	– (--)	– (--)	1 (50)	– (--)	2 (100)
	DME	1 (100)	– (--)	– (--)	– (--)	– (--)	– (--)	– (--)	1 (100)
	All								
Rice Mill	OAME	1 (33)	3 (100)	2 (67)	1 (33)	2 (67)	– (--)	– (--)	3 (100)
	NDME	2 (100)	1 (50)	1 (50)	– (--)	– (--)	– (--)	1 (50)	1 (50)
	DME	– (--)	– (--)	– (--)	– (--)	1 (100)	– (--)	– (--)	1 (100)
	All								
Leather Industry	OAME	– (--)	1 (100)	– (--)	– (--)	– (--)	– (--)	– (--)	– (--)
	NDME	1 (100)	1 (100)	– (--)	– (--)	– (--)	1 (100)	– (--)	1 (100)
	DME	1 (100)	1 (100)	– (--)	– (--)	1 (100)	1 (100)	– (--)	– (--)
	All								

Contd.table-3.2.2C

Contd.table-3.2.2C

Binding	OAME	–	1	1	–	–	–	–	1
		(--)	(100)	(100)	(--)	(--)	(--)	(--)	(100)
	NDME	–	1	1	–	–	1	1	1
		(--)	(100)	(100)	(--)	(--)	(100)	(100)	(100)
	DME	1	1	–	–	–	–	–	1
		(100)	(100)	(--)	(--)	(--)	(--)	(--)	(100)
	All								
Textile	OAME	2	2	–	–	1	1	1	1
		(100)	(100)	(--)	(--)	(50)	(50)	(50)	(50)
	NDME	1	1	–	–	1	1	–	–
		(100)	(100)	(--)	(--)	(100)	(100)	(--)	(--)
	DME	–	–	–	–	–	–	–	–
		(--)	(--)	(--)	(--)	(--)	(--)	(--)	(--)
	All								
Wood	OAME	–	1	–	–	–	–	–	1
		(--)	(100)	(--)	(--)	(--)	(--)	(--)	(100)
	NDME	1	1	–	–	–	1	–	–
		(100)	(100)	(--)	(--)	(--)	(100)	(--)	(--)
	DME	1	1	–	–	–	–	–	1
		(100)	(100)	(--)	(--)	(--)	(--)	(--)	(100)
	All								
Total		17	18	8	3	9	8	4	24
		(57)	(60)	(27)	(10)	(30)	(27)	(13)	(80)
Note : Figures in brackets indicate percentages of total entrepreneurs in the category of enterprise.									

3.2.3: The Size of Family and its Composition of the Sample Entrepreneurs

West Bengal:

Details regarding the size of the family and its composition of the sample entrepreneurs were collected during the study. Table-3.2.3A for West Bengal indicates that the average size of the family of the sample entrepreneurs ranged between 4 and 5 for food processing enterprises while the same varied between 3 and 5 for non-food processing units. Considering the number of persons who were dependent on workers/earners, dependency ratios have been calculated and are presented in the table. As may be seen from the table the average dependency ratio ranged between 30.00 per cent and 50.00 per cent for food processing industries. Dependency ratio is smaller for fish processing activity which indicates greater participation of the household members in the business activity. For non-food processing enterprises, dependency ratio varied between 17.00 per cent in the case of textile units and 61.00 per cent in the case of paper-based units. The average dependency ratio is found to be higher for non-food processing units (43.40 per cent) as compared to those of food

processing units (38.88 per cent). Greater engagement of family labour in the food processing activity reduced the dependency level for the entrepreneurs of the food processing units. It can also be seen that, in majority of cases women are also the earning members in the entrepreneurs family of the food processing units.

Bihar:

Table-3.2.3B presents the family size and its composition in Bihar. It can be seen that the average size of family ranged between 6-15 for food processing units while the same varied between 8-12 for non-food processing units. It is also observable that for majority of the units, women are not the earning member rather they are dependent.

Maharashtra:

Table-3.2.3C presents the composition of the family size of the sample entrepreneurs in Maharashtra. The average size of the family is varying between 3-7 for food and non-food agro units. It can be seen that for majority of the categories, women are also the earning members along with the male members. The average dependency ratio is higher for non-food units (49.91) than the food units (32.50). This possibly indicates higher participation of household members in the case of food processing units.

Table – 3.2.3A

Average Size of the Family and its Composition of Sample Entrepreneurs in West Bengal

Name of the Processing Activity	Type of enterprise (OAME/ NDME/ DME)	Men (Nos.)		Women (Nos.)		Total family member (Nos.)	Average size of family (Nos.)	Dependency ratio (%)
		Earner	Dependent	Earner	Dependent			
Fruit (mango) Processing	OAME	6	1	5	2	14	4.67	21.43
	NDME	3	1	0	5	9	4.50	66.67
	DME	1	0	2	1	4	4.00	25.00
	ALL	10	2	7	8	27	4.50	37.03
Paddy Processing	OAME	5	1	4	4	14	4.67	35.71
	NDME	4	1	0	7	12	6.00	66.67
	DME	1	1	1	1	4	4.00	50.00
	ALL	10	3	5	12	30	5.00	50.00
Fish Processing	OAME	9	1	6	1	17	5.67	11.76
	NDME	4	2	2	3	11	5.50	45.45
	DME	2	0	0	3	5	5.00	60.00
	ALL	15	3	8	7	33	5.50	30.30
Leather and its products	OAME	2	0	2	0	4	4.00	0.00
	NDME	2	0	1	1	4	4.00	25.00
	DME	1	1	0	1	3	3.00	66.67
	ALL	5	1	3	2	11	3.67	27.27
Paper and its products	OAME	1	1	1	1	4	4.00	50.00
	NDME	1	2	0	2	5	5.00	80.00
	DME	1	1	1	1	4	4.00	50.00
	ALL	3	4	2	4	13	4.33	61.53
Textile Products (Jute)	OAME	1	0	1	1	3	3.00	33.33
	NDME	2	1	2	0	5	5.00	40.00
	DME	2	0	1	1	4	4.00	25.00
	ALL	5	1	4	2	12	4.00	16.67
Wood and its products	OAME	3	0	0	2	5	5.00	40.00
	NDME	2	0	0	4	6	6.00	66.67
	DME	3	1	0	2	6	6.00	50.00
	ALL	8	1	0	8	17	5.67	52.95

Table No. 3.2.3B

Average Size of the Family and its Composition of the Sample Entrepreneurs (Numbers) in Bihar

SN	Name of Processing Activity	Type of Enterprise (OAME/ NDME/ DME)	Men		Women		Children	Total	Average Size of Family
			Earner	Dependent	Earner	Dependent			
A.	**Agro Food Processing**								
1.	Grain Processing Based Units (Paddy)	OAME	O6	07	02	05	06	26	8.67
		NDME	04	06	01	03	05	19	8.50
		DME	03	06	00	03	03	15	15
2.	Horticultural Products Based Processing Activities (Litchi)	OAME	04	05	02	00	06	17	5.67
		NDME	02	02	00	04	04	12	6.0
		DME	03	00	00	03	04	10	10
3.	Livestock based Processing Activity (Dairy)	OAME	06	03	00	04	05	18	06
		NDME	04	04	00	03	04	15	7.5
		DME	02	01	00	03	02	08	08
B.	**Non-food Processing**								
1.	Textile based Processing Activity (Silk)	OAME	02	01	02	01	03	09	09
		NDME	02	02	00	02	02	08	08
		DME	02	03	00	03	04	12	12
2.	Wood based Processing Activity	OAME	02	00	01	03	02	08	08
		NDME	02	01	00	03	03	09	09
		DME	01	02	00	03	02	08	08
3.	Leather based Processing Activity (Shoe/Foot wearing)	OAME	03	00	00	03	03	09	09
		NDME	02	01	01	02	03	09	09
		DME	03	01	01	03	02	10	10

Table – 3.2.3C

Average Size of the Family and its Composition of Sample Entrepreneurs in Maharashtra

Name of the Processing Activity	Type of enterprise (OAME/ NDME/ DME)	Men (Nos.)		Women (Nos.)		Children (Nos.)	Total family member (Nos.)	Average size of family (Nos.)	Dependency ratio (%)
		Earner	Dependent	Earner	Dependent				
Cashew	OAME	3	0	4	0	4	11	5.50	36.36
	NDME	6	1	4	2	4	17	5.67	41.18
	DME	1	0	1	0	1	3	3.00	33.33
	ALL								
Fish	OAME	8	0	6	0	5	19	6.33	26.32
	NDME	4	0	5	0	3	12	6.00	25.00
	DME	2	0	3	0	1	6	6.00	16.67
	ALL								
Rice Mill	OAME	6	1	4	3	2	16	5.33	37.50
	NDME	4	1	2	1	1	9	4.50	33.33
	DME	2	1	2	1	1	7	7.00	42.86
	ALL								
Leather	OAME	1	0	1	0	2	4	4.00	50.00
	NDME	1	0	0	2	2	5	5.00	80.00
	DME	3	0	0	3	3	9	9.00	66.67
	ALL								
Binding	OAME	2	0	1	1	2	6	6.00	50.00
	NDME	2	0	1	1	2	6	6.00	50.00
	DME	1	0	2	2	1	6	6.00	50.00
	ALL								
Textile	OAME	3	0	4	0	1	8	4.00	12.50
	NDME	3	0	2	0	0	5	5.00	0.00
	DME	0	0	0	0	0	0	0.00	0.00
	ALL								
Wood	OAME	2	0	1	0	2	5	5.00	40.00
	NDME	2	0	1	0	1	4	4.00	25.00
	DME	1	0	0	1	2	4	4.00	75.00
	ALL								

Chapter-IV

Cost of Investment and its Financing

Processing units are usually characterized by the lack of uniformity in capital intensity, level of technology used, labour requirement, length in production /operation cycle, seasonality in production etc. High level of variation in capital intensity and lumpiness of the investment make wide variation in the cost of investment. This chapter attempts to analyse actual cost of investment of the sample processing activities covered under the study and it's financing. First of all, we look into the status of the sample units ascertained in terms of year of existence, registration status, average age of the units, area of operation etc.

4.1: Status of the Sample Units

West Bengal:

In West Bengal, it was observed that all the sample-processing units covered under the study were existing ones and none of the sample units was set up new (table-4.1.1A). As the proportion of existing units was high, the average age of the sample units was also high. Age of the investment unit was the highest in fish processing units at 17.5 years followed by paddy processing 15.5 years, wood and its products 14.67 years, fruit processing 13.67 years, paper and its products 10.67years. The age of the units manufacturing jute-based textile products was lowest at 8.33years. It was observed that investors are not keen on registering their units with DIC. Details on registration status of the units shown in table 4.1.1A indicate that 50 per cent of the total sample processing units was registered. Further, it was observed that within the group of food processing units, 50 per cent of the paddy processing units were registered as against the corresponding proportion of 17 per cent in case of fish processing units. Fruit processing units were found to have registered in about 33 per cent cases. Notably, it can also be seen that OAME units are entirely unregistered. In the non-food-processing segment, 67 per cent each from leather, textile and wood category are the registered units, and here again OAME units are entirely unregistered. Exceptionally, paper-based processing units are entirely registered. It can also be seen that the concerned activity is the main activity for all the non-food-processing units with only exception of OAME units manufacturing jute-based textile products. In the food-processing segment, for all the processing units other than OAME units of fruit processing, the concerned activity is seen to be the main activity. As may be noted from table 4.1.1A, the average area of working place varied depending upon the requirement of the activity. The area of operation covered by the DME units of manufacturing enterprises is seen to be more than the other category of manufacturing units. Further, a relatively lesser work area is covered by OAME units of manufacturing enterprises.

Table – 4.1.1A
Status of the Sample Units in West Bengal

(Numbers)

Name of the Processing Activity	Type of enterprise (OAME/ NDME/ DME)	Status of Unit				Average age of the sample unit (years)	Registration Status		Average Area (sq.ft.)
		By occupation of the entrepreneurs		By year of existence					
		Main	Secondary	New	Existing		Registered	Not Registered	
Food Processing Units									
Fruit (mango processing)	OAME	1	2	-	3	11	-	3	367
	NDME	2	-	-	2	10.5	1	1	2650
	DME	1	-	-	1	28	1	-	21000
Paddy processing	OAME	3	-	-	3	15.33	-	3	667
	NDME	2	-	-	2	17.5	2	-	1350
	DME	1	-	-	1	12	1	-	28800
Fish processing	OAME	3	-	-	3	20	-	3	200
	NDME	2	-	-	2	14.5	-	2	700
	DME	1	-	-	1	16	1	-	20000
Non-Food Processing Units									
Leather and its products	OAME	-	1	-	1	20	-	1	800
	NDME	1	-	-	1	7	1	-	900
	DME	1	-	-	1	12	1	-	2000
Paper and its products	OAME	1	-	-	1	12	1	-	2800
	NDME	1	-	-	1	8	1	-	6000
	DME	1	-	-	1	12	1	-	9500
Textile product(jute)	OAME	-	1	-	1	3	-	1	600
	NDME	1	-	-	1	7	1	-	1200
	DME	1	-	-	1	15	1	-	3000
Wood and its products	OAME	1	-	-	1	10	-	1	750
	NDME	1	-	-	1	12	1	-	1100
	DME	1	-	-	1	22	1	-	2000

Bihar:

Table 4.1.1B presents the status of the sample units in Bihar. It reveals that most of the units are existing ones. It can also be seen that most of the surveyed processing units have been working in unorganized sector tiny, small and artisan based enterprises and so they are mostly unregistered. Paddy based processing industry i.e, rice mill in Rohtas district under the category of DME, Litchi based processing industry at Muzaffarpur 'Litchika International,' are registered under agro food processing activities, Directory Manufacturing Enterprises (DME), in the fields of leather and 'wood–based processing enterprises both in Patna district are registered. Except, one OAME under food processing activity and one NDME

Table – 4.1.1B
Status of the Sample Units in Bihar

(Numbers)

Name of the Processing Activity	Type of enterprise (OAME/ NDME/ DME)	Status of Unit				Average age of the sample unit (years)	Registration Status		Average Area (sq.ft.)
		By occupation of the entrepreneurs		By year of existence					
		Main	Secondary	New	Existing		Registered	Not Registered	
Food Processing Units									
Paddy Processing	OAME	2	1	1	2	20	-	3	170
	NDME	2	-	-	2	22	-	2	1500
	DME	1	-	-	1	24	1	-	35865
Fruit (Litchi Processing)	OAME	-	3	-	3	13	-	3	100
	NDME	1	1	1	1	8	-	-	225
	DME	1	-	-	1	20	1	-	8000
Milk Processing (Dairy)	OAME	2	1	-	3	15	-	3	360
	NDME	2	-	-	2	16	-	-	600
	DME	1	-	-	1	18	-	-	1000
Non-Food Processing Units									
Silk and its products	OAME	1	-	-	3	22	-	3	260
	NDME	1	-	-	2	25	-	2	600
	DME	1	-	-	1	30	-	1	750
Wood and its products	OAME	1	-	-	3	15	-	3	350
	NDME	1	-	-	2	18	-	2	700
	DME	1	-	-	1	14	1	-	1400
Leather and its products	OAME	1	-	-	3	18	-	3	100
	NDME	1	-	-	2	16	-	2	400
	DME	1	-	-	1	35	1	-	350

under horticultural products based processing activity, all the sample units were existing ones. Average age of the sample processing units ranged between 08 to 35 years (table-4.1.1B). DMEs under cereal based processing activity in Rohtas district occupied largest area (35,865sq.ft.). It was followed by DMEs of horticultural product based activity (8,000sq.ft.), wood based processing activity (1,400sq.ft.) and livestock based processing activity (1000 sq. ft.).

Maharashtra:

Table-4.1.1C presents the status of the sample units in Maharashtra. It can be seen that most of the units are the existing ones. It is the cashew processing units and the rice mills which are seen to be the new units. It can also be seen that

Table – 4.1.1C

Status of the Sample Units in Maharashtra

(Numbers)

Name of the Processing Activity	Type of enterprise (OAME/ NDME/ DME)	Status of Unit				Average age of the sample unit (years)	Registration Status		Average Area (sq.ft.)
		By occupation of the entrepreneurs		By year of existence					
		Main	Secondary	New	Existing		Registered	Not Registered	
Food Processing Units									
Cashew	OAME	1	1	2	0	2	2	0	700.00
	NDME	3	0	2	1	2.67	3	0	1029.33
	DME	1	0	1	0	3	1	0	400.00
Fish	OAME	3	0	0	3	25.00	0	3	300.00
	NDME	2	0	0	2	27.50	1	1	300.00
	DME	1	0	0	1	45.00	1	0	500.00
Rice Mill	OAME	1	2	1	2	4	3	0	460.67
	NDME	1	1	1	1	12.5	2	0	1087.50
	DME	0	1	1	0	3	1	0	1500.00
Non-Food Processing Units									
Leather	OAME	1	0	1	0	2.5	0	1	100.00
	NDME	1	0	0	1	22	1	0	110.00
	DME	1	0	0	1	37	1	0	400.00
Binding	OAME	1	0	0	1	20	1	0	120.00
	NDME	1	0	0	1	40	1	0	1200.00
	DME	1	0	0	1	30	1	0	750.00
Textile	OAME	2	0	0	2	35	1	1	120.00
	NDME	1	0	0	1	40	1	0	240.00
	DME	0	0	0	0	0	0	0	0.00
Wood	OAME	1	0	0	1	15	0	1	150.00
	NDME	1	0	0	1	28	1	0	200.00
	DME	1	0	0	1	7	1	0	400.00

most of the units are registered. Four fish processing units and one OAME each from leather, textile and wood category are the unregistered units. The fish units carry out their activity outside the house near the beach. The area covered by the units using machinery – cashew units, rice mills and binding units is seen to be more than the other business units. It can also be seen that for all the non-food processing units, the concerned activity is the main activity. For food processing units, it can be seen that the activity is the secondary activity in case of the rice mills. For these households, cultivation of rice and fruits is the main activity.

4.2: Cost of Investment

Item wise value of the existing investments made by the units was collected from the investors. The following analyses give the details of investment made by the entrepreneurs of the sample processing units.

West Bengal:

In West Bengal (table-4.2.1A) it is observed that investment in units varies across the food and non-food processing segments of manufacturing enterprises. It is relatively higher in non-food processing segment as compared to its counter part. Within the group of food-processing units, the size of the investment is higher in case of paddy processing activity while it is found to be lower for the OAME and NDME units of fish processing activity. On the other hand, among the non-food processing units, size of the investment is seen to be higher in paper-based activity followed by leather-based activity. In general, within a category, size of the investment made by the entrepreneurs varies increasingly with the size of the unit. That is, investment made by OAME unit is lower than that of NDME unit which is again lower than that of DME unit. Further, it can be seen that the size of the working capital got relatively larger share in all the processing units. The share of block capital in the case of food processing units is seen to have varied from 6.50 per cent in fish-processing units to 46.16 per cent in paddy-processing units. For the segment of non-food processing units, it ranged from 10.98 per cent in case of textile products to 41.40 per cent for paper-based activity. Working capital component got relatively larger share in the units like fish processing (93.50per cent) followed by fruit processing (71.10 per cent) in case of food-processing units. For non-food processing units, the share of working capital ranged from 58.60 per cent in case of paper-based activity to 89.02 per cent in case of units manufacturing jute-based textile products.

Table – 4.2.1A

Details of Investment made by Entrepreneurs of the Sample Processing Units in West Bengal

Name of the Processing Activity	Type of enterprise (OAME/ NDME/ DME)	Per Unit Investment (Rs.)		
		Block Capital	Working Capital	Total
Food Processing				
Fruit	OAME	4666.67	34166.67	38833.34
(mango processing)		(12.02)	(87.98)	(100.00)
	NDME	45750	153500	199250
		(22.96)	(77.04)	(100.00)
	DME	2000000	4792000	6792000
		(29.45)	(70.55)	(100.00)
Average		350916.67	866916.67	1217833.34
		(28.72)	(71.10)	(100.00)
Paddy Processing	OAME	6166.67	491666.67	497833.34
		(1.24)	(98.76)	(100.00)
	NDME	45000	659850	704850
		(6.39)	(93.61)	(100.00)
	DME	5800000	4096950	9896950
		(58.60)	(41.40)	(100.00)
Average		984750	1148608.33	2133358.33
		(46.16)	(53.94)	(100.00)
Fish Processing	OAME	1416.67	63666.67	65083.34
		(2.18)	(97.82)	(100.00)
	NDME	6500	86500	93000
		(6.99)	(93.01)	(100.00)
	DME	550000	7800000	8350000
		(6.59)	(93.41)	(100.00)
Average		94541.67	1360666.67	1455208.34
		(6.50)	(93.50)	(100.00)
Non-food Processing				
Leather and its products	OAME	15000	93400	108400
		(13.84)	(86.16)	(100.00)
	NDME	50000	634300	684300
		(7.37)	(92.69)	(100.00)
	DME	25000	939000	964000
		(2.59)	(97.41)	(100.00)
Average		105000	555566.67	660566.67
		(15.90)	(84.10)	(100.00)

Contd. Table-4.2.1A

Contd. Table-4.2.1A

Paper and its products	OAME	30000	58400	88400
		(33.94)	(66.06)	(100.00)
	NDME	400000	555000	955000
		(41.89)	(58.11)	(100.00)
	DME	1225000	1729000	2954000
		(41.47)	(58.53)	(100.00)
Average		551666.67	780800	1332466.67
		(41.40)	(58.60)	(100.00)
Textile products (jute)	OAME	5000	26900	31900
		(15.67)	(84.33)	(100.00)
	NDME	6000	55400	61400
		(9.77)	(90.23)	(100.00)
	DME	20000	169000	189000
		(10.58)	(89.42)	(100.00)
Average		10333.33	83766.67	94100
		(10.98)	(89.02)	(100.00)
Wood and its products	OAME	2500	124000	126500
		(1.98)	(98.02)	(100.00)
	NDME	2500	141850	144350
		(1.73)	(98.27)	(100.00)
	DME	500000	616000	1116000
		(44.80)	(55.20)	(100.00)
Average		168333.33	293950	462283.33
		(36.42)	(63.58)	(100.00)

Note : i)Figures in brackets indicate percentages of total investment.

ii) Block capital includes expenditure on machinery, tools, equipment, electric items, building/ work shed and working capital comprised of expenditure on procurement/storing of raw materials, payment to human labour, transportation charges, marketing expenses, tax, insurance payments etc.

Bihar:

Table 4.2.1B presents the details of investment made by the sample entrepreneurs in Bihar. On having a glance at the table, it is revealed that generally within a particular group of processing activity, investment increased with the size of the unit. The size of the total investments went on increasing with the size of the enterprises. OAMEs showed lower total investments in comparison to that of NDMEs and DMEs. The percentages of working capital were found lower in case of OAMEs than NDMEs and DMEs except in case of livestock based processing activity and textile product enterprises. Data contained in Table – 4.2.1B also suggest that size of the investments were higher in case of DMEs meant for primary food based processing unit i.e., rice mill (Rs.77,96,000/-), litchi based processing activity (Rs.1,59,60,000/-), livestock based processing activity (Rs.10,50,000) wood based

and leather based DMEs (RS.16,00000/-) and (RS. 9,00000/-) respectively . Percentages of block capital have remained much higher as compared to working capital in all the three groups (OAMEs, NDMEs and DMEs), in case of both agro-food processing activities and agro non-food processing enterprises except NDME and DME of wood–based processing activities. Possible reason for this may be that the machineries, tools, equipments, do not require heavy expenditure for this enterprise. Besides, comparatively higher expenses are incurred in procuring raw materials (wood from Assam, Bettiah and distant remote areas of Jharkhand and West Bengal). Share of block capital is seen to be very high in all cases. It varied from 86.96 per cent to 57.15 per cent in regard to agro-food processing activities and from 72.23 per cent to 39.66 per cent in case of agro non-food processing activities.

Table – 4.2.1B
Details of Investment made by Entrepreneurs of the Sample Processing Units in Bihar

Name of the Processing Activity	Type of enterprise (OAME/ NDME/ DME)	Per Unit Investment (Rs.)		
		Block Capital	Working Capital	Total
Food Processing				
Paddy Processing	OAME	82000	20000	102000
		(80.39)	(19.61)	(100.00)
	NDME	410000	127100	537100
		(76.34)	(23.66)	(100.00)
	DME	5000000	2796000	7796000
		(64.14)	(35.86)	(100.00)
Fruit (Litchi Processing)	OAME	70000	15000	80500
		(86.96)	(13.04)	(100.00)
	NDME	360000	70000	430000
		(83.72)	(16.28)	(100.00)
	DME	10200000	5760000	15960000
		(63.91)	(36.09)	(100.00)
Milk processing (Dairy)	OAME	150000	75000	225000
		(66.67)	(33.33)	(100.00)
	NDME	500000	375000	875000
		(57.15)	(42.85)	(100.00)
	DME	750000	300000	1050000
		(71.43)	(28.57)	(100.00)

Contd.Table-4.2.1B

Contd.Table-4.2.1B

Non-food Processing				
Silk and its products	OAME	70000	50000	120000
		(58.34)	(41.66)	(100.00)
	NDME	253000	146000	399000
		(63.41)	(36.59)	(100.00)
	DME	400000	292000	692000
		(57.81)	(42.19)	(100.00)
Wood and its products	OAME	45000	20000	65000
		(69.23)	(30.77)	(100.00)
	NDME	230000	350000	580000
		(39.66)	(60.34)	(100.00)
	DME	700000	900000	1600000
		(43.75)	(56.25)	(100.00)
Leather and its products	OAME	52000	20000	72000
		(72.23)	(27.77)	(100.00)
	NDME	225000	200418	425418
		(52.89)	(47.11)	(100.00)
	DME	500000	400000	900000
		(55.56)	(44.44)	(100.00)

Note : Block Capital includes (i) Machinery, (ii) Tools (iii) Equipment (iv) Electric Items (v) Building/Work Shed, Working Capital Comprises (i) Expenditure on procurement/ storing of raw materials (ii) Payment to human labour (iii) Transportation charges (iv) Expenses in Marketing (v) Tax (vi) Insurance payment, etc. Figures in brackets indicate percentages of total investment.

Maharashtra:

Table-4.2.1C shows the details of investment made by the entrepreneurs in Maharashtra. It can be seen that generally, within a category, investment is increasing with the size of the unit. This means that size of the investment by OAMEs is lower than that of NDMEs which in turn have lower investment than DMEs. The size of the working capital is seen to be lower for the OAME units as these units do not have to incur expenditure on wages/ salaries. It can also be seen that size of the investment is higher in case of rice mills and paper-based activity of binding which depend upon costly machinery for processing. Size of the investment is seen to be lower for fish processing OAMEs and NDMEs. The fish units need more working capital than fixed capital. The activity of drying and salting of fish does not require any heavy initial investment. However, due to the high value of the raw material i.e. fish, proportion of working capital is seen to be higher than the block capital. For other units, the share of block capital is seen to

Table – 4.2.1C

Details of Investment made by Entrepreneurs of the Sample Processing Units in Maharashtra

Name of the Processing Activity	Type of enterprise (OAME/ NDME/ DME)	Per Unit Investment (Rs.)		
		Block Capital	Working Capital	Total
Cashew	OAME	375250.00 (95.00)	18324.75 (5.00)	393574.75 (100.00)
	NDME	325903.33 (88.00)	42430.00 (12.00)	368333.33 (100.00)
	DME	165000.00 (64.00)	92125.33 (36.00)	257125.33 (100.00)
Fish	OAME	10083.33 (22.00)	36007.67 (78.00)	46091.00 (100.00)
	NDME	4750.00 (5.00)	81937.50 (95.00)	86687.50 (100.00)
	DME	52500.00 (10.00)	467650.00 (90.00)	520150.00 (100.00)
Rice Mill	OAME	327000.00 (99.80)	649.92 (0.20)	327649.92 (100.00)
	NDME	631000.00 (98.00)	10870.00 (2.00)	641870.00 (100.00)
	DME	1250000.00 (99.71)	3640.00 (0.29)	1253640.00 (100.00)
Leather	OAME	10700.00 (93.00)	750.00 (7.00)	11450.00 (100.00)
	NDME	67000.00 (90.00)	7350.00 (10.00)	74350.00 (100.00)
	DME	507700.00 (82.00)	114660.00 (18.00)	622360.00 (100.00)
Binding	OAME	45000.00 (96.00)	1917.00 (4.00)	46917.00 (100.00)
	NDME	120000.00 (27.00)	319400.00 (73.00)	439400.00 (100.00)
	DME	1450000.00 (97.00)	52500.00 (3.00)	1502500.00 (100.00)
Textile	OAME	13700.00 (93.00)	1100.00 (7.00)	14800.00 (100.00)
	NDME	42000.00 (64.00)	23500.00 (36.00)	65500.00 (100.00)
	DME	0.00 (0.00)	0.00 (0.00)	0.00 (100.00)
Wood	OAME	30000.00 (36.00)	54083.00 (64.00)	84083.00 (100.00)
	NDME	75000.00 (42.00)	105275.00 (58.00)	180275.00 (100.00)
	DME	52300.00 (59.00)	36250.00 (41.00)	88550.00 (100.00)

Note : 1. Figures in brackets indicate percentages of total investment.

2. Block capital includes expenditure on machinery, tools, equipment, electric items, building/work shed and working capital comprises of expenditure on procurement/storing of raw materials payment to human labour, transportation charges, marketing, expenses, tax, insurance payments etc.

be very high-it varies from 64 percent to 99 percent for food units. For non-food units, it ranges from as low as 27 percent to a high of 97 percent. Since the non-food section

consists of units carrying out various activities with different requirements, share of block capital in each activity is seen to be different.

4.3: Financing of the Investment

West Bengal:

The sources for financing the investment are categorized as own fund, institutional and non-institutional loans. In West Bengal (table-4.3.1A), food-processing industries met their investment requirement from own fund except the paddy processing activity. The similar is the case for non-food processing industries where it may be observed that only the paper-based processing units resorted to outside borrowing to bridge the gap between own contribution and

Table – 4.3.1A
Financing of Investment in Processing Units of West Bengal

(Rupees)

Name of the Processing Activity	Type of enterprise (OAME/ NDME/ DME)	Average Gross Value of Investment Per Unit	Sources of Fund Per Unit		
			Own Fund	Institutional Loan	Non-Institutional Loan
Food Processing					
Fruit (mango processing)	OAME	38833.34	18833.33 (48.50)	1666.66 (4.29)	18333.33 (47.21)
	NDME	199250	174250 (87.45)	25000 (12.55)	- (-)
	DME	6792000	6292000 (92.64)	- (-)	500000 (7.36)
	AVERAGE	1217833.34	1116166.67 (91.65)	9166.67 (0.75)	92500 (7.60)
Paddy Processing	OAME	497833.34	176333.33 (35.42)	10000 (2.01)	311666.67 (62.60)
	NDME	704850	227350 (32.25)	27500 (3.90)	450000 (63.85)
	DME	9896950	1296950 (13.10)	6600000 (66.69)	2000000 (20.21)
	AVERAGE	4893833.33	380108.33 (17.82)	1114166.67 (52.22)	639166.67 (29.96)
Fish Processing	OAME	65083.34	31750 (48.78)	- (-)	33333.33 (51.22)
	NDME	93000	47750 (51.34)	- (-)	45250 (48.66)
	DME	8350000	4100000 (49.10)	250000 (2.99)	4000000 (47.91)
	AVERAGE	1455208.34	715125 (49.14)	41666.67 (2.86)	698416.67 (48.00)

Contd.Table-4.3.1A

Contd.Table-4.3.1A

Non-food Processing					
Leather and its products	OAME	108400	51400 (47.42)	10000 (9.22)	47000 (43.36)
	NDME	684300	434300 (63.47)	50000 (7.30)	200000 (29.23)
	DME	1189000	489000 (41.13)	300000 (25.23)	400000 (33.64)
	AVERAGE	660566.67	324900 (69.65)	120000 (25.73)	21566.67 (4.62)
Paper and its products	OAME	88400	68400 (77.57)	20000 (22.63)	- (-)
	NDME	955000	355000 (37.18)	300000 (31.41)	300000 (31.41)
	DME	2954000	954000 (32.30)	1000000 (33.85)	1000000 (33.85)
	AVERAGE	1332466.67	459133.33 (34.46)	440000 (33.02)	433333.33 (32.52)
Textile product(jute)	OAME	31900	31900 (100.00)	- (-)	- (-)
	NDME	61400	61400 (100.00)	- (-)	- (-)
	DME	189000	100000 (52.91)	25000 (13.23)	64000 (33.86)
	AVERAGE	94100	64433.33 (68.72)	8333.33 (8.89)	21000.33 (22.39)
Wood and its products	OAME	126500	51500 (40.71)	- (-)	75000 (59.29)
	NDME	144350	64350 (44.60)	- (-)	80000 (55.40)
	DME	1116000	516000 (46.24)	100000 (8.96)	500000 (44.80)
	AVERAGE	462283.33	210616.67 (79.24)	33333.33 (12.54)	21833.33 (8.22)

Note : Figures in brackets indicate percentages of total investment.

Data Source : Primary survey data

actual cost of investment. Maximum own contribution for the investment was observed in the case of wood-based processing units at 79.24 per cent followed by leather processing units (69.65 per cent), jute-based textile products (68.72 per cent) and paper-making units at 34.46 per cent. The share of institutional loan ranged from 8.89 per cent to 33.02 per cent for such industries. For the units engaged in food-processing activity, the share of institutional loan was of the order of less than 1 per cent in the case of fruit processing units while it was 2.86 per cent in case of fish

processing units. The pattern of financing the investment is observed to be markedly opposite in the case of paddy processing units where institutional loan contributed 52.22 per cent of total investment. Units engaged in fish processing have taken loan from non-institutional sources to the tune of 48 per cent of their total investment in the activity.

Bihar:

Table 4.3.1B demonstrates the extent /magnitude of own fund, institutional loan and non –institutional loan that are used for financing the investment in Bihar. The NDME and DME under cereal based processing activity and DMEs of horticultural crop based, wood based and leather based processing activities were found to have taken institutional loans in varying degrees (7.44per cent, 25.65per cent,10per cent, 31.25per cent and 16.67per cent respectively). As the larger processing activities, particularly DMEs under both agro-food and agro-non–food categories are registered ones, they could have received institutional loans under DIC/KVI or other schemes. Except DMEs of Cereal based and wood based processing activities and OAMEs of livestock based activity, all other sample entrepreneurs had taken loans from non-institutional sources for meeting their investment costs. In all cases, the share of own funds were quite higher than that of institutional and non-institutional finances. It ranged from a minimum of 60.00 per cent in case of DME of textiles products to a maximum of 100 percent in case of OAMEs of livestock products–based processing activity.

Maharashtra:

Table-4.3.1C shows various sources that are used for financing the investment in Maharashtra. These are own fund, institutional/ non-institutional loan and also subsidy in case of food processing units. All the units engaged in cashew processing, rice milling and one (DME) each in book binding and leather have taken loan to finance their own investment. The share of loan ranges from 37 percent to 80 percent. It can also be seen that as the food processing units like cashew units and the rice mills have been registered under DIC/KVIB schemes, they have received loan as well as subsidy. On an average 18 percent of the investment has been funded by the subsidy for the 12 units covered under these food processing activities. The subsidy received by these units under the schemes has helped them to finance the investment needed thereby reducing their reliance

Table – 4.3.1B
Financing of Investment in Processing Units of Bihar

(Rupees)

Name of the Processing Activity	Type of enterprise (OAME/ NDME/ DME)	Average Gross Value of Investment Per Unit	Sources of Fund Per Unit		
			Own Fund	Institutional Loan	Non-Institutional Loan
Paddy Processing	OAME	102000	87860 (86.14)	- (-)	14140 (13.86)
	NDME	537100	337970 (62.93)	40000 (7.44)	159130 (29.63)
	DME	7796000	5796000 (74.35)	2000000 (25.65)	- (-)
Fruit (Litchi Processing)	OAME	80500	64400 (80.00)	- (-)	16100 (20.00)
	NDME	430000	344000 (80.00)	- (-)	86000 (20.00)
	DME	15960000	10852800 (68.00)	1596000 (10.00)	3511200 (22.00)
Milk processing (Dairy)	OAME	225000	225000 (100.00)	- (-)	- (-)
	NDME	875000	743750 (85.00)	- (-)	131250 (15.00)
	DME	1050000	787500 (75.00)	- (-)	262500 (25.00)
Silk and its products	OAME	120000	96000 (80.00)	- (-)	24000 (20.00)
	NDME	399000	279300 (70.00)	- (-)	119700 (30.00)
	DME	692000	415200 (60.00)	- (-)	276800 (40.00)
Wood and its products	OAME	65000	45000 (69.23)	- (-)	20000 (30.77)
	NDME	580000	480000 (82.75)	- (-)	100000 (17.25)
	DME	1600000	1100000 (68.75)	500000 (31.25)	- (-)
Leather and its products	OAME	72000	60000 (83.33)	- (-)	12000 (16.67)
	NDME	425418	340418 (80.02)	- (-)	85000 (19.98)
	DME	900000	650000 (72.21)	150000 (16.67)	100000 (11.12)

Note : Figures in brackets indicate percentages of total investment.

Table-4.3.1C

Financing of Investment in Processing Units of Maharashtra

(Rupees)

Name of the Processing Activity	Type of Enterprise (OAME/ NDME/ DME)	Average Gross Value of Investment Per Unit	Sources of Fund Per Unit					
			Own Fund	Institutional Loan	Non-Institutional Loan	Total without Subsidy	Subsidy	Total with Subsidy
A) Food								
1. Cashew	OAME	393574.75	60000.00 (17.00)	287500.00 (83.00)	— (--)	347500.00 (100.00)	97500.00 (21.91)	445000.00
	NDME	368333.33	133333.33 (37.00)	133333.33 (37.00)	91666.67 (26.00)	358333.33 (100.00)	25000.00 (6.52)	383333.33
	DME	257125.33	— (--)	325000.00 (100.00)	— (--)	325000.00 (100.00)	113750.00 (25.93)	738750.00
2. Fish	OAME	46091.00	10166.67 (100.00)	— (--)	— (--)	10166.67 (100.00)	— (--)	10166.67
	NDME	86687.50	12500.00 (100.00)	— (--)	— (--)	12500.00 (100.00)	— (--)	12500.00
	DME	520150.00	25000.00 (100.00)	— (--)	— (--)	25000.00 (100.00)	— (--)	25000.00
3. Rice Mill	OAME	327649.92	80000.00 (32.00)	173333.33 (68.00)	— (--)	253333.33 (100.00)	83333.33 (24.75)	336666.66
	NDME	641870.00	150000.00 (28.000	387500.00 (72.00)	— (--)	537500.00 (100.00)	112500.00 (17.31)	650000.00
	DME	1253640.00	450000.00 (42.00)	631000.00 (58.00)	— (--)	1081000.00 (100.00)	189000.00 (14.88)	1270000.00
B) Non-Food								
1. Leather	OAME	11450.00	12000.00 (100.00)	— (--)	— (--)	12000.00 (100.00)	— (--)	12000.00
	NDME	74350.00	75000.00 (100.00)	— (--)	— (--)	75000.00 (100.00)	— (--)	75000.00
	DME	622360.00	125000.00 (20.00)	500000.00 (80.00)	— (--)	625000.00 (100.00)	— (--)	625000.00
2. Binding	OAME	46917.00	50000.00 (100.00)	— (--)	— (--)	50000.00 (100.00)	— (--)	50000.00
	NDME	439400.00	450000.00 (100.00)	— (--)	— (--)	450000.00 (100.00)	— (--)	450000.00
	DME	1502500.00	750000.00 (50.00)	700000.00 (47.00)	50000.00 (3.00)	1500000.00 (100.00)	— (--)	1500000.00
3. Textile	OAME	14800.00	15000.00 (100.00)	— (--)	— (--)	15000.00 (100.00)	— (--)	15000.00
	NDME	65500.00	65000.00 (100.00)	— (--)	— (--)	65000.00 (100.00)	— (--)	65000.00
	DME	—	— (--)	— (--)	— (--)	— (--)	— (--)	— (--)
4. Wood	OAME	84083.00	85000.00 (100.00)	— (--)	— (--)	85000.00 (100.00)	— (--)	85000.00
	NDME	180275.00	200000.00 (100.00)	— (--)	— (--)	200000.00 (100.00)	— (--)	200000.00
	DME	88550.00	90000.00 (100.00)	— (--)	— (--)	90000.00 (100.00)	— (--)	90000.00

Note: Figures in brackets indicate percentages of total in investment

on other sources like loan/ own fund. It can be seen that units engaged in fish processing, and majority of units in non-food processing activities have utilized their own funds to finance investment. Only two units out of the sample of 30 units have taken non-institutional loan.

Chapter-V

Economics of Investment in Agro-Processing Units

This Chapter attempts to analyze economics of agro-processing activities based on the primary data collected from the sample units. Working out of economics of the activities is done to assess the capability of the units to generate net income. In order to study the economics of investment in agro-processing units, details on working of the sample units are examined considering the level of working of the units, production cycle and operation cycle of the activities. Number of production cycles in a year were also assessed based on total number of working days in a year and seasonality of the activity. Actual costs and gross value of output were worked out to arrive at net income generated by the activity.

5.1: Production and Operation Cycle of the Activities

West Bengal:

Details on level of working, production cycle, operation cycle, number of production cycles per year etc. of the sample units in West Bengal is shown in table-5.1.1A. It is seen that the level of operation of the sample units in West Bengal varied from activity to activity. The level of utilization/working of the units was influenced by availability of working capital and seasonality of the activity in terms of input availability and demand for output. For all the activities, it is seen that monthly working days ranged between 26 to 30 days. The difference is noted in the case of per year working days. Working days per year for food processing units are relatively less than those of non-food processing units. Low level of demand for the product and non-availability of raw materials adversely affected the number of working days in a year for the food-processing industries. Operation cycle of the activity included average days of input stored for smooth functioning of the unit, time taken for production (production cycle), output stocking period, time taken for marketing including credit realization. Depending on the time taken for processing of the input, the number of production cycles each unit completes is seen to be different. The normal feature, which has been observed is that the number of production cycles which a unit completes in a year differs with the type and size of activity. Notably within the category of food processing units, the number of cycles completed in a year increased with the size of the unit. Under the segment of food processing, paddy processing has the highest number of production cycles per year as its cycle is of 2–3 days. Relatively, longer duration of operation cycles was observed in the case of OAME units of fruit processing activity resulting in lower number of production cycles in a year. Within the fruit processing category, the number of production cycles completed in a year

Table – 5.1.1A
Details of Functioning of Units in West Bengal

(Per Unit)

Name of the Processing Activity	Type of enterprise (OAME/ NDME/ DME)	Level of working		Operation Cycle (Number of days)					Working Days/Yr.	Prod. Cycle/Yr. (Number)
		Days/M	Hrs./Day	Input Stock	Prod. Process	Output Stock	Marketing	Credit Realisation		
Fruit	OAME	30	10	2	10	60	13	10	120	12
(Mango)	NDME	26	8	120	3	45	14	15	300	100
Processing	DME	26	8	180	2	30	7	30	300	150
	AVERAGE	28	9	70	3	50	11	15	210	70
Paddy	OAME	30	10	7	3	10	7	7	180	60
Processing	NDME	26	8	10	2	2	6	5	312	156
	DME	26	20	15	2	20	9	14	300	150
	AVERAGE	28	11	9	2	9	7	7	244	98
Fish	OAME	30	10	7	17	20	25	8	300	18
Processing	NDME	28	9	6	12	15	20	25	330	28
	DME	26	8	3	6	6	5	30	300	50
	AVERAGE	29	9	6	13	16	20	17	310	24
Leather	OAME	26	10	10	4	15	15	20	300	75
and its	NDME	26	9	7	2	9	12	25	250	125
Products	DME	26	8	10	3	15	15	30	290	97
	AVERAGE	26	9	9	3	13	14	15	280	93
Paper	OAME	26	10	30	2	10	10	10	350	175
and its	NDME	26	10	15	2	5	5	20	310	155
Products	DME	26	8	15	3	12	12	15	300	100
	AVERAGE	26	9	20	2	9	9	15	320	137
Textile	OAME	30	10	10	3	7	7	10	350	117
Product	NDME	30	9	8	2	6	6	15	331	166
(Jute)	DME	26	8	15	1	5	5	20	300	300
	AVERAGE	29	9	11	2	6	6	15	327	164
Wood	OAME	30	10	8	3	15	10	5	350	117
and its	NDME	26	8	7	5	20	14	6	320	64
Products	DME	26	8	6	4	25	15	10	300	75
	AVERAGE	27	9	7	4	20	13	7	325	81

is relatively more in NDME and DME units as each cycle comprised of 2–3 days. For food processing units, longer duration of production cycle was observed in the case of fish processing units resulting in lower number of production cycles completed in a year. Among the non-food processing activities covered under the study, all the activities have low duration of production cycles and thus the number of production cycles completed in a year is comparatively high for them as compared to their food-processing counterpart. Within the group of food processing units, longest operation

cycle also was observed in the case of fruit processing units. Longer input storing period and output stock required for marketing led to a relatively to longer operation cycle for fruit processing units. For non-food processing units, longest operation cycle was observed in the case of paper-based units followed by leather units. Longer input storing period and credit realization time were the reasons for higher operation cycle for paper-based units whereas longer output stocking period and time required for marketing largely affected operation cycle of leather units. It is seen that the number of days taken for credit realization is relatively low at 7 days for paddy processing and wood-based manufacturing units while for other units the credit realization period varied from 15–17 days. Within the food processing segment, the delay in marketing of the produce was observed in case of fish processing units followed by fruit processing while for non-food processing units, the time taken for marketing averaged between 6–14 days.

Bihar:

Table-5.1.1B conveys the details of the functioning of sample processing units in Bihar. Number of working days per month as well as working hours per day were seen uniform in most of the cases, except in horticultural crop (litchi) based, dairy products' based and textile products' based processing activities. As litchi based processing activity is run hardly for 22 days to one month, so, in case of DME of this, double shift work is undertaken. In regard to textile processing activity also, two production activities in two shifts, or more than 08 hours are undertaken. So, in these cases, working hours per day is longer. Livestock based processing activity is everyday business without fail on priority basis; however, its working hours is shorter (05 hours). Depending upon the nature of activities, number of days required for other components of the whole operation cycle (viz., input stock, production process, output stocking, marketing and credit realization) was seen to be different for different processing activities (table-5.1.1B). The number of production cycles, which the unit completes in a year, also differs with the type and size of the processing unit. Except for 'cereal based processing activity and litchi based processing activity, the number of working days/year were quite higher (ranging from 300 to 355) for all other activities, the reason being the fact that litchi is a very short duration crop (available for processing from 22 days to a maximum of 30-35 days). Paddy is also not available for continuous processing in abundant quantum for more than three to four months. Number of days taken for credit realization was lower in case of OAMEs and NDMEs of most of the processing activities as they generally took loans from non-formal agencies. In regard to production cycle/year, the data discloses that it was quite higher in cases of livestock (300) and leather based processing activity (ranging from 312 to 355). In all other activities, number of production cycles was quite lower depending upon the availability of raw materials, time taken for processing the same and scale of operation.

Table – 5.1.1B
Details of Functioning of Units in Bihar

(Per unit)

Name of the Processing Activity	Type of enterprise (OAME/ NDME/ DME)	Level of working		Operation Cycle (Number of days)					Working Days/Yr.	Prod. Cycle/Yr. (Number)
		Days/M	Hrs./Day	Input Stock	Prod. Process	Output Stock	Marketing	Credit Realisation		
Paddy Processing	OAME	30	8	60	3	30	25	2	120	40
	NDME	30	8	45	3	15	24	6	120	40
	DME	30	12	105	3	60	75	9	273	91
Fruit (Litchi Processing)	OAME	20 (only for 1 M)	8	20	2	-	10	3	25	11
	NDME	22	8	5	2	4	6	3	27	13
	DME	30	16	20	2	12	48	10	100	50
Milk Processing (Dairy)	OAME	30	5	300	1	-	300	-	300	300
	NDME	30	5	300	1	-	300	4	300	300
	DME	30	5	300	1	-	300	5	300	300
Textile products	OAME	30	10	5	7	7	5	4	355	50
	NDME	25	18	8	10	-	-	3	300	30
	DME	25	18	7	8	-	-	5	305	38
Wood and its products	OAME	30	8	3	6	3	3	2	325	54
	NDME	26	8	5	7	8	5	4	312	45
	DME	26	8	10	5	10	5	8	312	62
Leather and its products	OAME	28	8	3	1	-	2	2	336	336
	NDME	30	10	4	1	-	-	3	355	355
	DME	26	8	6	1	5	6	8	312	312

Maharashtra:

Table-5.1.1C shows the details of the functioning of the units in Maharashtra. The number of working days per month as well as working hours per day is seen to be uniform for all the units. The difference can be noted as far as working days per year are concerned. As the food processing units are located in the costal district of Ratnagiri, all the activities come to a holt because of heavy rains during June – September. Therefore, working days per year for these units are less than the non-food

processing units in Pune and Mumbai. Depending upon the nature of activity, number of days required for other components of the operation cycle (stocking period, marketing and credit realization period) is seen to be different for different activities. The number of production cycles which a unit completes in a year also differs with the type and size of activity. Normally it can be seen that within a category the number of cycles completed increases with the size of the unit. It can also be seen that depending upon the time taken for

Table – 5.1.1C
Details of Functioning of the Sample Units in Maharashtra

(Per Unit)

Name of the Processing Activity	Type of enterprise (OAME/ NDME/ DME)	Level of working		Operation Cycle (Number of days)					Working Days/Yr.	Prod. Cycle/Yr. (Number)
		Days/M	Hrs./Day	Input Stock	Prod. Process	Output Stock	Marketing	Credit Realisation		
A) Food										
1. Cashew	OAME	25.50	8.00	60.00	3.50	25.50	--	18.00	220.00	59.34
	NDME	23.67	8.00	220.00	2.67	2.67	4.00	--	198.67	64.33
	DME	25.00	8.00	270.00	3.00	2.00	1.00	2.00	225.00	75.00
2. Fish	OAME	23.67	8.67	--	3.33	--	--	--	189.33	183.00
	NDME	25.50	9.00	--	3.50	--	--	--	229.50	228.00
	DME	25.00	8.00	--	3.00	--	--	--	200.00	197.00
3. Rice Mill	OAME	25.33	4.67	--	1.00	--	--	--	202.67	858.67
	NDME	22.00	7.50	--	1.00	--	--	--	176.00	1312.00
	DME	26.00	10.00	--	1.00	--	--	--	208.00	2080.00
B) Non-Food										
1. Leather	OAME	24.00	12.00	--	1.00	3.00	--	--	288.00	288.00
	NDME	25.00	8.00	--	1.00	--	--	--	300.00	300.00
	DME	25.00	12.00	--	1.00	--	--	60.00	300.00	300.00
2. Paper	OAME	25.00	12.00	30.00	4.00	4.00	--	--	300.00	75.00
	NDME	25.00	8.00	30.00	1.00	7.00	--	--	300.00	300.00
	DME	25.00	8.00	15.00	1.00	20.00	--	90.00	300.00	300.00
3. Textile	OAME	25.00	9.00	--	1.00	5.00	--	30.00	300.00	300.00
	NDME	24.00	8.00	--	--	25.00	--	30.00	288.00	288.00
	DME	--	--	--	--	--	--	--	--	--
4. Wood	OAME	25.00	10.00	10.00	--	5.00	--	--	300.00	75.00
	NDME	25.00	8.00	--	4.00	10.00	--	15.00	300.00	75.00
	DME	25.00	8.00	--	1.00	--	--	--	300.00	300.00

processing of the unit, the number of production cycles each unit completes is seen to be different. Thus, within the category of food processing, rice processing has highest number of cycles per year as each cycle is of an hour. For cashew units, the number of cycles completed in a year is comparatively low as each cycle is of 3-4 days.

Generally, all the units reported that the produce is marketed immediately. Cashew and fish units sell their produce to the agents, wholesalers. Rice mills, leather, furniture and tailoring units sell their produce to the agents and wholesalers (and clients in case of rice mills) who provide them the basic raw material. Binding units also did not report any delay in marketing of the produce. It can be seen that for the fish processing units and the rice mills, the credit realization period is nil. For other units the number of days taken for credit realization varies from 2-90 days. It is seen that on an average, the credit realization period for all the units is low except in some categories of units such as leather and textiles units.

5.2: Sources of Raw Materials and Marketing Linkages of the Processed Product

This section deals with the markets from where the units obtain their raw materials and sell their finished product. This gives us an idea about the number of linkages the producers have with various input and output markets.

5.2.1: Marketing Channels for Procuring Raw Materials

West Bengal:

Table-5.2.1A carry information about the number of channels for procuring raw materials in West Bengal. The table shows that except for the paddy processing and fish processing units, majority of all other units reported to have purchased raw materials through established trade/ market channels. In case of paddy processing and fish processing units, majority of them are found to have purchased raw materials from farmers directly. No unit in the total sample has not reported purchases from farmers' co-operative societies.

Bihar:

Table-5.2.1B reveals the sources, from where raw materials have been purchased in Bihar. It shows that processing activity-III (livestock based activity) purchased raw materials mainly from farmers directly (05). Other two types of agro-food based processing activities' used all the three channels for purchasing raw materials although in the major, the units are found to have purchased the same from farmers directly. Among non-food agro processing activities, raw materials, were wholly purchased from channel – III i.e., through established trade channels and market channels.

Table – 5.2.1A

Marketing Channels for Purchasing the Raw Materials in West Bengal

Channel	Food Processing Units Reporting (Nos.)			Non-Food Processing Units Reporting (Nos.)			
	Processing Activity-I Fruit (mango) processing (6)	Processing Activity-II (Paddy processing) (6)	Processing Activity-III (Fish processing) (6)	Processing Activity-IV (Leather and its products) (3)	Processing Activity-V (Paper and its products) (3)	Processing Activity-VI Textile (Jute) products (3)	Processing Activity-VII (Wood and its products) (3)
1. Purchasing raw materials from farmers directly	2	5	4	0	0	0	1
2. Purchasing raw materials from farmers' Cooperative Societies	0	0	0	0	0	0	0
3. Purchasing raw materials through established trade channels and market channels	4	1	2	3	3	3	2

Table – 5.2.1B
Marketing Channels for Purchasing the Raw Materials in Bihar

Channel	Food Processing Units Reporting (Nos.)			Non-Food Processing Units Reporting (Nos.)		
	Processing Activity-I (Paddy Processing) (6)	Processing Activity-II Fruit(Litchi Processing) (6)	Processing Activity-III Dairy(Milk Processing) (6)	Processing Activity-IV Textile(Silk and its products) (3)	Processing Activity-V (Wood and its products) (3)	Processing Activity-VI (Leather and its products) (3)
1. Purchasing raw materials from farmers directly	4	4	5	--	--	--
2. Purchasing raw materials from farmers' Cooperative Societies	1	1	1	--	--	--
3. Purchasing raw materials through established trade channels and market channels	1	1	--	3	3	3

Maharashtra:

Table-5.2.1C shows the sources from where the raw materials have been purchased in Maharashtra. It can be seen that except for the cashew units, all other units have one type of source from where the material is purchased. Cashew units

purchased raw materials both from farmers and established trade channels. In absence of producers cooperatives, the units have not reported purchases from cooperative societies.

Table – 5.2.1C
Marketing Channels for Purchasing the Raw Materials in Maharashtra

Channel	Food Processing Units Reporting (Nos.)			Non-Food Processing Units Reporting (Nos.)			
	Cashew (6)	Fish (6)	Rice Mill (6)	Leather (3)	Paper (3)	Textile (3)	Wood (3)
1. Purchasing raw materials from farmers/ fishermen directly	(3) Farmers	(6) Fishermen	___	___	___	___	___
2. Purchasing raw materials from farmers' Cooperative Societies	___	___	___	___	___	___	___
3. Purchasing raw materials through established trade channels and market channels	(3) Agents		(6) Taken for processing from the customers/ farmers growing paddy	(3) Agents Traders/	(3) Wholesalers	(3) Taken for processing from the customers who supply cloth	(3) Wholesalers

5.2.2: Marketing Channels for Selling the Processed Product

West Bengal:

Table-5.2.2A presents the number of channels of marketing for selling the processed product domestically in West Bengal. It can be seen that the food processing units in major cases, have sold their products through market functionaries like middlemen, retailer and wholesalers while the majority of those of non-food processing units have marketed their product directly in the terminal market.

Bihar:

Table-5.2.2B encompasses the data showing marketing channels in Bihar where the sample entrepreneurs were found selling processed products domestically. It can be seen from the table that half of the total sample entrepreneurs for 'cereal based activity' sold their processed product (rice) directly in the terminal markets. Channel of middlemen came second (02) and wholesaler (01) followed it. Entrepreneurs of processing activity-II (horticulture based activity) mainly used the channel –I, i.e., terminal market (4) and channel – 2(b) namely; middlemen (02). Sample entrepreneurs of processing activities-III and IV (livestock based and textile based) were seen to have sold their products through channel – 2 (a) and 2 (b), means wholesalers and middlemen. It was interesting to note that under agro non-food processing activities cent percent of the entrepreneurs of wood based and leather

based activities used terminal market (03 each) in selling their products. It can thus be inferred that terminal market for processing activities –III and IV and other market functionaries for activities – II, V and VI have to be strengthened and made easily available with remunerative prices.

Table – 5.2.2A

Marketing Channels for Selling the Processed Product Domestically in West Bengal

Channel	Food Processing Units Reporting (Nos.)			Non-Food Processing Units Reporting (Nos.)			
	Processing Activity-I Fruit (mango) processing (6)	Processing Activity-II (Paddy processing) (6)	Processing Activity-III (Fish processing) (6)	Processing Activity-IV (Leather and its products) (3)	Processing Activity-V (Paper and its products) (3)	Processing Activity-VI Textile (Jute) products (3)	Processing Activity-VII (Wood and its products) (3)
1. Selling the processed product directly in the terminal market	3	1	1	2	3	3	3
2. Selling the product through market functionaries a) Middlemen	4	1	4	1	1	1	0
b) Retailer	2	3	0	0	0	1	3
c) Wholesaler	2	2	2	2	2	1	0

Table – 5.2.2B

Marketing Channels for Selling the Processed Product Domestically in Bihar

Channel	Food Processing Units Reporting (Nos.)			Non-Food Processing Units Reporting (Nos.)		
	Processing Activity-I (Paddy Processing) (6)	Processing Activity-II Fruit(Litchi Processing) (6)	Processing Activity-III Dairy(Milk Processing) (6)	Processing Activity-IV Textile(Silk and its products) (3)	Processing Activity-V (Wood and its products) (3)	Processing Activity-VI (Leather and its products) (3)
1. Selling the processed product directly in the terminal market	3	4	--	--	3	3
2. Selling the product through market functionaries a) Wholesaler	1	--	3	1	--	--
b) Middleman	2	2	3	2	--	--
c) Retailer	--	--	--	--	--	--

Maharashtra:

In Maharashtra (table-5.2.2C), it can be seen that the cashew, fish and the binding units have sold their product to the agents, wholesalers (i.e. market functionaries) and also to the small consumers in the same market (i.e. directly to the consumers in the terminal market). Through the market functionaries like agents and wholesalers, the produce goes to various places.

Table – 5.2.2C

Marketing Channels for Selling the Processed Product Domestically in Maharashtra

Channel	Food Processing Units Reporting (Nos.)			Non-Food Processing Units Reporting (Nos.)			
	Cashew (6)	Fish (6)	Rice Mill (6)	Leather (3)	Binding (3)	Textile (3)	Wood (3)
1. Selling the processed product directly in the terminal market			3		3	3	
2. Selling the product through market functionaries				3			3
3. 1 and 2	6	6			3		

5.3: Cost of Production

Costs involved in the production process consisted of two components viz. recurring fixed costs and recurring variable costs. Recurring fixed costs are those which are occurring at a periodic intervals and generally not keeping any correlation with the level of production. Recurring variable costs referred to those costs that vary with level of production, almost proportionately. Items figuring under the head of recurring fixed costs are depreciation of assets, interest payment for loan taken, periodic maintenance cost, insurance premium, tax, salaries, bonus etc. Apart from the interest on bank loan paid by the sample investors, alternative cost of own fund at the prevailing interest rate on deposits was also taken into account. Recurring variable cost of the investments included cost on raw materials (including transportations), wages, marketing charges (including transportation), electricity charge, interest on working capital, repair and replacement on machinery etc. In order to workout the realistic economics of the activity, efforts put in by the family labour involved in activity have been assigned value at par with the outside labour wage (ruling wage) prevailing in the local area.

Recurring Fixed Costs (Per Unit) incurred by the Sample Units

West Bengal:

Details of recurring fixed cost, incurred annually by the sample investors in West Bengal, are given in Table – 5.3.1A. As may be noticed from the table, all the activities incurred some recurring fixed costs. Within the group of food processing

units, investment in paddy processing unit has a very high fixed cost of Rs.424331.67 followed by fruit processing activity at Rs.264283.33 and fish processing unit at Rs.175091.67 per year. For the non-food processing units, annual recurring fixed cost was very minimum at Rs.4433.33 in case of units manufacturing textile (jute) products, followed by manufacturing units of wood-based products at Rs.66916.67, leather based products at Rs.106533.33 and paper-based products at Rs.244166.67. Heavy fixed cost incurred by the units manufacturing paper-based products was mainly on account of higher depreciation charges (due to higher investment in machinery), higher interest payment for the

Table – 5.3.1A

Recurring Fixed Costs (Per Unit) incurred by the Sample Units in West Bengal

(Rupees/yr.)

Name of the Processing Activity	Type of enterprise (OAME/ NDME/ DME)	Interest on Capital			Depreciation	Other fixed costs	Total
		Own Fund	Bank Loan	Other Loan			
Fruit (Mango) Processing	OAME	464.67 (29.70)	166.67 (10.65)	466.67 (29.82)	466.67 (29.82)	-- (--)	1564.68 (100.00)
	NDME	1750 (4.49)	2500 (6.41)	4500 (11.54)	5500 (14.10)	24750 (63.46)	39000 (100.00)
	DME	200000 (13.23)	-- (--)	-- (--)	200000 (13.23)	1112000 (73.54)	1512000 (100.00)
	AVERAGE	34150 (12.90)	916.67 (0.35)	1733.33 (0.65)	35900 (13.56)	192083.33 (72.54)	264783.33 (100.00)
Paddy Processing	OAME	750 (22.28)	1600 (47.52)	-- (--)	616.67 (18.32)	400 (11.88)	3366.67 (100.00)
	NDME	1900 (6.30)	2750 (9.12)	-- (--)	4500 (14.92)	21000 (69.65)	30150 (100.00
	DME	100000 (4.04)	565000 (22.82)	96000 (3.88)	580540 (23.44)	1134650 (45.82)	2476190 (100.00)
	AVERAGE	1757.5 (0.43)	95883.33 (23.47)	16000 (3.92)	98565 (24.13)	196308.33 (48.05)	408514.16 (100.00)
Fish Processing	OAME	258.33 (46.97)	-- (--)	-- (--)	141.67 (25.76)	150 (27.27)	550 (100.00)
	NDME	1000 (51.28)	-- (--)	-- (--)	650 (33.33)	300 (15.38)	1950 (100.00)
	DME	25000 (2.34)	50000 (4.67)	-- (--)	30000 (2.80)	965000 (90.19)	1070000 (100.00)
	AVERAGE	4629.17 (2.65)	8333.33 (4.77)	-- (--)	528.75 (0.30)	161008.33 (92.27)	174499.58 (100.00)

Cont.Table-5.3.1A

Cont.Table-5.3.1A

(Rupees/yr.)

Name of the Processing Activity	Type of enterprise (OAME/ NDME/ DME)	Interest on Capital			Depreciation	Other fixed costs	Total
Leather and its product	OAME	500 (13.89)	1100 (30.55)	-- (--)	1500 (41.67)	500 (13.89)	3600 (100.00)
	NDME	1000 (7.69)	5000 (38.46)	-- (--)	5000 (38.46)	2000 (15.38)	13000 (100.00)
	DME	10000 (3.30)	30000 (9.90)	10000 (3.30)	25000 (8.25)	228000 (75.25)	303000 (100.00)
	AVERAGE	3833.33 (3.70)	12033.33 (11.62)	333.33 (0.32)	10500 (10.14)	76833.33 (74.21)	103533.32 (100.00)
Paper and its product	OAME	500 (6.67)	2000 (26.67)	-- (--)	3000 (40.00)	2000 (26.67)	7500 (100.00)
	NDME	10000 (5.40)	30000 (16.22)	-- (--)	40000 (21.62)	105000 (56.76)	185000 (100.00)
	DME	30000 (5.55)	100000 (18.52)	-- (--)	125000 (23.15)	285000 (52.78)	540000 (100.00)
	AVERAGE	13500 (5.53)	44000 (18.02)	-- (--)	56000 (22.93)	130666.67 (53.52)	244166.67 (100.00)
Textile Products (Jute)	OAME	1000 (66.67)	-- (--)	-- (--)	500 (33.33)	-- (--)	1500 (100.00)
	NDME	2000 (71.43)	-- (--)	-- (--)	600 (21.43)	200 (7.14)	2800 (100.00)
	DME	4000 (44.44)	2500 (27.78)	-- (--)	2000 (22.22)	500 (5.56)	9000 (100.00)
	AVERAGE	2333.33 (52.63)	833.33 (18.80)	-- (--)	1033.33 (23.31)	233.33 (5.26)	4433.32 (100.00)
Wood and its Products	OAME	500 (52.63)	-- (--)	200 (21.05)	250 (26.31)	-- (--)	950 (100.00)
	NDME	250 (25.00)	-- (--)	500 (50.00)	250 (25.00)	-- (--)	1000 (100.00)
	DME	20000 (10.05)	10000 (5.03)	10000 (5.03)	50000 (25.12)	109000 (54.77)	199000 (100.00)
	AVERAGE	6916.67 (10.33)	3333.33 (4.98)	3566.67 (5.32)	16833.33 (25.13)	36333.33 (54.24)	66983.33 (100.00)

Note: Figures in brackets indicate percentages of total recurring fixed costs.

bank loan and other annual costs like insurance and tax payments. On the other, low depreciation cost due to capital saving nature of the investment, relatively lower loan amount and thereby interest payments, had contributed to keep the recurring fixed cost

at very low level in the case of manufacturing units of textile (jute) products covered under the study.

Variable Cost of Investment in Processing Units

West Bengal

Table 5.3.1B shows details of variable cost of the investment in processing units of West Bengal. As far as recurring variable cost is concerned (table-5.3.1B), it can be seen that spending on raw materials is the major component of variable cost of the investment for all the processing activities. Notably, the share of this component is found to be relatively higher for the food processing industries. The percentage share varied from 55 per cent to 95 per cent in case of food processing industries while the same varied from 67 per cent to 74 per cent in case of non-food processing industries. Within the group of food processing units, the proportion of cost on raw materials topped the list for the paddy-processing unit followed by the fish processing and fruit processing activities respectively. In general for all the processing units, proportion of cost on raw material is found to have declined with the increase in the size of the unit in the category.

Table – 5.3.1B
Recurring Variable Costs of Investment in Processing Units of West Bengal (Per Unit)

(Rupees/yr.)

Name of the Processing Activity	Type of enterprise (OAME/ NDME/ DME)	Repair & Replacement on Machinery	Cost on Raw Materials	Wages	Marketing Cost	Electricity Charges	Interest on Working Capital	Total
Fruit (Mango) Processing	OAME	--	33666.67	--	500.00	--	5766.67	39933.34
		(--)	(84.31)	(--)	(1.25)	(--)	(14.44)	(100.00)
	NDME	1250.00	124250.00	21000.00	5750.00	7500.00	6000.00	165750.00
		(0.75)	(74.96)	(12.67)	(3.47)	(4.52)	(3.62)	(100.00)
	DME	50000.00	2050000.00	630000.00	1040000.00	48000.00	70000.00	3888000.00
		(1.29)	(52.73)	(16.20)	(26.75)	(1.23)	(1.80)	(100.00)
	AVERAGE	8750.00	399916.67	112000.00	175500.00	10500.00	16550.00	723216.67
		(1.21)	(55.30)	(15.49)	(24.27)	(1.45)	(2.28)	(100.00)
Paddy Processing	OAME	--	489166.67	--	3333.33	--	2800.00	495300.00
		(--)	(98.76)	(--)	(0.67)	(--)	(0.56)	(100.00)
	NDME	2500.00	626600.00	10250.00	5000.00	21000.00	4000.00	669350.00
		(0.37)	(93.61)	(1.53)	(0.75)	(3.14)	(0.60)	(100.00)
	DME	125000.00	20679300.00	150000.00	342000.00	115000.00	50000.00	21461300.00
		(0.58)	(96.37)	(0.70)	(1.59)	(0.53)	(0.23)	(100.00)
	AVERAGE	21666.67	3900000.00	28416.70	60500.00	26166.70	86066.67	4122816.68
		(0.53)	(94.59)	(0.69)	(1.47)	(0.63)	(2.09)	(100.00)

Contd.Table-5.3.1B

Contd.Table-5.3.1B

(Rupees/yr.)

Name of the Processing Activity	Type of enterprise (OAME/ NDME/ DME)	Repair & Replacement on Machinery	Cost on Raw Materials	Wages	Marketing Cost	Electricity Charges	Interest on Working Capital	Total
Fish Processing	OAME	--	63666.67	--	--	--	750.00	64416.67
		(--)	(98.84)	(--)	(--)	(--)	(1.16)	(100.00)
	NDME	--	73250.00	13500.00	--	--	1250.00	88000.00
		(--)	(83.24)	(15.34)	(--)	(--)	(1.42)	(100.00)
	DME	50000.00	4520000.00	1995000.00	200000.00	120000.00	100000.00	6985000.00
		(0.72)	(64.71)	(28.56)	(2.86)	(1.72)	(1.43)	(100.00)
	AVERAGE	8333.33	809583.33	337000.00	33333.33	20000.00	17458.33	1225708.30
		(0.68)	(66.06)	(27.49)	(2.72)	(1.63)	(1.42)	(100.00)
Leather and its product	OAME	500.00	91200.00	--	2200.00	3600.00	500.00	98000.00
		(0.51)	(93.06)	(--)	(2.25)	(3.67)	(0.51)	(100.00)
	NDME	2000.00	537600.00	87000.00	7400.00	4000.00	3000.00	641000.00
		(0.31)	(83.87)	(13.57)	(1.16)	(0.62)	(0.47)	(100.00)
	DME	20000.00	510000.00	147000.00	99000.00	25000.00	10000.00	811000.00
		(2.47)	(62.89)	(18.12)	(12.21)	(3.08)	(1.23)	(100.00)
	AVERAGE	7500.00	379600.00	78000.00	33200.00	10866.70	4500.00	513666.67
		(1.46)	(73.90)	(15.19)	(6.46)	(2.11)	(0.88)	(100.00)
Paper and its product	OAME	500.00	55400.00	--	1500.00	3600.00	1500.00	62500.00
		(0.80)	(88.64)	(--)	(2.40)	(5.76)	(2.40)	(100.00)
	NDME	5000.00	450000.00	30000.00	5000.00	33000.00	10000.00	533000.00
		(0.94)	(84.42)	(5.63)	(0.94)	(6.19)	(1.88)	(100.00)
	DME	10000.00	1440000.00	130000.00	16000.00	48000.00	20000.00	1664000.00
		(0.60)	(86.54)	(7.81)	(0.96)	(2.88)	(1.20)	(100.00)
	AVERAGE	5166.67	216466.67	53333.30	7500.00	28200.00	10500.00	321166.67
		(1.61)	(67.40)	(16.61)	(2.33)	(8.78)	(3.27)	(100.00)
Textile Products (Jute)	OAME	--	25300.00	--	1600.00	1200.00	1000.00	29100.00
		(--)	(86.94)	(--)	(5.50)	(4.12)	(3.44)	(100.00)
	NDME	700.00	42100.00	10800.00	2500.00	2400.00	1500.00	60000.00
		(1.17)	(70.17)	(18.00)	(4.17)	(4.00)	(2.50)	(100.00)
	DME	2000.00	128000.00	33000.00	8000.00	4800.00	5000.00	180800.00
		(1.11)	(70.80)	(18.25)	(4.42)	(2.65)	(2.77)	(100.00)
	AVERAGE	900.00	65133.33	14600.00	4033.33	2800.00	2500.00	89966.66
		(1.00)	(72.40)	(16.23)	(4.48)	(3.11)	(2.78)	(100.00)
Wood and its Products	OAME	500.00	124000.00	--	--	3000.00	3000.00	130500.00
		(0.38)	(95.02)	(--)	(--)	(2.30)	(2.30)	(100.00)
	NDME	750.00	129150.00	12000.00	--	3600.00	3500.00	149000.00
		(0.50)	(86.68)	(8.05)	(--)	(2.42)	(2.35)	(100.00)
	DME	2000.00	377000.00	230000.00	2000.00	30000.00	10000.00	651000.00
		(0.31)	(57.91)	(35.33)	(0.31)	(4.60)	(1.54)	(100.00)
	AVERAGE	1083.33	210050.00	80666.70	666.67	12200.00	5500.00	310166.67
		(0.35)	(67.72)	(26.01)	(0.22)	(3.93)	(1.77)	(100.00)

Note: Figures in brackets indicate percentages of total recurring variable cost.

Recurring Fixed Costs (Per Unit) incurred by the Sample Units

Bihar:

Table-5.3.2A embodies fixed costs which recur throughout the process of production in the processing units of Bihar. In the state, within each category, the quantum of fixed costs is seen to be increasing with the size of the unit. As most of the small enterprises belonging to various food and non-food processing activities have been working under unorganized sectors, they are not registered and feel difficulty in achieving bank loan. Only NDMEs and DMEs of cereal based and horticultural products based activities (under agro food processing activities) and DMEs of wood and leather based activities (under agro non-food processing category) were found to have taken loans from banks. The percentages of interest payment on bank loans to total fixed costs were: 6.34, 18.24, 27.12, 12.35, 21.37 and 13.20 respectively (table-5.3.2A). Other fixed costs (periodic maintenance, rent, insurance premium, taxes and salaries, bonus) and depreciation are the main components of the recurring fixed costs. It is obvious that major part of recurring fixed costs is shared by own fund ranging between 61.70 per cent to 85.15 per cent for agro-food processing activities' and from 64.51 per cent to 82.19per cent in case of agro non-food processing activities.

Variable Cost of Investment in Processing Units

Bihar:

As far as recurring variable costs of the investment are concerned, it is seen that cost on raw materials is the major component of the variable cost for most of the activities (table-5.3.2B), except DME of horticultural products (36.89 per cent) and NDME, (31.90 per cent), DMEs of textile (29.91 per cent) and NDMEs and DMEs of wood and leather based processing activities (18.61 per cent, 43.50 per cent, 21.52 per cent and 20.04 per cent) respectively. In all these cases, share of wages dominated the variable cost component. For these agro non-food based processing activities, generally, proportion of cost on raw materials is seen to be declining with increase in the size of the units in the respective categories. This is because with increase in the size, other costs like: those on wages, electricity charges (in some cases) and interest on working capital are seen to be increasing. The cost on raw materials is lower for the non-food units (in particular), like textiles and wood because the units did not have to buy full quantum of the basic raw materials to be processed. As a matter of fact, the units were provided with the raw materials for processing by some of the customers, who took back the processed products.

Table – 5.3.2A
Recurring Fixed Costs (Per Unit) incurred by the Sample Units in Bihar

(Rupees/yr.)

Name of the Processing Activity	Type of enterprise (OAME/ NDME/ DME)	Interest on Capital			Depreciation	Other fixed costs	Total
		Own Fund	Bank Loan	Other Loan			
A) Food							
1. Paddy Processing	OAME	35000	--	5270	3730	3600	47600
		(73.51)	(--)	(11.08)	(7.84)	(7.57)	(100.00)
	NDME	200000	14880	--	19988	--	234868
		(85.15)	(6.34)	(--)	(8.51)	(--)	(100.00)
	DME	353000	90545	--	52950	--	496495
		(71.09)	(18.24)	(--)	(10.67)	(--)	(100.00)
2. Fruit (Litchi) Processing	OAME	17400	--	3500	1740	--	22640
		(76.85)	(--)	(15.46)	(7.69)	(--)	(100.00)
	NDME	36000	15000	--	4320	--	55320
		(65.07)	(27.12)	(--)	(7.81)	(--)	(100.00)
	DME	1350000	270000	--	202500	365000	2187500
		(61.70)	(12.35)	(--)	(9.26)	(16.69)	(100.00)
3. Milk (Dairy) Processing	OAME	42000	--	10000	5040	--	57040
		(73.62)	(--)	(17.54)	(8.84)	(--)	(100.00)
	NDME	168000	--	25000	21840	--	214840
		(78.19)	(--)	(11.64)	(10.17)	(--)	(100.00)
	DME	400000	--	60000	40000	--	500000
		(80.00)	(--)	(12.00)	(8.00)	(--)	(100.00)
B) Non-Food							
1. Silk and its products	OAME	11000	--	2200	1650	--	14850
		(74.06)	(--)	(14.82)	(11.12)	(--)	(100.00)
	NDME	250000	--	75000	37500	--	362500
		(68.96)	(--)	(20.69)	(10.35)	(--)	(100.00)
	DME	498000	--	199200	74700	--	771900
		(64.51)	(--)	(25.81)	(9.68)	(--)	(100.00)
2. Wood and its products	OAME	36000	--	11000	1800	--	48800
		(73.77)	(--)	(22.54)	(3.69)	(--)	(100.00)
	NDME	235000	--	40000	28200	--	303200
		(77.50)	(--)	(13.20)	(9.30)	(--)	(100.00)
	DME	400000	125000	--	60000	--	585000
		(68.37)	(21.37)	(--)	(10.26)	(--)	(100.00)
3. Leather and its products	OAME	30000	--	5000	1500	--	36500
		(82.19)	(--)	(13.70)	(4.11)	(--)	(100.00)
	NDME	260000	--	51000	13000	--	324000
		(80.24)	(--)	(15.74)	(4.02)	(--)	(100.00)
	DME	520000	86685	--	50000	--	656685
		(79.18)	(13.20)	(--)	(7.62)	(--)	(100.00)

Note : 1. Figures in brackets indicate percentages of total recurring fixed costs.

Table – 5.3.2B
Recurring Variable Costs of Investment in Processing Units of Bihar (Per Unit)

(Rupees/yr.)

Name of the Processing Activity	Type of enterprise (OAME/ NDME/ DME)	Repair & Replacement on Machinery	Cost on Raw Materials	Wages	Marketing Cost	Electricity Charges	Interest on Working Capital	Total
Paddy Processing	OAME	5000	173943	--	1800	1500	3026	185269
		(2.69)	(93.89)	(--)	(0.98)	(0.81)	(1.63)	(100.00)
	NDME	20000	3465000	90000	6000	4000	19065	3604065
		(0.56)	(96.14)	(2.50)	(0.17)	(0.11)	(0.52)	(100.00)
	DME	150000	25110000	648000	42480	20000	445682	26416162
		(0.57)	(95.06)	(2.45)	(0.16)	(0.08)	(1.68)	(100.00)
Fruit (Litchi) Processing	OAME	2000	7140	4200	3000	1200	487	18027
		(11.10)	(39.60)	(23.30)	(16.64)	(6.65)	(2.71)	(100.00)
	NDME	6000	36300	14700	9400	2500	2450	71350
		(8.41)	(50.87)	(20.60)	(13.18)	(3.51)	(3.43)	(100.00)
	DME	203000	2199800	2420000	200000	76200	864000	5963000
		(3.41)	(36.89)	(40.58)	(3.36)	(1.28)	(14.48)	(100.00)
Milk (Dairy) Processing	OAME	2000	75000	--	2000	--	5000	84000
		(2.38)	(89.28)	(--)	(2.38)	(--)	(5.96)	(100.00)
	NDME	10000	500000	180000	12000	960	33750	736710
		(1.35)	(67.87)	(24.44)	(1.63)	(0.13)	(4.58)	(100.00)
	DME	13000	743225	200000	18000	2400	30000	1006625
		(1.29)	(73.83)	(19.87)	(1.79)	(0.24)	(2.98)	(100.00)
Silk and its product	OAME	1000	50000	--	--	2400	4000	57400
		(1.75)	(87.10)	(--)	(--)	(4.19)	(6.96)	(100.00)
	NDME	6000	126000	240000	--	4800	18250	395050
		(1.52)	(31.90)	(60.75)	(--)	(1.22)	(4.61)	(100.00)
	DME	10000	150000	300000	--	5000	36500	501500
		(1.99)	(29.91)	(59.83)	(--)	(0.99)	(7.28)	(100.00)
Wood and its product	OAME	1000	15335	--	1565	1200	1900	21000
		(4.76)	(73.03)	(--)	(7.45)	(5.71)	(9.05)	(100.00)
	NDME	4000	70000	255000	12000	3600	31500	376100
		(1.06)	(18.61)	(67.81)	(3.19)	(0.95)	(8.38)	(100.00)
	DME	15000	397950	405000	4050	12000	81000	915000
		(1.63)	(43.50)	(44.26)	(0.44)	(1.31)	(8.86)	(100.00)
Leather and its products	OAME	1000	16300	--	1040	960	1700	21000
		(4.76)	(77.62)	(--)	(4.95)	(4.57)	(8.10)	(100.00)
	NDME	1600	66000	213000	4800	1200	20042	306642
		(0.52)	(21.52)	(69.47)	(1.56)	(0.39)	(6.54)	(100.00)
	DME	4000	81000	270000	6000	3000	40000	404000
		(0.99)	(20.04)	(66.84)	(1.48)	(0.74)	(9.91)	(100.00)

Note : 1.Figures in brackets indicate percentages of total recurring variable costs.

Recurring Fixed Costs (Per Unit) incurred by the Sample Units

Maharashtra:

Table-5.3.3A shows the fixed costs which recur throughout the process of production in Maharashtra. Within each category, the quantum of the fixed cost is seen to be increasing with the size of the unit. On an average, only 13 to 14 percent of the total costs have been contributed by own fund in case of food as well as non-food processing units. Out of the 30 units, bank loan has been taken only by 12 units and therefore, interest forms a part of fixed capital only for these units. These are basically

the food processing units registered under DIC or KVIC and covered under their schemes. Other fixed costs (periodic maintenance, rent, insurance premium, taxes and salaries, bonus and depreciation) are the main components of the recurring fixed costs.

Table – 5.3.3A

Recurring Fixed Costs (Per Unit) incurred by the Sample Units of Maharashtra

(Rupees/yr.)

Name of the Processing Activity	Type of enterprise (OAME/ NDME/ DME)	Interest on Capital			Depreciation	Other fixed costs	Total
		Own Fund	Bank Loan	Other Loan			
A) Food							
1. Cashew	OAME	2350.00	10090.00	--	28400.00	4850.00	45690.00
		(5.00)	(22.00)	(--)	(62.00)	(11.00)	(100.00)
	NDME	6833.33	7575.67	2924.00	18337.74	11646.67	47317.41
		(14.00)	(16.00)		(39.00)	(25.00)	(100.00)
	DME	--	39000.00	--	6908.33	96140.00	142048.33
		(--)	(27.00)	(--)	(5.00)	(68.00)	(100.00)
2. Fish	OAME	685.00	--	--	1026.59	1316.67	3028.26
		(23.00)	(--)	(--)	(34.00)	(43.00)	(100.00)
	NDME	800.00	--	--	900.00	28522.50	30222.50
		(3.00)	(--)	(--)	(3.00)	(94.00)	(100.00)
	DME	1750.00	--	--	3566.70	6800.00	12116.70
		(14.00)	(--)	(--)	(29.00)	(56.00)	(100.00)
3. Rice Mill	OAME	6416.67	10133.33	--	11201.12	32274.67	60025.79
		(11.00)	(17.00)	(--)	(19.00)	(54.00)	(100.00)
	NDME	14250.00	43187.50	--	6451.69	24440.00	88329.19
		(16.00)	(49.00)	(--)	(7.00)	(28.00)	(100.00)
	DME	46830.00	48620.00	--	32733.30	45875.00	174058.30
		(27.00)	(28.00)	(--)	(19.00)	(26.00)	(100.00)
B) Non-Food							
1. Leather	OAME	10800.00	--	--	866.61	50400.00	62066.66
		(17.00)	(--)	(--)	(1.00)	(81.00)	(100.00)
	NDME	4500.00	--	--	2650.00	67350.00	74500.00
		(6.00)	(--)	(--)	(4.00)	(90.00)	(100.00)
	DME	10800.00	--	--	14642.58	477500.00	502942.58
		(2.00)	(--)	(--)	(3.00)	(95.00)	(100.00)
2. Binding	OAME	4500.00	--	--	2033.34	14700.00	21233.34
		(21.00)	(--)	(--)	(10.00)	(69.00)	(100.00)
	NDME	13500.00	--	--	3205.70	56200.00	72905.70
		(19.00)	(--)	(--)	(4.00)	(77.00)	(100.00)
	DME	67500.00	9100.00	--	37416.67	177000.00	291016.67
		(23.00)	(3.00)	(--)	(13.00)	(61.00)	(100.00)
3. Textile	OAME	1100.00	--	--	956.67	810.00	2866.67
		(38.00)	(--)	(--)	(33.00)	(28.00)	(100.00)
	NDME	5200.00	--	--	2425.00	159500.00	167125.00
		(3.00)	(--)	(--)	(1.00)	(95.00)	(100.00)
	DME	--	--	--	--	--	--
		(--)	(--)	(--)	(--)	(--)	(--)
4. Wood	OAME	7650.00	--	--	2033.33	27000.00	36683.33
		(21.00)	(--)	(--)	(6.00)	(74.00)	(100.00)
	NDME	12000.00	--	--	3566.67	110200.00	125766.67
		(10.00)	(--)	(--)	(3.00)	(88.00)	(100.00)
	DME	4500.00	--	--	3882.50	274000.00	282382.50
		(1.00)	(--)	(--)	(1.37)	(97.00)	(100.00)

Note : 1. Figures in brackets indicate percentages of total recurring fixed costs.

Variable Cost of Investment in Processing Units

Maharashtra:

As far as recurring variable cost is concerned, it can be seen that cost on raw materials is the major component of the variable cost for most of the activities of the state (table-5.3.3B). However, it can be noted that the share of this component is higher for the food processing units i.e. cashew and fish processing units. For these units, generally, proportion of cost on raw material is seen to be declining with increase in the size of the units in the category. This is because with increase in the size, other costs like those on wages, marketing and transportation are seen to be increasing. This cost is lower for the non-food units as for many non-food activities like tailoring, leather processing, and also the rice milling, the units do not have to buy the basic raw material that is to be processed. The units are provided with the raw material for processing by the customers who take back the processed product. Costs on repair and replacements are higher for the rice mills as these use heavy machinery.

5.4: Net Income from the Investment in Processing Units

Net income from the investment was worked out as the difference between gross income (gross value of output) from the investment and cost of production. The following analyses provide the details of net income accrued from the investment in sample processing units in the selected states.

West Bengal:

With regard to net income received from the investment, it may be observed that all the activities in the state gave positive net income being varied among the activities depending upon the size of the investment (table-5.4.1A). This is uniformly observable in the case of food processing units. It may be seen that within the group of food processing units, paddy processing activity gave maximum net income at Rs.1,85,718 per year followed by fish processing activity at Rs.1,61,583 and fruit processing activity at Rs.1,45,666. Small investment in units like fruit processing yielded net income of smaller amount in comparison with other units in the food-processing category. For the group of non-food processing units, this particular pattern is not uniformly observed, although, paper-based processing units with maximum investment among non-food processing units accrued maximum net income of Rs.1,15,333 followed by wood-based processing units at Rs.89,583, leather-based processing units at Rs.74,133 and jute-based textile units at Rs.68,800. For all the processing activities (food and non-food), net income increased with the size of the unit.

Table-5.3.3B
Recurring Variable Costs of Investment in Processing Units of Maharashtra (Per Unit)

(Rupees/Yr)

Name of the Processing Activity	Type of enterprise (OAME/ NDME/ DME)	Repair & Replacement on Machinery	Cost on Raw Materials	Wages	Marketing Cost	Electricity Charges	Interest on Working Capital	Transportation Cost of Raw Material	Total
A) Food									
1. Cashew	OAME	4420.00 (2.72)	140000.00 (86.14)	__ (--)	10850.00 (6.68)	4150.00 (2.55)	1850.00 (1.14)	1250.00 (0.77)	162520.00 (100.00)
	NDME	1850.00 (0.53)	317000.00 (90.21)	10346.67 (2.94)	8633.33 (2.46)	5333.33 (1.52)	7000.00 (1.99)	1233.33 (0.35)	351396.66 (100.00)
	DME	1200.00 (0.39)	90000.00 (29.60)	90000.00 (29.60)	106250.00 (34.94)	8100.00 (2.66)	1050.00 (0.35)	7500.00 (2.47)	304100.00 (100.00)
2. Fish	OAME	736.67 (0.20)	335008.00 (90.97)	__ (--)	18333.33 (4.98)	4200.00 (1.14)	403.33 (0.11)	9600.00 (2.61)	368281.33 (100.00)
	NDME	600.00 (0.08)	691200.00 (91.99)	18360.00 (2.44)	19125.00 (2.55)	1200.00 (0.16)	500.00 (0.07)	20385.00 (2.71)	751370.00 (100.00)
	DME	20000.00 (0.45)	3600000.00 (80.33)	360000.00 (8.03)	387000.00 (8.64)	12500.00 (0.28)	1750.00 (0.04)	100000.00 (2.23)	4481250.00 (100.00)
3. Rice Mill	OAME	24666.67 (64.16)	__ (--)	__ (--)	8960.00 (23.31)	3616.67 (9.41)	1200.00 (3.12)	__ (--)	38443.34 (100.00)
	NDME	5500.00 (13.53)	__ (--)	19040.00 (46.85)	__ (--)	14000.00 (34.45)	2100.00 (5.17)	__ (--)	40640.00 (100.00)
	DME	80000.00 (37.43)	__ (--)	29120.00 (13.62)	__ (--)	56000.00 (26.20)	48620.00 (22.75)	__ (--)	213740.00 (100.00)

Contd. Table-5.3.3B

Contd. Table-5.3.3B

Name of the Processing Activity	Type of enterprise (OAME/ NDME/ DME)	Repair & Replacement on Machinery	Cost on Raw Materials	Wages	Marketing Cost	Electricity Charges	Interest on Working Capital	Transportation Cost of Raw Material	Total
B) Non-Food									
1. Leather	OAME	2400.00 (10.74)	8400.00 (37.58)	— (--)	600.00 (2.68)	6000.00 (26.85)	4950.00 (22.15)	— (--)	22350.00 (100.00)
	NDME	2400.00 (2.60)	15000.00 (16.23)	60000.00 (64.94)	5700.00 (6.17)	4800.00 (5.19)	4500.00 (4.87)	— (--)	92400.00 (100.00)
	DME	12000.00 (0.88)	840000.00 (61.43)	405000.00 (29.62)	54000.00 (3.95)	9600.00 (0.70)	10800.00 (0.79)	36000.00 (2.63)	1367400.00 (100.00)
2. Binding	OAME	4000.00 (13.33)	15000.00 (50.00)	— (--)	1000.00 (3.33)	8000.00 (26.67)	— (--)	2000.00 (6.67)	30000.00 (100.00)
	NDME	4000.00 (0.10)	2820000.00 (72.67)	46800.00 (1.21)	543000.00 (13.99)	30000.00 (0.77)	13500.00 (0.35)	423000.00 (10.90)	3880300.00 (100.00)
	DME	25000.00 (3.47)	300000.00 (41.59)	126000.00 (17.47)	144000.00 (2.00)	36000.00 (4.99)	40000.00 (5.54)	180000.00 (24.95)	721400.00 (100.00)
3. Textile	OAME	2500.00 (22.12)	4500.00 (39.82)	— (--)	— (--)	3600.00 (31.86)	700.00 (6.19)	— (--)	11300.00 (100.00)
	NDME	800.00 (0.37)	57600.00 (26.67)	144000.00 (66.67)	— (--)	9600.00 (4.44)	4000.00 (1.85)	— (--)	216000.00 (100.00)
	DME	— (--)	— (--)	— (--)	— (--)	— (--)	— (--)	— (--)	— (--)
4. Wood	OAME	15000.00 (2.28)	600000.00 (91.10)	— (--)	— (--)	9600.00 (1.46)	9000.00 (1.37)	25000.00 (3.80)	658600.00 (100.00)
	NDME	7000.00 (0.68)	840000.00 (81.84)	102000.00 (9.94)	16800.00 (1.64)	9600.00 (0.94)	3000.00 (0.29)	48000.00 (4.68)	1026400.00 (100.00)
	DME	4000.00 (0.44)	480000.00 (53.40)	225000.00 (25.03)	105000.00 (11.68)	5400.00 (0.60)	4500.00 (0.50)	75000.00 (8.34)	898900.00 (100.00)

Note: 1. Recurring variable costs refer to costs that vary with the level of production, almost proportionately.
2. Figures in bracket indicate percentages of the total recurring variable cost for a particular category.

Table – 5.4.1A
Per Unit Net Income from the Investment in Processing Units of West Bengal

(Rupees/yr.)

Name of the Processing Activity	Type of enterprise (OAME/ NDME/ DME)	Gross Value of Output of the Processed Product	Expenditure			Net Income
			Fixed	Variable	Total	
Fruit (Mango) Processing	OAME	89666.67	1566.67	39933.34	41500.00	48166.67
	NDME	265000.00	34500.00	165750.00	200250.00	64750.00
	DME	6000000.00	1512000.00	3888000.00	5400000.00	600000.00
	AVERAGE	1133166.67	264283.33	723216.67	987500.00	145666.67
Paddy Processing	OAME	555500.00	3166.67	495300.00	498466.67	57033.33
	NDME	777500.00	30150.00	669350.00	699500.00	78000.00
	DME	26000200.00	2476190.00	22736800.00	25212990.00	787210.00
	AVERAGE	4870283.33	424331.67	4260733.33	4684565.00	185718.33
Fish Processing	OAME	110633.33	550.00	64416.67	64966.67	45666.67
	NDME	146200.00	1950.00	88000.00	89950.00	56250.00
	DME	9000000.00	1045000.00	7275000.00	8280000.00	720000.00
	AVERAGE	2101750.00	175091.67	1267375.00	1442466.67	161583.33
Leather and its product	OAME	150000.00	3600.00	98000.00	101600.00	48400.00
	NDME	708000.00	13000.00	641000.00	654000.00	54000.00
	DME	1225000.00	303000.00	802000.00	1105000.00	120000.00
	AVERAGE	694333.33	106533.33	513666.67	620200.00	74133.33
Paper and its product	OAME	120000.00	7500.00	62500.00	70000.00	50000.00
	NDME	754000.00	185000.00	533000.00	688000.00	66000.00
	DME	2304000.00	540000.00	1664000.00	2074000.00	230000.00
	AVERAGE	1059333.33	244166.67	753166.67	944000.00	115333.33
Textile Products (Jute)	OAME	65000.00	1500.00	29100.00	30600.00	34400.00
	NDME	102000.00	2800.00	57200.00	60000.00	42000.00
	DME	320000.00	9000.00	181000.00	190000.00	130000.00
	AVERAGE	162333.33	4433.33	90033.33	93533.33	68800.00
Wood and its Products	OAME	180000.00	750.00	130500.00	131250.00	48750.00
	NDME	195000.00	1000.00	149000.00	150000.00	45000.00
	DME	1025000.00	199000.00	6510000.00	850000.00	175000.00
	AVERAGE	466666.67	66916.67	310166.67	377083.33	89583.33

Bihar:

Table-5.4.1B presents the amount of net income earned by the sample units in Bihar. Out of the total 18 processing activities surveyed (06 each under three types of agro food based activities and 09 processing activities (03 each under agro non-food processing activities). All the activities and units of the state showed positive net returns. Data reveal that except DME of livestock based processing activity, in all

other cases under agro food processing activities net returns increased with the size of the units. This might be because of the higher interests on capital involved as own fund, other loan (under fixed costs and larger amount incurred as variable cost (Rs. 10,06,625/-). Under agro non-food processing activity group also, similar pattern could be observed except in case of net income by DME of textile based processing activity (Rs. 46,600/-), which is a bit lower than its NDME (Rs. 51850/-). This might be because of the heterogeneous nature of these non-food processing activities. It finally points out at the efficiency of the investments in bigger units. However, net incomes earned by larger units couldn't.

Table – 5.4.1B

Per Unit Net Income from the Investment in Processing Units of Bihar

(Rupees/yr.)

Name of the Processing Activity	Type of enterprise (OAME/ NDME/ DME)	Gross Value of Output of the Processed Product	Expenditure			Net Income
			Fixed	Variable	Total	
Paddy Processing	OAME	279000	47600	185269	232869	46131
	NDME	4010625	234868	3604065	3838933	171692
	DME	57139992	496495	26416162	26912657	30227335
Fruit (Litchi) Processing	OAME	42000	22640	18027	40667	1332
	NDME	220000	55320	71350	126670	93330
	DME	12940000	2187500	5963000	8150500	4789500
Milk (Dairy) Processing	OAME	153333	57040	84000	141040	12293
	NDME	1022221	214840	736710	951550	70671
	DME	1519481	500000	1006625	1506625	12856
Silk and its product	OAME	97625	14850	57400	72250	25375
	NDME	809400	362500	395050	757550	51850
	DME	1320000	771900	501500	1273400	46600
Wood and its product	OAME	99000	48800	21000	69800	29200
	NDME	799000	303200	376100	679300	112700
	DME	1980000	585000	915000	1500000	480000
Leather and its products	OAME	99000	36500	21000	57500	41500
	NDME	798750	394000	306642	700642	98108
	DME	1347500	656685	404000	1060685	286815

be seen to be proportionately higher as their total expenditures rose more than proportionately. Thus, the efficiency of processing units of smaller size also can not be ruled out

Maharashtra:

Table-5.4.1C presents gross value of the output as well as investment and values of net income earned by the sample units in Maharashtra. Firstly, a comparison of variable and fixed cost shows that the share of variable costs is higher than that of fixed costs for most of the units. On an average, 71 percent of the investment is the variable component of investment. In case of fish processing activity, the share of fixed costs is seen to be marginal. This is because

Table – 5.4.1C

Per Unit Net Income from the Investment in Processing Units of Maharashtra

(Rupees/yr.)

Name of the Processing Activity	Type of enterprise (OAME/ NDME/ DME)	Gross Value of Output of the Processed Product	Expenditure			Net Income
			Fixed	Variable	Total	
A) Food						
1. Cashew	OAME	265000.00	45690.00	162520.00	208210.00	56790.00
	NDME	491666.67	47317.41	351446.67	398764.08	92902.59
	DME	1120000.00	142048.33	304100.00	446148.33	673851.67
2. Fish	OAME	616960.00	3028.26	369353.00	372381.26	244578.74
	NDME	1152000.00	30222.50	751370.00	781592.50	370407.50
	DME	5000000.00	12116.70	4121250.00	4133366.70	866633.30
3. Rice Mill	OAME	83520.00	37025.79	6150.00	43175.79	40344.21
	NDME	198560.00	88329.19	40640.00	128969.19	69590.81
	DME	520000.00	174058.30	213740.00	387798.30	132201.70
B) Non-Food						
1. Leather	OAME	475200.00	62066.66	22350.00	84416.66	390783.34
	NDME	270000.00	74500.00	92400.00	166900.00	103100.00
	DME	1650000.00	502942.58	926400.00	1429342.58	220657.42
2. Paper	OAME	238200.00	21233.34	30000.00	51233.34	186966.66
	NDME	4400550.00	72905.70	3880300.00	3953205.70	447344.30
	DME	988080.00	291016.67	570400.00	861416.67	126663.33
3. Textile	OAME	40200.00	2866.67	11300.00	14166.67	26033.33
	NDME	748800.00	167125.00	216000.00	383125.00	365675.00
	DME	0.00	0.00	0.00	0.00	0.00
4. Wood	OAME	984720.00	36683.33	658600.00	695283.33	289436.67
	NDME	1495690.00	125766.67	1026400.00	1152166.67	343523.33
	DME	1045235.00	282382.50	679900.00	962282.50	82952.50

the activity is labour intensive and essentially forms a part of the unorganised sector of the economy with no expenditure on salaries/ tax/ insurance premium etc. Size of the total investment is seen to be increasing with the size of the units specifically for the food processing units. Similarly, in absolute terms, the paper and the leather processing units are seen to have had heavy investment as compared to other units. For all the units, the total investment is compared with the gross value of the output to find the net return. All the activities and units show a positive net return. It can be seen that for the food processing activities, the net return increases with the size of the unit. Among these activities, the highest net income is earned by the cashew processing unit (DME) followed by fish processing (DME). Among non-food processing units, this particular pattern i.e. increasing income with increasing size is not observed. This might be because of the heterogeneous nature of these non-food processing activities. Even within the categories, in some cases, the products of these units are differing slightly from the other units.

It can be noted that if we account for the subsidy received by the food units by adding it up with the net return, the value of net return of all cashew and rice mills will register an increase. The amount of subsidy is seen to be rising with increase in size of the unit. The average net return will increase by that amount.

5.5: Employment Generation

Creation of sustainable employment throughout the year is one of the objectives of promoting agro-based industries in the country. Thus recurring employment created out of the investment was assessed during the study.

West Bengal:

Employment generation by the activity would depend on various factors like technology used, level of mechanization, size of the investment, level of utilization of the unit etc. Accordingly, employment generation by the processing units covered under the study showed wide variation. Employment generated from the investment in processing units of West Bengal is presented in table – 5.5.1A. In the food-processing category of enterprises, maximum employment generation from the investment was observed in the case of fish-processing unit with 7,662 man-days per unit per year followed by fruit-processing (4,195 man-days) and paddy-processing (1,550 man-days). Among the non-food processing units, maximum employment generation by the activity was observed in the case of wood-based product manufacturing unit (2,150 man-days) followed by paper-based unit (2,100 man-days), leather-based unit (1,760 man-days) and jute-based textile product unit (1,730 man-days). OAME units are entirely family-labour based and other units namely NDMEs and DMEs, employed outside labour over and above the contribution made by the family labour. As expected, labour employment in the units increased with the increase in the size of the unit. With regard to employment across sexes, fruit-processing units in the food-processing

Table – 5.5.1A
Employment Generation under the Activity in West Bengal

(Per unit per year in standard mandays of 8hrs.)

Name of the Processing Activity	Type of enterprise (OAME/ NDME/ DME)	Family Labour		Hired Labour		Total Labour	Employment creation per investment for Rs.1000/-
		Male	Female	Male	Female		
Fruit	OAME	240	200	0	0	440	11.33
(Mango)	NDME	360	360	255	150	1125	5.65
Processing	DME	360	240	9000	12000	21600	31.81
	AVERAGE	300	260	1585	2050	4195	3.44
Paddy	OAME	230	300	0	0	530	1.06
Processing	NDME	450	0	300	210	960	1.36
	DME	360	0	3600	2400	6360	0.64
	AVERAGE	330	50	700	470	1550	0.34
Fish	OAME	815	500	0	0	1315	20.2
Processing	NDME	675	300	480	300	1755	18.87
	DME	0	0	22500	16500	39000	4.67
	AVERAGE	632	350	3830	2850	7662	5.32
Leather and	OAME	600	600	0	0	1200	11.07
its product	NDME	240	240	960	240	1680	2.46
	DME	300	0	1500	600	2400	2.02
	AVERAGE	380	280	820	280	1760	2.82
Paper and	OAME	300	600	0	0	900	10.18
its product	NDME	300	0	600	300	1200	1.26
	DME	600	300	2400	900	4200	1.42
	AVERAGE	400	300	1000	400	2100	1.58
Textile	OAME	350	700	0	0	1050	32.92
Products	NDME	340	350	300	600	1590	25.9
(Jute)	DME	320	330	0	1800	2450	13.12
	AVERAGE	370	460	100	800	1730	18.38
Wood	OAME	1050	0	0	0	1050	8.3
and its	NDME	600	0	600	0	1200	8.31
Products	DME	600	0	3600	0	4200	3.76
	AVERAGE	750	0	1400	0	2150	4.65

sector and jute-based textile units in the non-food sector are seen to be female-dominated ones. There is no one-to-one correspondence between size of investment

and employment. As table-5.5.1A shows, fish processing units in the food-processing sector generated maximum employment (5.32 days) per investment for Rs.1000 holding the second position in terms of the size of investment. As against this, in the non-food sector, the maximum employment of 18.38 days per thousand rupees of investment was generated by the units manufacturing textile products while in terms of size of investment the units ranked the lowest position among the non-food units.

Bihar:

Table-5.5.1B contains data explaining scenario of employment generation of the surveyed processing units in Bihar. It can be seen that the number of total labour in the units increased with the size. The highest number of total man days was seen in case of DME of horticultural products based activity figured at 24,200. It was followed by DMEs of cereal based, wood based, textile based, leather based and livestock based processing activities at 7796, 4050, 3000, 2700 and 2000

Table – 5.5.1B
Employment Generation under the Activity in Bihar

(Per unit per year in standard mandays of 8hrs.)

Name of the Processing Activity	Type of enterprise (OAME/ NDME/ DME)	Family Labour		Hired Labour		Total Labour
		Male	Female	Male	Female	
Paddy Processing	OAME	180	100	--	--	280
	NDME	240	--	900	--	1140
	DME	--	--	6480	1316	7796
Fruit (Litchi) Processing	OAME	42	38.50	--	--	80.50
	NDME	--	--	92	110 @ Rs.50	202
	DME	--	--	14200	10000	24200
Milk (Dairy) Processing	OAME	300	--	--	--	300
	NDME	300	--	1500	--	1800
	DME	--	--	2000	--	2000
Silk and its products	OAME	295	60	--	--	355
	NDME	355	--	2045	--	2400
	DME	710	--	2290	--	3000
Wood and its product	OAME	325	--	--	--	325
	NDME	312	--	2238	--	2550
	DME	--	--	4050	--	4050
Leather and its product	OAME	336	--	--	--	336
	NDME	--	--	2130	--	2130
	DME	--	--	2700	--	2700

respectively. It could also be observed that only OAMEs of cereal based, horticulture and textile based processing activities engaged female family labourers. In regard to hired female workers, the table suggests their involvement only in case of DMEs and NDME of two agro food processing activities viz., cereal and horticultural products based activities. It reveals that most of the processing activities (under both agro-food and agro non-food categories) did not prefer to employ female workers.

Maharashtra:

Table-5.5.1C presents the details of the employment generation in the processing units. It can be seen that the number of total labour in the units is increasing with the size as is expected. The highest number of workers i.e. 9 is

Table – 5.5.1C
Employment Generation under the Activity in Maharashtra

(Number of workers per unit per year)

Name of the Processing Activity	Type of enterprise (OAME/ NDME/ DME)	Family Labour		Hired Labour		Average Total Labour	Employment Creation per Rs.1000/- of Investment
		Male	Female	Male	Female		
A) Food							
1. Cashew	OAME	2	2	--	--	4	0.01
	NDME	1	2	--	2	5	0.01
	DME	--	1	--	8	9	0.04
2. Fish	OAME	2	3	--	--	5	0.11
	NDME	2	3	1	1	7	0.08
	DME	2	3	2	--	7	0.01
3. Rice Mill	OAME	1	--	--	--	1	0.00
	NDME	2	1	2	--	5	0.01
	DME	2	2	2	--	6	0.00
B) Non-Food							
1. Leather	OAME	3	--	--	--	3	0.26
	NDME	2	1	1	--	4	0.05
	DME	--	--	6	--	6	0.01
2. Paper	OAME	2	--	--	--	2	0.04
	NDME	2	2	1	--	5	0.01
	DME	1	1	4	--	6	0.00
3. Textile	OAME	1	--	--	--	1	0.07
	NDME	2	2	1	2	7	0.11
	DME	--	--	--	--	--	--
4. Wood	OAME	2	--	--	--	2	0.02
	NDME	2	--	1	--	3	0.02
	DME	1	--	5	--	6	0.07

found in cashew processing DME unit. It can also be seen that all the categories in the food processing sector except one have engaged female family labourers. Thus, food processing (which can be carried out along with the domestic chores) is seen to be a female dominated activity. As against this, in all, only three categories in the non-food sector (wherein work is carried out within the household) have engaged female family labourers. Similar pattern is found as far as hired female labourers are concerned. Leather as well as wood processing units are seen to be basically male dominated units. As table-5.5.1C shows, employment creation per 1000 rupees of investment does not indicate any important pattern.

Chapter-VI

Problems and Prospects of Agro-processing Industries

In the earlier chapter, it was observed that all the sample-processing units have generated positive net income. However, the units have faced problems of various kinds varying according to the category and type of the unit. This chapter provides an analysis of the problems faced by the agro-based manufacturing enterprises depending on the primary level data collected in course of the study.

6.1: Problems Faced by Manufacturing Enterprises

Given the dominance of the unorganised sector in the state, agro-based enterprises are mostly tiny and small household based enterprises. Such enterprises are usually characterized by backward production technologies, limited market out-reach and diseconomies of scale. Those apart, they may face more difficult problems that need to be hardly emphasized. Thus the responses regarding problems faced by enterprises in procuring raw materials as well as marketing the processed product are summarized in the following paragraphs.

West Bengal:

Reportedly, in West Bengal the problem of non-availability of raw materials throughout the year, variability of prices of raw materials and absence of information network to keep track of raw materials prices and availability came to be featured prominently in the array of problems faced by the entrepreneurs of OAME units of food processing industries (table-6.1.1A). The major problem faced by the NDME units of food processing enterprises reported to be variability of prices of raw materials causing difficulties in fixing prices of product followed by the problem of absence of information network to keep track of raw materials prices. As far as DME units are concerned, only 1 unit each in fruit processing, paddy processing and fish processing category reported the single problem of variability of prices of raw materials during the seasons. In short, the major problem faced by the food processing units in procuring raw materials reported to be variability of prices of raw materials (cent per cent) followed by absence of information network (72.22 per cent) and non-availability of raw materials (66.67 per cent) throughout the year (table – 6.1.1A). As far as the non-food processing units are concerned, the specific problem faced by the enterprises in procuring raw materials reported to be variability of prices of raw materials (cent per cent) similar to those of food-processing units. Notably, the problem is reported uniformly by all categories of enterprises. For these units, the

problem of non-availability of raw materials did not stand in the way of functioning of the unit. Rather, the next important problem faced by the enterprises reported to be absence of information network (50 per cent) to keep track of raw materials prices and availability (table – 6.1.1A).

Table-6.1.1A

Constraints Faced by the Processing Units in Procurement of Raw Materials in West Bengal

Food Processing Units

Sl. No	Type of constraints	Fruit (mango) processing			Paddy processing			Fish Processing		
		OAME	NDME	DME	OAME	NDME	DME	OAME	NDME	DME
1.	Non-availability of raw materials throughout the year	3	0	0	3	1	0	3	2	0
2.	Variability of prices of raw materials and difficult to fix prices of product	3	2	1	3	2	1	3	2	1
3.	Absence of information network to keep track of raw materials prices and availability	3	1	0	3	1	0	3	2	0

Non-Food Processing Units

Sl.No.	Type of constraints	Leather and its products			Paper and its products			Textile products (jute)			Wood and its products		
		OAME	NDME	DME	OAME	NDME	DME	OAME	NDME	DME	OAME	NDME	DME
1.	Non-availability of raw materials throughout the year	1	0	0	1	0	0	0	0	0	1	0	0
2.	Variability of prices of raw materials and difficult to fix prices of product	1	1	1	1	1	1	1	1	1	1	1	1
3.	Absence of information network to keep track of raw materials prices and availability	1	1	0	1	0	0	1	0	0	1	1	0

Data source: Primary survey data

Table-6.1.2A present the problems faced by the enterprises in marketing of processed products in West Bengal. In the case of food-processing units, the main problem reported was lack of proper domestic market of processed products (72.22 per cent) followed by absence of good network purveying market information (66.67 per cent) and dependence on middleman for marketing the processed products (66.67 per cent). Notably, all the OAME units in the food-processing segment reported these three problems uniformly across the category of enterprises. Reportedly, for non-food processing units, the major problem was absence of strong network for obtaining market information (58.33 per cent) followed by lack of proper market of processed products (50 per cent) in domestic market and dependence on middleman for

marketing the processed products (41.67 per cent). Here again, OAME units in all categories of enterprises reported the above three problems in the sphere of marketing of their products.

Table-6.1.2A
Constraints Faced by the Processing Units in Marketing of Processed Products in the Domestic Market in West Bengal

Food Processing Units

Sl. No	Type of constraints	Fruit (mango) processing			Paddy processing			Fish Processing		
		OAME	NDME	DME	OAME	NDME	DME	OAME	NDME	DME
1.	Lack of proper market of processed product in domestic market	3	2	0	3	0	0	3	2	0
2.	Absence of strong network for marketing the product	3	1	0	3	0	0	3	2	0
3.	Dependence on middleman for marketing the processed product	3	0	0	3	1	0	3	2	0

Non-Food Processing Units

Sl.No.	Type of constraints	Leather and its products			Paper and its products			Textile products (jute)			Wood and its products		
		OAME	NDME	DME	OAME	NDME	DME	OAME	NDME		OAME	NDME	DME
1.	Lack of proper market of processed product in domestic market	1	0	1	1	0	0	1	1	0	1	0	0
2.	Absence of strong network for marketing the product	1	1	1	1	0	0	1	1	0	1	0	0
3.	Dependence on middleman for marketing the processed product	1	0	1	1	0	0	1	1	0	0	0	0

Data source: Primary survey data

Bihar:

Constraints in procurement of raw materials faced by the agro food processing activities and agro non-food processing units in Bihar are reported in table-6.1.2A. Non-availability of adequate raw materials due to lack of capital, supporting machines/equipments, and absence of required infrastructural facilities were reported by majority of the agro food processing units. Fluctuations in prices of raw materials, absence of information network and circumstantial need of purchasing raw materials

from middlemen at higher rates were also prominently reported by the sample agro food processing units. Non-availability of skilled labourers, availability of raw materials (litchi) for a very short period and difficulty in determining prices of value added products were felt by DMEs of agro-food processing activities. As far as agro non-food processing activities are concerned, table-6.1.2A enunciates lack of capital, poor quality of raw materials and no easy availability of bank credit to have been faced by OAMEs. Like agro food processing activities, NDMEs of agro non-food processing activities did come across the problems of poor electricity supply position, variability of prices of raw materials and purchasing of raw materials from distant market (Kolkata in case of leather). Procurement of raw materials sometimes from informal trade channel, non-availability of strong supporting infrastructure and raw materials not adequately available in the state (in case of leather), were the main constraints faced by DMEs of agro non-food processing activities.

Table-6.1.2B instances problems/constraints related to marketing of processed products in the domestic market faced by sample processing units in Bihar. In case of agro food processing activities, long market channel causing lower net income, non-existing support by NGOs/Co-operative marketing societies and limiting factors causing processors to sell value added products' to local middlemen at lower prices were found to have been faced by entrepreneurs of small units. Seasonality of demand for the products, lack of mutual understanding among enterprises for preparing common marketing strategy and quality consciousness of consumers compelling the entrepreneurs to sell their products in distant markets for higher prices were experienced by all NDMEs. Existence of cut throat competition, absence of widespread network for marketing the products in the State (particularly litchi juice, syrup and pulp) and transport related problems in taking the value added products to terminal markets were the constraints faced mainly by DMEs of agro food processing activities.Regarding constraints faced by sample entrepreneurs of agro non-food processing activities, table-6.1.2B reports determination of the price of the products by middlemen or big traders, no option of opting other profitable markets and demand for product mainly in the local market and preferred generally by low income group of people yielding lower returns as the main problems faced by OAMEs. Marketing through middlemen resulting in lower net profit, demand influenced by design oriented preferences and more quality, design and brand consciousness of consumers were felt by NDMEs. Lower returns as a result of scattered markets, existence of tough competition due to presence of a good number of entrepreneurs and uncertainty of ready demand and availability of value added products generally ensured on order basis, could be found as main problems faced by DMEs of agro non-food processing activities category.

Table-6.1.2A

Constraints Faced by the Processing Units in Procurement of Raw Materials in Bihar
Food Processing Units

(Number)

Sl. No	Problems Reported	Paddy Processing (6)			Fruit (Litchi) Processing (6)			Milk (Dairy) Processing (6)		
		OAME	NDME	DME	OAME	NDME	DME	OAME	NDME	DME
1.	Non-availability of adequate raw materials due to lack of capital	3	--	--	--	--	--	--	--	--
2.	Variability of prices of raw materials and hence difficult to fix prices of its product	--	2	--	--	--	--	--	--	--
3.	Non-availability of labour in general, skilled labour in particular in running the processing activity	--	--	1	--	--	--	--	--	--
4.	Lack of supporting machineries/equipments for processing	--	--	--	3	--	--	--	--	--
5.	Poor quality of raw materials, absence of information network to keep track of raw materials prices and availability	--	--	--	--	2	--	--	--	--
6.	Availability of raw materials for a very short period (22 to 25 days)	--	--	--	--	--	1	--	--	--
7.	Non-availability of supporting infrastructures like electricity, roads, communication	--	--	--	--	--	--	3	--	--
8.	Purchasing raw materials from middlemen on higher rate	--	--	--	--	--	--	--	2	--
9.	Difficulty in fixing prices of products due to variability in raw materials' prices	--	--	--	--	--	--	--	--	1

Non-food Processing Units

Sl.No.	Problems	Silk and its products (3)			Wood and its products (3)			Leather and its products (3)		
		OAME	NDME	DME	OAME	NDME	DME	OAME	NDME	DME
1.	Lack of capital	1	--	--	--	--	--	--	--	--
2.	Poor condition of supporting infrastructure (mainly electricity)	--	1	--	--	--	--	--	--	--
3.	Sometimes raw materials have to be procured from informal trade channel	--	--	1	--	--	--	--	--	--
4.	Dear and poor quality of raw materials	--	--	--	1	--	--	--	--	--
5.	Variability of prices of raw materials makes the fixation of product prices' difficult	--	--	--	--	1	--	--	--	--
6.	Non-availability of strong supporting infrastructure (electricity and road)	--	--	--	--	--	1	--	--	--
7.	No bank credit is easily made available	--	--	--	--	--	--	1	--	--
8.	Purchasing raw materials through established, but tough trade channel	--	--	--	--	--	--	--	1	--
9.	Raw materials not adequately available in the state. Mostly procured from Kolkata (West Bengal)	--	--	--	--	--	--	--	--	1

Table-6.1.2B
Constraints Faced by the Processing Units in Marketing of Processed Products in the Domestic Market in Bihar

Food Processing Units

(Number)

Sl. No	Problems Reported	Paddy Processing (6)			Fruit (Litchi) Processing (6)			Milk (Dairy) Processing (6)		
		OAME	NDME	DME	OAME	NDME	DME	OAME	NDME	DME
1.	Long market channel causing lower net income	3	--	--	--	--	--	--	--	--
2.	Seasonality of demand for the product	--	2	--	--	--	--	--	--	--
3.	Existence of rivalry/ cutthroat competition among manufacturers	--	--	1	--	--	--	--	--	--
4.	No existing support by NGOs/Co-operative Marketing Societies for better or remunerative marketing	--	--	--	3	--	--	--	--	--
5.	Non-existence of co-operation among enterprises for preparing a common marketing strategy	--	--	--	--	2	--	--	--	--
6.	Absence of a strong network for marketing the products	--	--	--	--	--	1	--	--	--
7.	Due to difficult terrain and poor communication, processors/entrepreneurs are compelled to sell products to local middlemen at lower prices	--	--	--	--	--	--	3	--	--
8.	Due to Quality consciousness of buyers	--	--	--	--	--	--	--	2	--
9.	Processed products are subjected to various transport related problems in reaching terminal market	--	--	--	--	--	--	--	--	1

Non-food Processing Units

Sl.No.	Problems	Silk and its products (3)			Wood and its products (3)			Leather and its products (3)		
		OAME	NDME	DME	OAME	NDME	DME	OAME	NDME	DME
1.	Price of the product is fixed by the middlemen or big traders, who give order	1	--	--	--	--	--	--	--	--
2.	Marketing through middlemen resulting in lower net profit margin	--	1	--	--	--	--	--	--	--
3.	Scattered market yields lower returns. So price fixation is difficult for processors	--	--	1	--	--	--	--	--	--
4.	No option of more profit providing market, as they generally work on order basis	--	--	--	1	--	--	--	--	--
5.	Demand for the products' processed items is led by design oriented preferences	--	--	--	--	1	--	--	--	--
6.	Due to large number of entrepreneurs in the field, tough competition exists.	--	--	--	--	--	1	--	--	--
7.	The demand for product is localized and preferred by low income group of people yielding low margin	--	--	--	--	--	--	1	--	--
8.	People have become more quality, design and brand conscious. So, demand is sometimes a problem	--	--	--	--	--	--	--	1	--
9.	They generally manufacture on order, so there is uncertainty of ready demand and hence, quantum of processing	--	--	--	--	--	--	--	--	1

Maharashtra:

Table-6.1.3.1 shows the problems reported by the food processing units in Maharashtra. It can be seen that majority of the cashew and fish units have reported non-availability of raw materials throughout the year. As far as the cashew units are concerned, non-availability of good quality cashews is mainly due to inability of the small units to find agents or seller supplying good quality raw material. In absence of information/ resources to find the same, these units are often at a disadvantage if the cashews supplied are not of good quality. The units have also reported non-availability of labourers during the peak season and variability of prices. The fish units also face this problem, as during the months of monsoon, fishing does not take place. Similarly it was reported by these units that over a period of time, the supply of good quality fish has been reducing due to

Table-6.1.3.1
Constraints Faced by the Food Processing Units in Maharashtra

(Number)

Sl. No	Problems Reported	Cashew Processing (6)			Fish Processing (6)			Rice Mills (6)		
		OAME	NDME	DME	OAME	NDME	DME	OAME	NDME	DME
1.	Non-availability of raw materials throughout the year	2	3	1	2	2	1	_	_	_
2.	Poor quality of raw materials, absence of information network to keep track of raw materials prices and availability	_	2	_	1	_	_	_	_	_
3.	Variability of prices of raw materials and hence difficult to fix prices of its product	1	1	_	2	_	_	_	_	_
4.	Non-availability of labour in general, skilled labour in particular in running the processing activity	_	1	_	_	1	_	_	_	_
5.	Non-availability of capital	1	_	_	_	_	_	_	_	_
6.	Non-availability of supporting infrastructures like electricity, roads, communication	_	_	_	_	_	_	2	2	1
7.	Seasonality of demand for the product	_	_	_	3	_	_	_	_	_
8.	Quality consciousness of buyers	1	_	_	2	_	_	_	_	_
9.	Non-existence of cooperation amongst enterprises to harvest scale economies	_	_	_	_	1	_	_	_	_
10.	Existence of rivalry/ cutthroat competition among manufacturers	_	_	_	1	_	_	1	2	_
11.	Absence of a strong network for marketing the products	_	_	_	_	_	_	_	_	_
12.	Problems faced due to the administrative set up of the government	2	1	_	_	_	_	_	_	_
13.	No government support in training, supplying equipments, others (if any)	_	_	_	1	2	1	_	_	_
14.	Non-existence of promotional agencies	_	_	_	3	_	1	_	_	_
15.	Non-existence of Non-Government Organizations (NGOs), or Self-Help Groups (SHGs) or Cooperatives to support the specific processing activity	2	2	_	1	2	_	_	_	_

various reasons such as entry of large firms. Another major problem faced by the fish units is the absence of any government schemes/ promotional agencies (unlike in case of cashew units covered under DIC/KVIC) which would provide support to these units. Similarly, there are no NGOs or self-help groups which would ensure better functioning of the units. Though cashew units and rice mills are availing of the schemes of KVIC and DIC, they do face problems while interacting with the government machinery. In case of the rice mills, the main problem reported was irregularity in the electricity supply. They have also reported that there is a tough competition from other rice mills as due to the liberal policy of the government regarding licensing, many new rice mills are being established.

As far as the non-food processing units (table-6.1.3.2) are concerned, majority of the units reported unavailability of cheap labour as one of the important problems. Similarly absence of any promotional agencies is another problem reported by the units.

Table-6.1.3.2
Constraints Faced by the Non-Food Processing Units in Maharashtra

(Number)

Sl.No.	Problems	Leather (3)			Binding (3)			Textile (3)		
		OAME	NDME	DME	OAME	NDME	DME	OAME	NDME	DME
1.	Non-availability of labour in general, skilled labour in particular in running the processing activity	–	–	–	–	–	–	1	–	–
2.	Non-availability of capital	–	–	–	–	–	1	–	–	–
3.	Quality consciousness of buyers	–	–	–	–	–	–	1	–	–
4.	Existence of rivalry/ cutthroat competition among manufacturers	–	–	–	–	–	–	1	–	–
5.	Non-availability of government support in training, supplying equipments, others (if any)	–	1	1	–	–	–	–	–	–

6.2: Prospects of the Processing Units

6.2.1: Prospects of the Units in West Bengal

The state of West Bengal is a significant producer of many horticultural and agricultural crops. Besides, West Bengal being the largest producer of freshwater fish and second largest producer of shrimps offers extensive scope for investment in the area of processing of fish. Processed fish are in great demand in international markets. All these give it a natural advantage to invest in grain processing, fruit processing and fish processing. The growth potential of these sectors are enormous and it is expected

that food processing industries will increase substantially in the coming decades with the growing demand for the processed food products emanating from rapid increase in the consumption of value added items of food products.

Grain processing is the biggest component in the food-processing sector. Grains produced in the state include cereals like rice, wheat, maize, barley and a variety of pulses like arahar, masur, moong, gram and khesari. In rice, the state produces wide range of varieties, both scented and non-scented. The state being a largest producer of rice offers scope for investing in paddy processing industry, particularly, rice milling. There already exists a large number of rice processing units in the state which produce mainly Indian snacks like puffed rice (moori), flattened rice(chira) and Indian rye (khoi). Most of these units are small-scale units and fall under the unorganized sector.

On the basis of analysis of secondary data, the present study reveals that food-processing sector as a whole witnessed higher growth rate as compared to the non-food sector both in the organised and unorganised segments. As revealed by primary data, within the group of food processing industries, paddy-processing units gave maximum net return. However, the activity faces problems in its day-to-day operations. As revealed by primary data, the major problem encountered by the paddy processing enterprises is the variability of prices of raw materials followed by the absence of information network. Paddy is the raw material for the paddy processing units. In West Bengal, total rice production (husked-paddy) was of the order of 147.45 lakh tonnes in 2006-07 as against the figure of 19.67 lakh tones in the sample district of Burdwan. The sample district thus contribute around 13.34 per cent of total paddy production in the state. Although the State of West Bengal is the significant producer of paddy, rice milling processing units face the seasonal problem of non-availability of paddy as raw material for the paddy-processing units. In the absence of information network, the processing units have become subject to paying variable prices of raw materials at different points of time during the year, the second major problem faced by the paddy-processing enterprise. However, the state of West Bengal being blessed with largest production of paddy has the potentials for investing in paddy processing industry. The industrial units in future can take advantage of the growing demand for the value added processed product in India as well as abroad. This would be possible if the units have access to information network to keep track of raw materials prices and availability.

The state is a significant producer of fruits especially mango, pineapple, lychee and enjoys comparative advantage for setting up fruit processing units. The processed products of this sector include Jam, Jelly, Juice, Squash, Slice, chutneys etc. Apart form domestic demand, fruit processed products have a very good export market.

Among the food processing units selected for the study, fruit (mango) processing activity yielded net income of smaller amount in comparison with other units in the food-processing segment. All the sample units belong to the un-organized sector with small size of the investment. The processed products of the selected units included Jam, Jelly, Sauce, Slice, Pickles/ Anchar. Due to having demand for the fruit-based processed products in the domestic as well as international market, mango-processing units have the good potential for expansion. The state produces different varieties of mangoes like Langra, Himsagor, Bombai, Amrapalli, Mallika, Golapkhas, Gopal Bhog, Lakhna, Moha Bhog, Rani Pas. Further, among fruits, mango is the major one in West Bengal, the produce being 5,13,339 thousand tonnes in the state as recorded in the year 2005-06. However, the major problem faced by these units is the non-availability of raw materials throughout the year, the same being encountered particularly by the OAME units of enterprises and accordingly facing the problem of variability of prices in procuring raw materials for the product. Further, in the wake of lack of proper market for the processed product and absence of marketing information network, the units have to compromise in availing reasonable prices for their products. In view of production and availability of mango as raw materials of the processing units, there exists potentials for setting up mango processing units in the fruit processing sector. They are however provided with proper infra-structural support for preservation of mango fruit as well as in getting remunerative prices for their product.

Apart from the above, the state has the comparative advantage in fishery and thus it is in one of the most important sectors for investment in the state. The state's fishery resources potential include inland water inclusive of fresh water and brackish water resource and the marine resources. The range of processed fish products include processed shrimps/ prawns and sea water fish. Unlike other agribusiness areas, the export market for processed fish particularly shrimps/ prawns is well established. Traditionally fishing communities preserved fish by salt curing and drying them out in the sun. The nature of the fish processing industry has undergone changes with large-scale export of prawns and shrimps etc. Today the industry is modern and mechanically sophisticated. In the present study, sample fish processing units consisted of two types of fish processing units. The first category of the fish processing activity involves curing and drying sea fishes in the sun. The other category of units included processing of prawns and belong to the rank of factory. The nature of works in prawns processing activity are divided into two parts, the semi-processing part that involves doing headless, cutting and cleaning and the next stage consist of the works like peeling off the shell, washing, grading, icing and finally packing of the product for making the product marketable domestically as well as in the export market. Our sample processing units belonging to the DME category

procures semi-processed prawns from aratdar cum bhery owners and after performing the works of peeling, grading, icing and packing the product in hygienic conditions make the product marketable to the consumers. As observed from the study of sample fish processing units, traditional sun-drying fish processing units belonging to OAME and NDME categories faced the problem of non-availability of raw materials throughout the year. They also equally face the problem of marketing of their products. Processed products of the units involved in sun-drying of fishes are marketed domestically through wholesaler /middleman who passes the product to the retailer from whom consumers procure. The prawn processing units belonging to DME category faces the problem at the stage of procuring raw materials who purchase the same mainly through agents. However, marketing is no problem for prawn processing unit, where the unit having link with the export market used to market their product to the consumers through the wholesaler. The constraint / problem common to the OAME and NDME units of fish processing enterprises is the absence of information network both in the sphere of availing raw materials and marketing of the product. Therefore fish processing units having their large potential in the state could enhance their efficiency if they are provided with assistance in terms of creating access to information network.

With regard to non-food industries, the analysis of secondary data reveals that there has been an expansion in the number of non-food processing units both in the organized and un-organized segments of agro-based industry but the rate of expansion is lower as compared to food processing units. Within the group of non-food industries, textile and leather units have shown relatively better performance in terms of their numerical strength. The analysis of primary data collected from the sample processing units however clearly revealed that textile and leather units generated relatively lower net income. Jute-based textile units in the sample faced the basic constraint of low internal market demand for the products. Thus, lack of internal market and low net income generated by the units are the main hindrances that stand in the way of growth of these units.

Leather, a natural raw material, lends itself to a variety of conversions. Hide-based leather particularly bovine is used to make shoes, soles and variety of footwear. Goat and sheep leathers go into making excellent dress shoes for ladies and gents. Other important leather-based products are luggage-ware, travel-ware, handbags, belts and fashion accessories etc. In our sample processing units, leather based activities included items viz. manufacturing of ladies purses, shoes, lather jackets and bags. Similar to textile units, they also face the problem of marketing of their products. Thus the common problem faced by the entrepreneurs of leather and textile units reported to be the absence of network for the marketing of their products. Obviously, the units

could enhance their numerical strength if they are provided with better infrastructure purveying marketing information for their processed product.

6.2.2 Prospects of the Agro-Processing Units in Bihar

Based on the industrial units covered by the Annual Survey of Industries (ASI), the agro based industries in Bihar accounted for nearly half of the gross value added. If the remaining smaller units are also taken into account the share of agro based industries (ABIs) will be still higher. However, the potential of agro based industries is not fully utilized. The development of ABIs is largely dependent on the importance attached to fruits and vegetables vis-à-vis other crops. It is to be noted here that significantly large areas are under different top qualities of fruits in Bihar. Mango, banana, litchi, guava, lemon, pineapple and others' occupy 140786 ha, 29013ha, 28758 ha, 27994 ha, 17122 ha, 4454 ha and 31284 ha respectively. Quantum of production of these fruits is quite higher. However, absence of required storage, preservation and proper marketing facilities within and outside the state, good quantum of these fruits are wasted and sometimes sold at unremunerative prices. Hence, there is great potential for installation of agro processing industries based on these fruits and vegetables too in areas/regions with their production in abundance. The processing of mango, litchi, banana, etc. will also take care of seasonal gluts, storage and retention of their nutritive values, apart from providing income and employment. Among cereal based processing activities, apart from paddy and wheat, there is high prospect for APIs based on maize in Bihar having total area under autumn and rabi maize estimated at 472.90 thousand ha, and total production estimated at 1076.30 thousand tones. Bulk of maize is produced mainly in the north-eastern districts of Bihar. As per a rough estimate, nearly 25.00 per cent of maize produced is used for human consumption locally. 20.00 to 25.00 per cent is used in feeding the milch animals and other domestic animals. As good as 50.00 to 55.00 per cent of total quantum of maize produced is sent to Andhra Pradesh and other states from Bihar, which is processed there as value added products for human consumption, poultry feed, fish feed, animal feed, starch making, etc. If processing industries based on maize are installed at different points in the districts of its surplus production, it

will not only make proper and optimum use of this cereal crop but also be instrumental in a big way in creation of additional employment opportunities in rural and urban areas both and help in enhancing the income of the farmers and the people in general. It is, thus, important to record here that maize based APIs can be effectively established for producing/manufacturing various value added products for human being, as animal feed and bio-diesel etc. With regard to livestock based processing activity, dairy industry in the co-operative sector under the brand name Sudha has achieved marked success in Bihar. In unorganized sector, also there is great potential and bright prospect for processing of milk into khowa, ghee, butter, cream, paneer, lassi, etc. It will, however, require proper input supply, free marketing mechanism, scientific preservation facilities, milk chilling plants at different places in the private sector, infrastructural facilities, marketing intelligence and information system, packaging facilities at producers' level and skill development training programmes for the entrepreneurs and workers of such processing units. Of course, there are some problems, weaknesses and lacuna in procurement of raw materials, operational aspects and marketing of value added products of agro food based processing industries. However, if these constraints are removed strategically with vision and determination, the prospect of agro-food processing units in Bihar is undoubtedly brighter.

As far as non-food processing units are concerned, Annual Survey of Industries (ASI, 2004-05) reveals that leather and leather products in Bihar has a small share (0.56 per cent) in its total production of Rs. 1922 thousand crore from the agro based industries. However, considering the magnitude and quality of livestock wealth and traditional expertise of leather men in Bihar there appears to be a good potential for industries relating to leather and leather products in the state. Similarly, if the traditional expertise of weavers and their presence in significantly good numbers in some districts of Bihar (particularly, Bhagalpur Gaya, Aurangabad, Patna, Banka, Madhubani, Siwan and Nawada districts) are utilized properly by providing them necessary inputs, technical supervision, training on latest machine, remunerative marketing facility with reduced number of middlemen and better power supply, then the prospects of textile based processing industries in Bihar is undoubtedly bright. As

regards wood based processing activities, it has also great potential in Bihar. Urbanization has been promoting the use of varieties of value added products of wood. As far as the sample units of agro non-food category are concerned, these are located in comparatively developed districts of Patna and Bhagalpur. If the problems/constraints faced by sample processing units at different stages of production process are suitably addressed, the prospects of agro non-food and agro food based processing industries in Bihar are sure to be very bright. What is needed is to use the inherent potential and available resources in different areas/fields.

6.2.3 Prospects of the Agro-Processing Units in Maharashtra

The analysis of the data collected from the sample units in Maharashtra shows that cashew unit (DME) has earned highest net income followed by fish unit (DME). The net income per labourer is found to be increasing with the size of the units. It can be noted that these are basically female (hired/family) labour dominated activities. All the sample units are located in the coastal district Ratnagiri. Being a relatively backward district, it faces problems like non-availability of good roads, continuous electricity supply etc. similarly, informal discussion with the people revealed that the cooperative movement has never been successful in this area. The cashew units are newly established units under DIC/KVIC schemes. Due to the increasing demand for the cashew nuts in the domestic as well as international markets and due to the huge untapped potential for processing of the fruit, the units can in future also, take advantage of the expanding markets. This would be possible if the units have a wider choice of markets for selling their produce and centers for providing information relating to the markets. Fish processing units are existing units working since 10-20 years. Most of these have their business on the batches under unhygienic conditions. The major problem faced by these units is the irregular supply of good quality fish. Similarly, these units are not covered under any scheme as they do not require heavy capital investments. Assistance to these units in terms of market information and value addition techniques would increase their earning capacity. The major problem for the rice mills is the contraction of the business due to opening up of many rice mills in the vicinity in the context of liberal licensing policy of the government. The mills thus need to be more competitive and modernized.

With regard to non-food sector, the secondary data shows that there has been a contraction in the number of non-food units (except the leather units) in the organized sector. As against this, the unorganized sector shows a better performance, the textile units are seen to be the units registering growth. However, the productivity of these units in non-food agro-based industries has declined over the years. Thus, overall,

there has been a contraction in the non-food agro-based sector. As far as the sample units are concerned, these are located in the developed districts of Pune and Mumbai. The units do not exhibit uniformly increasing net income with size within a category. Thus, the DME units are not necessarily the units with highest net income. This may be indicative of efficiency of small units which depend mainly on family labour. The units mainly have reported non-availability of labour, absence governmental support, existence of rivalry as the main problems. In this case also therefore, like in case of the agro-based units, the units would expand their earning capacity and be more competitive if they are provided information regarding market conditions and various existing schemes and extension services.

Chapter-VII

Summary and Policy Conclusions

7.1: Background

Dependence on agricultural sector, particularly on crop cultivation has resulted in widespread unemployment and underemployment in the country. The agricultural sector is characterized by ever declining land-man ratio, predominance of small and fragment land holdings and increasing application of labour saving production technologies. Thus it is being increasingly realized now a days that the very capacity of the agricultural sector is not enough to absorb the growing labour force. While the labour absorptive capacity of agriculture tended to be limited, the growth of the labour-intensive rural agro-based non-farm sector is seen as a critical component of rural transformation. In the process, the major role is ascribed to manufacturing activity so as to take advantage of the vast potential rural demand for industrial goods. Government of India has been encouraging certain activities in the sphere of non-farm sector, agro-processing being one of them. Agro-processing is necessarily a process of value adding activity to agricultural production and thus makes agriculture a more effective contributor to industrial growth establishing agriculture-industry linkages. The growth in agro-based industries has a big potential to trigger development through adding value to the farmers' produce, generating employment opportunities and increasing farmers' income. This in turn motivates the farmers for better productivity and opens up possibilities of industrial development. The processed products also have a large export potential.

7.2: Need for the Present Study

Agro-processing involves transformation of the raw materials into final consumer goods or intermediate goods and thus results in increase in value addition. On the other side, the demand for processed food is increasing in recent years with the growth of population, rapid urbanization and changing life styles. Agro-processing industries thus offer enormous potential to boost an economy. In India, the processing units based on grains, horticultural products, livestock products, fish have ample opportunities. However such potential is hardly exploited. This underscores the need for undertaking the study.

Agro-processing industry in India is largely a house of small-scale enterprises. They are highly heterogeneous in terms of capital investment, technology in use, scale of operation, quality and quantum of output, composition and level of employment. More importantly, levels of productivity among tiny and small enterprises are also

low. There must be a host of institutional, technological and marketing constraints that are holding up productivity of the agro-industry units to low levels. There is therefore need to address these constraints so that productivity of the agro-industry sector may be improved. Moreover, the growth profile of the number of agro-based enterprises is uneven across the regions of India. As a whole, the strength of agro-based industry is comparatively less than those of non-agro-based industries. It is this trend in the growth of agro-based manufacturing enterprises calls for undertaking the study with the broad objective of studying the problems and prospects of agro-processing industries.

7.3: Objectives of the Study

The present study has been taken up keeping up the following objectives in mind.

1. To present a profile of the agro-processing industries and the recent trend.
2. To study the economics of agro-processing units.
3. To analyse the marketing behavior of agro-processed products.
4. To study the employment potential from agro-processing industries.
5. To analyse the constraints on acceleration of production.
6. To review the export performance of various agro-based commodities and constraints faced in accelerating the growth of export from the sector.

7.4: Data Base

The study is based on both secondary and primary data. For secondary data the study relies on quinquennial National Sample Survey data for unorganized manufacturing and Annual Survey of Industries data for the organized segment. Secondary data relates to the select years viz. 1994-95 and 2000-01. In India, bulk of the units in agro-processing sector are small and unregistered. Considering this, primary level data from the selected processing units are collected in order to capture the problems at the grass root level so that recommendation for policy formulation can be made for the promotion of agro-based industries.

7.5: Sampling Design, Methodology and Coverage of the Study

The study has been carried out in three selected states namely West Bengal, Bihar and Maharashtra. Primary data was collected from the selected agro-processing units in each selected state. As the products of agro-industries are both edible and non-edible, the agro-industries are classified into agro-food industries (or food-processing industries) and agro non-food industries. Thus, in order to have a comprehensive and total view of agro-processing sector, primary data are collected from the selected processing units chosen from both agro-food industries and agro-non-food industries.

Altogether, 30 sample processing units are studied in each state except in Bihar where 27 sample processing units are covered selecting at random proportionately spread over food and non-food processing segments of agro-based enterprises. Considering the dominance of food processing activity in the total number of agro-based industries, 18 processing units are selected within the group of food processing and the rest 12 are from non-food processing segment of agro-based enterprises. In case of Bihar however 9 units from non-food processing segment are selected. In selecting processing units, the food-processing activities are broadly divided into three categories viz. primary food processing units mainly grain processing units; spice and horticultural products and livestock based processing units including fish processing. Similarly, non-food processing units are broadly divided into four categories namely, textile products, wood and its products, paper and its products, leather and its products. For each category of enterprise, the dominant processing activity was selected consulting available secondary data. Sample districts are identified on the basis of the concentration of units of activities. In the case of food-processing component of agro-based enterprises, for each selected processing enterprise, six units of different sizes namely OAMEs, NDMEs and DMEs with their distribution as 3:2:1 are covered. Within non-food processing segment of agro-based industry, for each selected processing unit, three units of different sizes namely OAMEs, NDMEs and DMEs in the ratio of 1:1:1 are selected. The units in the suggested proportion could not be selected in Maharashtra due to non-availability of entrepreneurs of a particular category at the time of survey. Details of the sample processing units and the selected districts across the selected states are given below.

Sample Processing Units and the Selected Districts of the States Covered in the Study

Processing Activity	**West Bengal**		**Bihar**		**Maharashtra**	
	Selected District	**Number of Sample Units**	**Selected District**	**Number of Sample Units**	**Selected District**	**Number of Sample Units**
Food Processing:						
a) Grain processing units	Burdwan	6	Rohtas	6	Ratnagiri	6
b) Spice and horticultural products	Malda	6	Muzaffarpur	6	Ratnagiri	6
c) Livestock based processing units	South 24 parganas	6	Khagaria	6	Ratnagiri	6
Total		**18**		**18**		**18**
Non-food Processing:						
a) Textile products	North 24 parganas	3	Bhagalpur	3	Pune	3
b) Wood and its products	North 24 parganas	3	Patna	3	Pune	3
c) Paper and its products	North 24 parganas	3	Not covered	Not covered	Pune	3
d) Leather and its products	South 24 parganas	3	Patna	3	Mumbai City	3
Total		**12**		**9**		**12**
Total Sample Size		**30**		**27**		**30**

Primary data from the selected processing units are collected through canvassing structured schedule and questionnaire prepared for the purpose of the study. Data are analyzed through simple tabular analysis.

7.6: Major Findings

7.6.1: Status of Agro-based Industry

West Bengal:

Given the structure of the Indian Economy, especially in view of the importance of agriculture in the national economy, agro-industry is expected to continue to be the dominant constituent of its industrial sector. The state of West Bengal however revealed an exception to this. As evidenced by Annual Survey of Industries data, the strength of agro-based industry is comparatively less than those of non-agro-based industries in the organised sector of manufacturing enterprises of the state. Evidently however, in the concerned period between 1994-95 and 2000-01, the organised segment has tended to concentrate more and more on agro-based industrial enterprises. Within the group of food-processing industries, manufacture of beverages, tobacco and tobacco products increased at a fairly high rate while in the non-food processing segment, leather-based units recorded highest increase followed by the units manufacturing textile products. In the un-organised segment of manufacturing enterprises of the state, the dominance of agro-based industry is clearly noticed. The un-organised segment of agro-industrial sector had as many as 86.30 per cent of total manufacturing enterprises, 81.54 per cent of employment of workers and 69.09 per cent of gross value added. During the reference period, agro-based enterprises (both food and non-food) witnessed increase in the number of units leading to an increase in their share in units from 80.51 per cent in 1994-95 to 86.30 per cent in 2000-01. The main driving force has been the phenomenal growth of manufacturing units of tobacco products in the food processing segment and improvement in the number of units manufacturing textile products in it's non-food processing counterpart. Importantly agro-based industry is largely a house of household based tiny and small enterprises. As is evident, the proportion of OAMEs in the un-organised segment of manufacturing enterprises is 89.59 per cent while agro-based industries as a whole have as many as 92.57 per cent of the units working as OAMEs.

Bihar:

In Bihar, change in the number of working units for different categories of industries has been measured by taking into account data available for the concerned years 1994-95 and 2000-01 for the unorganized manufacturing sector furnished by National Sample Survey Organization. On having a look at the data it is clear that in the year 1994-95, agro based industries (including agro food and agro non-food)

dominated sharing 53.00 per cent (7, 11,279) in the number of total working units while non-agro based industries shared 47.00 per cent of total agro based industries. Among the agro-based industries, the share of agro food processing industries was estimated to be higher (28.45 percent) than agro non-food processing industries (24.55 percent).

Data for the year 2000-01 be taken significant decline in the number of working units under the groups of 'agro food,' 'agro non-food' and 'non-agro based industries' as compared to that of 1994-95. On overall level, though the decline was to the tune of 39.75 per cent, it varied from 93.15 per cent in case of manufacturing of leather and leather based products to a low of 17.14 per cent in case of textile and its products and 7.89 per cent for 'total non-agro based industries.' In the reference year, the share of non-agro based industries in Bihar is seen to have made good efforts to surfeit the economy of Bihar by achieving expansion in size estimated at 5,80,974 (71.85 percent). However, decline in the number of working units based on agro-food (15.55percent) and agro non-food based processing activities (12.45percent), i.e., about 1.89 times less than the existing strength of 1994-95 suggest a state of uncertainty in the field of unorganized manufacturing industries based on processing of agro food and agro non-food commodities (particularly OAMEs) during the period 1994-95 to 2000-01.

Maharashtra:

In Maharashtra, it is observed that the unorganised sector clearly dominates the organised sector as far as the number of the units is concerned in both the years. The number of all industries in the unorganised sector in the state is 46 and 66 times higher than those in the organised sector in 1994-95 and 2000-01 respectively. It can be seen that in the organized sector, non agro-based industries are dominating with their share being around 70 percent. However, in the unorganised sector, the agro-based industries are seen to be dominating the non agro-based industries and their number has greatly increased (92.87 percent) over the concerned period whereas that of non agro-based industries has fallen (the percentage change being –19.98 over the period). Further, in the organised sector, within the agro-based industries, the share of food processing industries is observed to be around 30 percent in 1994-95 and has increased to 42.59 percent in 2000-01. This is because the number of food-based industries has increased, and that of non-food agro-based industries (except leather based industries) has decreased. In the unorganised sector, the share of food processing industries which was around 35.23 percent in 1994-95 has declined to 25.84 percent in 2000-01 as the number of non food agro-based industries has increased by a larger extent (120.82 percent as compared to 41.49 percent for the food processing industries). This is mainly due to the increase in the textiles related

industries. Thus, the broad features of the industrial sector of the state of Maharashtra are that the food processing industries are growing at a faster pace considering both the sectors. Among the non-food industries, wood and paper units are seen to have adversely affected in terms of numbers in both the sectors. However, the leather units have registered a positive increase in both the sectors. The non agro-based industries have registered growth in the organised sector and have experienced a decline in the unorganised sector. On the whole, the unorganised sector is expanding whereas there is a definite decline in the size of the organised sector.

7.6.2: Profile of Sample Entrepreneurs of Agro-Processing Activities

West Bengal:

The socio-economic profile of the sample entrepreneurs is analyzed by using the variables like social group, age, education, land-holding and previous experience. In West Bengal, it can be seen that the processing units are mainly owned by those belonging to the category of 'others' i.e. other than SC, ST and OBC. In case of fish processing units, entrepreneurs are mostly from the SC and ST category. Educationally, majority of the entrepreneurs have their education attainment up to 10^{th} standard. However, entrepreneurs engaged in textile units which needs technical know-how are better educated beyond the level of 10^{th} standard. All the sample entrepreneurs had previous experience in the present activity. Entrepreneurs of food processing units are found to have learnt and followed the activity traditionally while majority of the entrepreneurs of non-food processing units received institutional training and gained working experience in carrying out the activity. With regard to the motivating factors behind the selection of the activity, it is found that getting employment is the major motivating factor as reported by the majority of entrepreneurs in the food-processing category of enterprises. Previous experience in the business emerged as the equally important motivating factor behind choosing the activity in the case of food processing units. In contrast, the units engaged non-food processing activities, reported higher profit margin as the major motivating factor that has motivated the entrepreneurs to take up the business activity.

Bihar:

In Bihar, entrepreneurs who belong to the category of 'others' in the social group is reported in the case of food processing units while in the non-food processing segment, majority of the entrepreneurs reported to be SC and ST. As far as education is concerned, it can be observed that majority of entrepreneurs are literates. Many of them have taken education above 10^{th} standard in case of food processing units while majority of entrepreneurs have been educated upto the 10^{th} standard in case of non-food processing units. As far as land holding is concerned, it can be observed that

entrepreneurs engaged in non-food processing agro-based activities possess relatively smaller amount of land between 1-2ha as compared to those of households engaged in food processing activities. The entrepreneurs engaged in food processing activities mostly possess land 2ha and above those who are dependent upon agriculture for their survival. Further, majority of units are existing ones and the entrepreneurs have experience of more than 10 years. This is particularly observed in the case of dairy related processing units where the business is carried on traditionally and members of household have learnt business traditionally. Non-food processing units are relatively new units although there are some instances of learning business activity traditionally.

Maharashtra:

In Maharashtra, most of the entrepreneurs belong to the category 'others' in the social group which also includes people from other religions (e.g. Muslims which are involved in fish processing). Majority of the leather entrepreneurs (67 per cent) belong to the SC/ST category as tanning of the animal skin has been the traditional business of this community. This indicates lower occupational mobility in this particular community. As far as education is concerned, it can be observed that majority of the entrepreneurs are educated. Majority of them have been educated upto the 10^{th} standard. It can also be observed that the entrepreneurs possessing cashew processing units, rice mills and paper-based (binding) units have taken education above 10^{th} standard. Thus, the entrepreneurs engaged in activities which need technical know-how, relatively heavy investments in terms of machinery are seen to be better educated. As far as land holding size is concerned, it can be seen that urban-based households engaged in non-food processing agro-based activities do not possess land. It is only the households in rural areas of a Konkan engaged in cashew processing and rice milling possess land. These households depend upon agriculture and agro-based activities for their survival and hence possess land. Families engaged in fish processing also do not possess land. It is also observed that majority of the units are existing units and have experience of more than 5 to 10 years back. This is specifically true in case of fish and leather units as the business is carried on traditionally and hence the household members have learnt the business traditionally. It can be noted that the cashew units are the newly established units and all the entrepreneurs have been trained as running the business needs technical training and knowledge about the machinery.

7.6.3: Cost of Investment and Its Financing

7.6.3.1: Status of the Sample Units

West Bengal:

Status of the units was ascertained in terms of year of existence, average age of the units and registration status. In West Bengal, all the sample-processing units were existing ones, the average age of the unit being varied from 10 to 20 years in case of food processing units and from 3 to 22 years in case of non-food processing units. It is observed that investors are not keen on registering their units. On the aggregate, in about 50 per cent of the cases, entrepreneurs of the processing units are found to have registered their units. Notably, OAME units in all the category of enterprises are entirely unregistered.

Bihar:

In Bihar, most of the units are existing ones. It can also be seen that most of the surveyed processing units have been working in the unorganized sector tiny, small and artisan based enterprises and so they are mostly unregistered. Average age of the sample processing units ranged between 08 to 35 years. DMEs under cereal based processing activity in Rohtas district occupied largest area (35,865sq.ft.). It was followed by DMEs of horticultural product based activity (8,000sq.ft.), wood based processing activity (1,400sq.ft.) and livestock based processing activity (1000 sq. ft.).

Maharashtra:

In Maharashtra, it can be seen that most of the units are the existing ones. It is the cashew processing units and the rice mills which are seen to be the new units. It can also be seen that most of the units are registered. Four fish processing units and one OAME each from leather, textile and wood category are the unregistered units. The fish units carry out their activity outside the house near the beach. The area covered by the units using machinery – cashew units, rice mills and binding units is seen to be more than the other business units.

7.6.3.2: Cost of Investment

West Bengal:

The size of investment in units varies across the food and non-food processing segments of manufacturing enterprises. It is relatively higher in non-food processing segment as compared to its counterpart. Within the group of food-processing units, the size of the investment is higher in case of paddy processing activity while it is found

to be lower for the OAME and NDME units of fish processing activity. On the other hand, among the non-food processing units, size of the investment is seen to be higher in paper-based activity followed by leather-based activity. In general, within a category, size of the investment made by the entrepreneurs varies increasingly with the size of the unit. The size of the working capital got relatively larger share in investment for all the processing units. The share of block capital in the case of food processing units is seen to have varied from 6.50 per cent in fish-processing units to 46.16 per cent in paddy-processing units. For the segment of non-food processing units, it ranged from 10.98 per cent in case of textile products to 41.40 per cent for paper-based activity.

Bihar:

In Bihar, generally within a particular group of processing activity, investment increased with the size of the unit. OAMEs showed lower size of investments in comparison to those of NDMEs and DMEs. It is also suggested that size of the investments were higher in case of DMEs meant for primary food based processing unit i.e., rice mill (Rs.77,96,000/-), litchi based processing activity (Rs.1,59,60,000/-), livestock based processing activity (Rs.10,50,000) wood based and leather based DMEs (RS.16,00000/-) and (RS. 9,00000/-) respectively. The percentage shares of block capital have remained much higher as compared to working capital, in case of both agro-food processing activities and agro non-food processing enterprises except NDME and DME of wood–based processing activities. It varied from 86.96 per cent to 57.15 per cent in regard to agro-food processing activities and from 72.23 per cent to 39.66 per cent in case of agro non-food processing activities.

Maharashtra:

In Maharashtra, within a category, investment is increasing with the size of the unit. The size of the working capital is seen to be lower for the OAME units as these units do not have to incur expenditure on wages/ salaries. It can also be seen that size of the investment is higher in case of rice mills and paper-based activity of binding which depend upon costly machinery for processing. Size of the investment is seen to be lower for fish processing OAMEs and NDMEs. The fish units need more working capital than fixed capital. The activity of drying and salting of fish does not require any heavy initial investment. However, due to the high value of the raw material i.e. fish, proportion of working capital is seen to be higher than the block capital. For other units, the share of block capital is seen to be very high which varies from 64 percent to 99 percent for food units. For non-food units, it ranges from as low as 27 percent to a high of 97 percent. Since the non-food section consists of units carrying

out various activities with different requirements, share of block capital in each activity is seen to be different.

7.6.3.3: Financing of the Investment

West Bengal:

In West Bengal, food processing industries with only exception of paddy processing enterprises met their investment requirement from own fund. For paddy processing unit, institutional loan contributed the major in financing their investment. For the units engaged in non-food processing activity, majority of the units are found to have financed the activity using their own funds. Only the paper-based industrial units have resorted to outside borrowing both from institutional and non-institutional sources in financing their investment.

Bihar:

In Bihar, the NDME and DME under cereal based processing activity and DMEs of horticultural crop based, wood based and leather based processing activities were found to have taken institutional loans in varying degrees. As the larger processing activities, particularly DMEs under both agro-food and agro-non–food categories are registered ones, they could have received institutional loans under DIC/KVI or other schemes. Except DMEs of Cereal based and wood based processing activities and OAMEs of livestock based activity, all other sample entrepreneurs had taken loans from non-institutional sources for meeting their investment costs. In all cases, however, the share of own funds were quite higher than that of institutional and non-institutional finances. It ranged from a minimum of 60.00 per cent in case of DME of textiles products to a maximum of 100 percent in case of OAMEs of livestock products–based processing activity.

Maharashtra:

In Maharashtra, all the units engaged in cashew processing, rice milling and one (DME) each in book binding and leather have taken loan to finance their own investment. The share of loan ranges from 37 percent to 80 percent. It can also be seen that as the food processing units like cashew units and the rice mills have been registered under DIC/KVIB schemes, they have received loan as well as subsidy. On an average 18 percent of the investment has been funded by the subsidy for the 12 units covered under these food-processing activities. The subsidy received by these units under the schemes has helped them to finance the investment needed thereby reducing their reliance on other sources like loan/ own fund. It can be seen that units engaged in fish processing, and majority of units in non-food processing activities have utilized their own funds to finance investment. Only two units out of the sample of 30 units have taken non-institutional loan.

7.6.4: Economics of Investment in Agro-Processing Units

7.6.4.1: Production and Operation Cycle of the Activities

West Bengal:

In West Bengal, the level of working of the units varied from activity to activity depending on the availability of working capital and seasonality of the activity in terms of input availability and demand for output. For all the activities, it is seen that monthly working days ranged between 26 to 30 days. The difference is noted in the case of per year working days. The level of working days per year for food processing units is observed to be relatively less than those of non-food processing units. Depending on the time taken for processing of the unit, the number of production cycles each unit completes is seen to be different being varied according to the type and size of the activity. Notably, within the category of food-processing enterprises, the number cycles completed in a year increased with the size of the unit which is not observable uniformly across the category of enterprises in the non-food processing segment.

Bihar:

In Bihar, number of working days per month as well as working hours per day were seen uniform in most of the cases, except in horticultural crop (litchi) based, dairy products' based and textile products' based processing activities. As litchi based processing activity is run hardly for 22 days to one month, so, in case of DME of this, double shift work is undertaken. In regard to textile processing activity also, two production activities in two shifts, or more than 08 hours are undertaken. So, in these cases, working hours per day is longer. Livestock based processing activity is everyday business without fail on priority basis; however, its working hours is shorter (05 hours). The number of production cycles, which the unit completes in a year, also differs with the type and size of the processing unit. In regard to production cycle/year, the data discloses that it was quite higher in cases of livestock (300) and leather based processing activity (ranging from 312 to 355). In all other activities, number of production cycles was quite lower depending upon the availability of raw materials, time taken for processing the same and scale of operation.

Maharashtra:

In Maharashtra, the number of working days per month as well as working hours per day is seen to be uniform for all the units. The difference is noted as far as working days per year are concerned. As the food processing units are located in the costal district of Ratnagiri, all the activities come to a holt because of heavy rains during June – September. Therefore, working days per year for these units are less than the non-food processing units in Pune and Mumbai. Depending upon the nature

of activity, number of days required for other components of the operation cycle (stocking period, marketing and credit realization period) is seen to be different for different activities. The number of production cycles which a unit completes in a year also differs with the type and size of activity. Normally within a category, the number of cycles completed increases with the size of the unit. Depending upon the time taken for processing of the unit, the number of production cycles each unit completes is seen to be different.

7.6.4.2: Sources of Raw Materials and Marketing Linkages of the Processed Product

West Bengal:

In West Bengal, sample food-processing units being relatively smaller units have the limited capacity to reach out to various markets. They do not have strong linkages with input-market; rather they have obtained raw materials from the producers directly (72.22 per cent). Non-food processing units however directly come in contact with the input-market through established trade/ market channel for procuring raw materials. Further, it is observed that some of the units have reportedly procured raw materials from more than one source, the proportion of such units being 22 per cent for food processing units and 50 per cent for non-food processing units. With regard to marketing of the produce, the unit owners (both food and non-food) are found to have linkage with various domestic markets stretching from the home district to various places all over the country apart from having their linkage with the local output-market. As far as involvement in the export market is concerned, no processing unit in the sample except the DME units of fish processing activity has involvement in the export market.

Bihar:

In Bihar, livestock based activity procured raw materials mainly from farmers directly (05). Other two types of agro-food based processing activities' used all the three channels for purchasing raw materials although in the major, the units are found to have purchased the same from farmers directly. Among non-food agro processing activities, raw materials, were wholly purchased through established trade channels and market channels. As far as marketing of the product is concerned, it was observed that half of the total sample entrepreneurs for 'cereal based activity' sold their processed product (rice) directly in the terminal markets. Channel of middlemen came next followed by wholesaler. Entrepreneurs of horticulture based activity mainly marketed their produce in the terminal market. Sample entrepreneurs of livestock based and textile based activities were seen to have sold their products

through wholesalers and middlemen. It was interesting to note that under agro non-food processing activities cent percent of the entrepreneurs of wood based and leather based activities sold their produce in the terminal market.

Maharashtra:

As far as the procurement of raw material and marketing of the produce in Maharashtra is concerned, it was observed that as the units are small units, often working with only family labour, the capacity of the units to reach out to various markets is limited and they work through agents. Hence the unit owners directly do not come in contact with the terminal consumers/ markets. Units like rice mills, leather units, textile mills and furniture units which process only the raw material provided to them by the customers at their doorstep do not have strong linkages with either input or output markets. All the units except the cashew units have reported that they have only one source (market) for procuring raw material as well as selling their product. Cashew units purchased raw materials both from farmers and established trade channels and have sold their product to the agents, wholesalers (i.e. market functionaries) and also to the small consumers in the same market (i.e. directly to the consumers in the terminal market). The units in all the categories cater only to the domestic demand and do not export any of their products.

7.6.4.3: Cost of Production

West Bengal:

Costs involved in the production process consisted of two components viz. recurring fixed costs and recurring variable costs. Evidently, all the activities incurred some recurring fixed costs. Within the group of food processing units, investment in paddy processing unit has a very high fixed cost per year followed by fruit processing activity and fish processing unit. For the non-food processing units, annual recurring fixed cost was very minimum in case of units manufacturing textile (jute) products, followed by manufacturing units of wood-based products, leather based products and paper-based products. Heavy fixed cost incurred by the units manufacturing paper-based products was mainly on account of higher depreciation charges (due to higher investment in machinery), higher interest payment for the bank loan and other annual costs like insurance and tax payments. On the other, low depreciation cost due to capital saving nature of the investment, relatively lower loan amount and thereby interest payments, had contributed to keep the recurring fixed cost at very low level in the case of manufacturing units of textile (jute) products covered under the study. As far as recurring variable cost is concerned, it can be seen that spending on raw materials is the major component of variable cost of the investment for all the processing activities. In general for all the processing units, proportion of cost on raw

material is found to have declined with the increase in the size of the unit in the category.

Bihar:

In Bihar, within each category, the quantum of fixed costs is seen to be increasing with the size of the unit. As most of the small enterprises belonging to various food and non-food processing activities have been working under unorganized sectors, they are not registered and feel difficulty in achieving bank loans. Other items of costs namely periodic maintenance, rent, insurance premium, taxes and salaries, bonus and depreciation are the main components of the recurring fixed costs. Major part of recurring fixed costs is however shared by own fund ranging between 61.70 per cent to 85.15 per cent for agro-food processing activities' and from 64.51 per cent to 82.19per cent in case of agro non-food processing activities. As far as recurring variable cost is concerned, it is seen that cost on raw materials is the major component of the variable cost for most of the activities, except DME of horticultural products (36.89 per cent) and NDME, (31.90 per cent), DMEs of textile (29.91 per cent) and NDMEs and DMEs of wood and leather based processing activities (18.61 per cent, 43.50 per cent, 21.52 per cent and 20.04 per cent) respectively. In all these cases, share of wages dominated the variable cost component.

Maharashtra:

In Maharashtra, within each category, the quantum of the fixed cost is seen to be increasing with the size of the unit. On an average, only 13 to 14 percent of the total costs have been contributed by own fund in case of food as well as non-food processing units. Out of the 30 units, bank loan has been taken only by 12 units and therefore, interest forms a part of fixed capital only for these units. These are basically the food processing units registered under DIC or KVIC and covered under their schemes. Other fixed costs (periodic maintenance, rent, insurance premium, taxes and salaries, bonus and depreciation) are the main components of the recurring fixed costs. As far as recurring variable cost is concerned, it is observed that cost on raw materials is the major component of the variable cost for most of the activities. However, it can be noted that the share of this component is higher for the food processing units i.e. cashew and fish processing units. This cost is lower for the non-food units as for many non-food activities like tailoring, leather processing, the units do not have to buy the basic raw material that is to be processed. The units are provided with the raw material for processing by the customers who take back the processed product. Costs on repair and replacements are higher for the rice mills as these use heavy machinery.

7.6.4.4: Net Income from Investments

West Bengal:

In West Bengal, all the activities gave positive net income being varied among the activities depending upon the size of the investment. This is uniformly observable in the case of food processing units. Within the group of food processing units, paddy processing activity gave maximum net income at Rs.1,85,718 per year followed by fish processing activity at Rs.1,61,583 and fruit processing activity at Rs.1,45,666. Small investment in units like fruit processing yielded net income of smaller amount in comparison with other units in the food-processing category. For the group of non-food processing units, this particular pattern is not uniformly observed, although, paper-based processing units with maximum investment among non-food processing units accrued maximum net income of Rs.1,15,333 followed by wood-based processing units at Rs.89,583, leather-based processing units at Rs.74,133 and jute-based textile units at Rs.68,800. For all the processing activities (food and non-food), net income increased with the size of the unit.

Bihar:

In Bihar, out of the total 18 food processing activities (06 each under three types of agro food based activities) and 09 non-food processing activities (03 each under agro non-food processing activities) surveyed, all the activities and units yielded positive net returns. Data reveal that except DME category of livestock based processing activity, in all other cases under agro food processing activities net returns increased with the size of the unit. In the non-food processing segment, similar pattern is observed except in case of net income earned by DME of textile based processing activity (Rs. 46,600/-), which is a bit lower than its NDME (Rs. 51850/-). It thus simply points out the efficiency of the investments in bigger units.

Maharashtra:

In Maharashtra, all the activities and units show a positive net return. For the food processing activities, the net return increases with the size of the unit. Among these activities, the highest net income is earned by the cashew processing unit (DME) followed by fish processing (DME). Among non-food processing units, this particular pattern i.e. increasing income with increasing size is not observed. This might be because of the heterogeneous nature of these non-food processing activities. Even within the categories, in some cases, the products of these units are differing slightly from the other units. It can be noted that if we account for the subsidy received by the food units by adding it up with the net return, the value of net return of all cashew and rice mills will register an increase. The amount of subsidy is seen to be rising with increase in size of the unit. The average net return will increase by that amount.

7.6.4.5: Employment Generation

West Bengal:

Employment generation by the processing units covered in West Bengal showed wide variation. In the food-processing category of enterprises, maximum employment generation from the investment was observed in the case of fish-processing unit with 7,662 man-days per unit per year followed by fruit-processing (4,195 man-days) and paddy-processing (1,550 man-days). Among the non-food processing units, maximum employment generation by the activity was observed in the case of wood-based product manufacturing unit (2,150 man-days) followed by paper-based unit (2,100 man-days), leather-based unit (1,760 man-days) and jute-based textile product unit (1,730 man-days). OAME units are entirely family-labour based and other units namely NDMEs and DMEs, employed outside labour over and above the contribution made by the family labour. As expected, labour employment in the units increased with the increase in the size of the unit. With regard to employment across sexes, fruit-processing units in the food-processing sector and jute-based textile units in the non-food sector are seen to be female-dominated ones. There is no one-to-one correspondence between size of investment and employment. As observed, fish processing units in the food-processing sector generated maximum employment (5.32 days) per investment for Rs.1000 holding the second position in terms of the size of investment. As against this, in the non-food sector, the maximum employment of 18.38 days per thousand rupees of investment was generated by the units manufacturing textile products while in terms of size of investment the units ranked the lowest position among the non-food units.

Bihar:

With regard to employment opportunities created by the sample processing units in Bihar, it is observed that the number of total labour days engaged in the units increased with the size. The highest number of total man days was seen in case of DME of horticultural products based activity figured at 24,200. It was followed by DMEs of cereal based, wood based, textile based, leather based and livestock based processing activities at 7796, 4050, 3000, 2700 and 2000 respectively. It could also be observed that only OAMEs of cereal based, horticulture and textile based processing activities engaged female family labourers. In regard to employment of hired female workers, it is found that only DME and NDME categories of two agro food processing activities viz., cereal and horticultural products based activities employed female workers on hiring basis. It is however revealing that most of the processing activities (under both agro-food and agro non-food categories) did not prefer to employ female workers.

Maharashtra:

In Maharashtra, the number of total labour employment in the units is increasing with the size as is expected. The highest number of workers (9) is found in cashew processing DME unit. It is also observable that all the categories in the food processing sector except one have engaged female family labourers. Thus, food processing (which can be carried out along with the domestic chores) is seen to be a female dominated activity. As against this, in all, only three categories in the non-food sector (wherein work is carried out within the household) have engaged female family labourers. Similar pattern is found as far as hired female labourers are concerned. Leather as well as wood processing units are seen to be basically male dominated units. Employment creation per 1000 rupees of investment however does not indicate any important pattern.

7.6.5: Problems Faced by Manufacturing Enterprises

West Bengal:

Reportedly the problem of non-availability of raw materials throughout the year, variability of prices of raw materials and absence of information network to keep track of raw materials prices and availability came to be featured prominently in the array of problems faced by the entrepreneurs of sample processing units in West Bengal. For food processing units, the major problem in procuring raw materials reported to be variability of prices of raw materials (cent per cent) followed by absence of information network (72.22 per cent) and non-availability of raw materials (66.67 per cent) throughout the year. As far as the non-food processing units are concerned, the specific problem faced by the enterprises in procuring raw materials reported to be variability of prices of raw materials (cent per cent). The next important problem faced by the non-food units reported to be absence of information network (50 per cent) to keep track of raw materials prices and availability. Thus, both food and non-food units being faced the variability of prices of raw materials in procuring the same face difficulties in fixing prices of products, having bearing on the marketability of their products.

In the field of marketing of processed products, reportedly for food-processing units, the main problem was lack of proper domestic market of processed products (72.22 per cent) followed by absence of good network purveying market information (66.67 per cent) and dependence on middleman for marketing the processed products (66.67 per cent). Notably, all the OAME units in the food-processing segment reported these three problems uniformly across the category of enterprises. For non-food processing units, the major problems reported to be absence of strong network for obtaining market information (58.33 per cent) followed by lack of proper market of processed products (50 per cent) in domestic market and dependence on middleman

for marketing the processed products (41.67 per cent). Here again, OAME units in all categories of enterprises reported the above three problems in the sphere of marketing of their products.

Bihar:

In Bihar, problems of non-availability of adequate raw materials due to lack of capital, supporting machines/equipments, and absence of required infrastructural facilities were reported by majority of the food processing units. Fluctuations in prices of raw materials, absence of information network and circumstantial need of purchasing raw materials from middlemen at higher rates were also prominently reported by the sample food processing units. Non-availability of skilled labourers, availability of raw materials (litchi) for a very short period and difficulty in determining prices of value added products were specifically felt by DMEs of agro-food processing activities. As far as agro non-food processing activities are concerned, lack of capital, poor quality of raw materials and no easy availability of bank credit were reported to have been faced by OAMEs. Like agro food processing activities, NDMEs of agro non-food processing activities did come across the problems of poor electricity supply position, variability of prices of raw materials and purchasing of raw materials from distant market (Kolkata in case of leather). Procurement of raw materials sometimes from informal trade channel, non-availability of strong supporting infrastructure and raw materials not adequately available in the state (in case of leather), were the main constraints faced by DMEs of agro non-food processing activities.

With regard to the marketing of processed products in the domestic market, long market channel causing lower net income, non-existing support by NGOs/Co-operative marketing societies and limiting factors causing processors to sell value added products to local middlemen at lower prices were found to have been faced by entrepreneurs of small units in case of agro food processing activities. Seasonality of demand for the products, lack of mutual understanding among enterprises for preparing common marketing strategy and quality consciousness of consumers compelling the entrepreneurs to sell their products in distant markets for higher prices were experienced by all NDMEs. Existence of cutthroat competition, absence of widespread network for marketing the products in the State (particularly litchi juice, syrup and pulp) and transport related problems in taking the value added products to terminal markets were the constraints faced mainly by DMEs of agro food processing activities. Regarding constraints faced by sample entrepreneurs of agro non-food processing activities, it is revealing that determination of the price of the products by middlemen or big traders, no option to choose profitable markets but to market the

product mainly in the local market being preferred generally by low income group of people yielding lower returns were reported to be the main problems faced by OAMEs. Marketing through middlemen resulting in lower net profit, demand for quality product based on design-oriented preferences by the consumers were felt by NDMEs. Lower returns as a result of scattered markets, existence of tough competition and uncertainty of ready demand could be found as main problems faced by DMEs of agro non-food processing activities category.

Maharashtra:

In Maharashtra, within the food processing segment, majority of the cashew and fish units have reported non-availability of raw materials throughout the year. As far as the cashew units are concerned, non-availability of good quality cashews is mainly due to inability of the small units to find agents or seller supplying good quality raw material. In absence of information/ resources to find the same, these units are often at a disadvantage if the cashews supplied are not of good quality. The units have also reported non-availability of labourers during the peak season and variability of prices. The fish units also face this problem, as during the months of monsoon, fishing does not take place. It was reported by these units that over a period of time, the supply of good quality fish has been reducing due to various reasons such as entry of large firms. Another major problem faced by the fish units is the absence of any government schemes/ promotional agencies (unlike in case of cashew units covered under DIC/KVIC) which would provide support to these units. In case of the rice mills, the main problem reported was irregularity in the electricity supply. They have also reported that there is a tough competition from other rice mills as due to the liberal policy of the government regarding licensing, many new rice mills are being established.

As far as the non-food processing units are concerned, majority of the units reported unavailability of cheap labour as one of the important problems. Similarly absence of any promotional agencies is another problem reported by the units.

7.6.6: Prospects of the Units

West Bengal:

As revealed by primary data, within the group of food-processing industries, paddy-processing activity gave maximum net return in West Bengal. The state of West Bengal being blessed with largest production of paddy has the potentials for investing in paddy processing industry. The industrial units in future can take advantage of the growing demand for the value added processed product in India as well as abroad. However, as observed in the study, this would be possible if the units

have access to information network to keep track of raw materials prices and availability.

Within the group of non-food processing industries, textile and leather units yielded lower net income, although, they have shown relatively better performance in terms of growth in number of units. The common problem faced by the entrepreneurs of these units reported to be the absence of network for the marketing of their products. Obviously, these units could enhance their earning capacity if they are provided with better infrastructure purveying market information for their processed products. Paper-based manufacturing units gave highest net return amongst the non-food processing units and thus offers scope for investing in units manufacturing paper-based products.

Bihar:

The development of agro-based industry in the state is largely dependent on the importance attached to fruits and vegetables vis-à-vis other crops. It is to be noted that significantly large areas are under different top qualities of fruits in Bihar. Mango, banana, litchi, guava, lemon, pineapple and others' occupy 140786 ha, 29013ha, 28758 ha, 27994 ha, 17122 ha, 4454 ha and 31284 ha respectively. Quantum of production of these fruits is quite higher. However, absence of required storage, preservation and proper marketing facilities within and outside the state, good quantum of these fruits are wasted and sometimes sold at unremunerative prices. Hence, there is great potential for installation of agro processing industries based on these fruits and vegetables in areas/regions with their production in abundance. Among cereal based processing activities, apart from paddy and wheat, there is high prospect for APIs based on maize in Bihar having total area under autumn and rabi maize estimated at 472.90 thousand ha, and total production estimated at 1076.30 thousand tones. With regard to livestock based processing activity, dairy industry in the co-operative sector under the brand name Sudha has achieved marked success in Bihar. In unorganized sector, also there is great potential and bright prospect for processing of milk into khowa, ghee, butter, cream, paneer, lassi, etc.

As far as non-food processing units are concerned, it is revealing that leather and leather products in Bihar has a small share (0.56 per cent) in total production of agro based industries. However, considering the magnitude and quality of livestock wealth and traditional expertise of leather men in Bihar there appears to be a good potential for industries relating to leather and leather products in the state. Similarly, if the traditional expertise of weavers and their presence in significantly good numbers in some districts of Bihar (particularly, Bhagalpur Gaya, Aurangabad, Patna, Banka, Madhubani, Siwan and Nawada districts) are utilized properly by providing them

necessary inputs and infrastructure then the prospects of textile based processing industries in Bihar is undoubtedly bright. Wood based processing activities have also great potential in Bihar as urbanization has been promoting the use of varieties of value added products based on wood. As far as the sample units of agro non-food category are concerned, these are located in comparatively developed districts of Patna and Bhagalpur. If the problems/constraints faced by sample processing units at different stages of production process are suitably addressed, the prospects of agro non-food and agro food based processing industries in Bihar are sure to be very bright.

Maharashtra:

The analysis of the data collected from the sample units in Maharashtra shows that cashew unit (DME) has earned highest net income followed by fish unit (DME). The cashew units are newly established units under DIC/KVIC schemes. Due to the increasing demand for the cashew nuts in the domestic as well as international markets and due to the huge untapped potential for processing of the fruit, the units can in future also, take advantage of the expanding markets. Fish processing units are existing units working since 10-20 years. Most of these have their business on the beaches under unhygienic conditions. The major problem faced by these units is the irregular supply of good quality fish. Similarly, these units are not covered under any scheme as they do not require heavy capital investments. Assistance to these units in terms of market information and value addition techniques would increase their earning capacity. The major problem for the rice mills is the contraction of the business due to opening up of many rice mills in the vicinity in the context of liberal licensing policy of the government. The mills thus need to be more competitive and modernized.

With regard to non-food sector, the secondary data shows that there has been a contraction in the number of non-food units (except the leather units) in the organized sector. As against this, the unorganized sector shows a better performance, the textile units are seen to be the units registering growth. However, overall, there has been a contraction in the non-food agro-based sector. As far as the sample units are concerned, these are located in the developed districts of Pune and Mumbai. The units do not exhibit uniformly increasing net income with size within a category. Thus, the DME units are not necessarily the units with highest net income. This may be indicative of efficiency of small units which depend mainly on family labour. The units mainly have reported non-availability of labour, absence of governmental support, existence of rivalry as the main problems. The units would expand their earning capacity and be more competitive if they are provided information regarding market conditions and various existing schemes and extension services.

7.7 Policy Implications

The following are the major policy recommendations emerged from the study.

West Bengal:

* Adequate infrastructure like marketing infrastructure, storehouse, cold storage facility assume great significance in the context of growth of agro-based enterprises. This is particularly evidenced by primary level data analysis of sample food processing units. Thus public investment in developing the required infrastructure needs to be stepped up for the growth of agro-based enterprises **(Attn: West Bengal Industrial Development Corporation (WBIDC), Government of West Bengal).**

* Pricing of products is an important element of marketing of agro-based products. In the present study, sample-processing units experienced one major problem of variable prices of raw materials varying over the seasons. In the face of variable prices of raw materials, the processing units find difficult in fixing prices of their products in advance. This has deterred these units from entering into forward contract with the customers who can purchase their products at reasonable prices and thus ensuring the marketability of the products. Moreover, for want of information network infrastructure, the processing units are unable to assess the supply demand conditions of raw materials and thus prices of raw materials. They are also unable to forecast market demand for the product. This calls for creating infrastructure in the form of developing network linkages **(Attn: 1. Directorate of Agriculture, Government of West Bengal, 2. Department of food processing industry and horticulture, Govt. of West Bengal).**

* The constraint / problem common to the OAME and NDME categories of fish processing enterprises is the absence of information network both in the sphere of availing raw materials and marketing of the product. Therefore assistance to these units in terms creating access to information network would enhance the efficiency of these units **(Attn: Department of Fisheries, Government of West Bengal).**

* As for the non-food processing units, the textile units have faced the basic problem of low market demand for the products. Similar to textile units, leather based activities also face the problem of marketing of their products. However, the common problem faced by the entrepreneurs of leather and textile units reported to be the absence of network for the marketing of their products. Obviously, these units could enhance their numerical strength if they are backed by better infrastructural support providing market information for their processed product. **(Attn: West Bengal Industrial Development Corporation (WBIDC), Government of West Bengal).**

*For the food processing units except the paddy processing activity, the share of institutional loan varied from less than 1 per cent in case of fruit processing units to 2.86 per cent in case of fish processing units. For the units engaged non-food processing activity, the share of institutional loan ranged from 8.89 per cent to 33.02 per cent. Thus for the promotion of agro-based industries, the banks should come forward in providing credit to them, In the sphere of credit, priority sector lending should not be discouraged, rather, more credit to priority sectors like the small-scale units of manufacturing enterprises should be provided. In the era of liberalization, under low interest rate regime, greater size of credit at market interest rate would be attractive to the investors to make investment in small-scale manufacturing units **(Attn: RBI, NABARD).**

Bihar:

Keeping in view the prevailing problems and existing potentials of sample ‘agro-processing units, following action points could be suggested for the expansion of agro-processing activities in Bihar:

*Arrangement should be made for making capital available to the potential entrepreneurs engaged in agro-processing activities **(Attn: NABARD, State Co-operative Banks, Commercial Banks and RRBs).**

*Information Centres should be established. These can give information relating not only to market prices, availability of raw materials, technical know- how in connection with concerned activities, but also about various government schemes meant for promoting agro processing activities. **(Attn: Department of Industries, Govt. of Bihar & State Department of Food Processing & Horticulture).**

*Deficiency of supporting infrastructure should be removed by ensuring quality all weather roads both in rural and urban areas, regular power supply, means of communication and strengthening formal credit institutions. **(Attn: Road Commissioner, Govt. of Bihar, Bihar State Electricity Board, NABARD, Department of Institutional Finance, Govt. of Bihar).**

*With a view to ensure the supply of raw materials at reasonable prices and in time, and marketing of the produces, Co-operatives be made instrumental and strengthened. **(Attn: Department of Co-operation, Govt. of Bihar).**

*Processing units based on locally available raw materials related to fruits and vegetables have to be encouraged**. (Attn: Directorate of Horticulture, Directorate of Industries & Department of Agriculture, Govt. of Bihar and Ministry of Food Processing, Govt. of India).**

*There exists large scope for expanding livestock based processing activity (milk processing). It will, however, require proper input supply, free marketing mechanism,

scientific preservation facilities, milk chilling plants at different places in the private sector, infrastructural facilities, marketing intelligence and information system, packaging facilities at producers' level and skill development training programmes for the entrepreneurs and workers of such processing units. **(Attn: Department of Animal Husbandry, Govt. of Bihar).**

*For the development of textile based processing enterprises, handloom parks should be established in and around potential districts. In view of larger concentration of tasar and silk units in and around Bhagalpur, expansionary measures by the District Industries Centre should be undertaken. **(Attn: Department of Industries, Govt. of Bihar).**

Maharashtra:

Considering the existing problems and prospects of the sample agro-processing units in Maharashtra, following policy suggestions could be made in the interest of development of agro-based industries in the state.

*It is important that the information is accessible and reaches various regions. For easy accessibility of this information, information centers should be established. These can give information relating not only about various government schemes but also markets, prices and the technical know how relating to the concerned activities. This should guide the entrepreneurs in adding value to their products and in reducing costs. **(Attn: Industrial Development Coorporation, Govt. of Maharashtra)**

*Establishment of co-operative marketing for cashews and fish units can be promoted. This is important as the units mainly rely on agents for marketing of the produce as well as for procuring raw material. In case of lack of information regarding the market functionaries, the units may have to compromise as far as the quality of the raw material and price of the produce is concerned. **(Attn: Registrar, Co-operatives Societies, Govt. of Maharashtra)**

*In the wake of non-availability of fish throughout the year and reduction in the supply over the years, aquaculture should be promoted in the state. **(Attn: Dept. of Fisheries, Govt. of Maharashtra, Dept. of Agriculture, Govt. of Maharashtra)**

*The sample non-food processing units reported absence of any promotional agency or government help in running the activity. Hence, it is felt that efforts should be made to encourage establishment of self-help groups or co-operative production/ marketing units which would also act as information centers for the units. **(Attn: NABARD, State Co-operative Bank, Govt. of Maharashtra)**

*Like in case of food processing units, information regarding various government schemes (giving loans/ subsidies) should be made easily accessible to the public so

that the entrepreneurs take advantage of it. **(Attn: District Industries Centre (DIC), Industrial Development Corporation, Govt. of Maharashtra)**

*The potential of Small-scale agro-based industries to expand can be improved if they are provided with good quality infrastructure, information about the market and prices and the technical know-how. Establishment of institutions for procuring raw material and marketing of produce will help them in taking advantage of the scale economies and getting directly in touch with the terminal market and getting a better price for their products. **(Attn: Dept. of Cottage and Small Scale Industries, Govt. of Maharashtra)**

Of course, tasks are many to perform for reducing uneven growth of agro-processing industries across the regions of India. Apart from easing of infra-structural bottlenecks in the form of developing market infrastructure, roads communication, storehouse and cold storage facility what is important is that the information is accessible and reaches to the entrepreneurs of processing units. This calls for creating infrastructure in the form of developing network linkages. However, performing of tasks enumerated above would require coordinated efforts among different departments of the government as well as amongst government and non-government agencies. There is now widespread recognition that agro-processing industries can play active role in generating income and employment. Equally, there is vast export market potential for agro-based processed products in earning foreign exchange. On the demand side, changing consumption habits have opened up new domestic market possibilities for the value added processed products. Government policy environment has also created favorable investment climate in recent years. The overall effect of all these is that there exists large potential for the development of agro-processing industries. However, So far, there is no separate agency either at the central or at the state level exclusively for focusing on the problems of agro-based industries. Today, when agro-processing sector has started gaining strength, the establishment of a separate agency for the agro-industrial sector at the centre and state levels would help a lot in realizing the problems peculiar to the agro-based activities and in overall development of the economy.

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