

CHAPTER – III

METHODOLOGY

The study is exploratory in nature which attempts to review the existing framework of funding for agriculture marketing and marketing infrastructure projects both in its institutional credit and as well as credit by trader(informal) relating to agriculture marketing and explore new alternatives for extending institutional credit support to agriculture marketing stakeholders. It is a two dimensional study which will primarily focus on (i) analyzing the present policies for agriculture credit as well as agriculture marketing credit (Institutional Finance) and (ii) informal sector credit support to farmers by traders for agricultural marketing activities. The study tries to explore the components of the marketing infrastructure projects, which are not covered under institutional credit particularly from banking institutions. The methodology adopted is a mix of primary and secondary research as well as qualitative and quantitative approach. These include; (i) Secondary Research (ii) Major Stake-holder Discussions (iii) Field Survey through structured questionnaires.

Secondary Research

The *Secondary Research* involved intensive review of literature and available information pertaining to agriculture marketing as well as credit for agriculture including agriculture marketing in India. In Chapter-I, the development of agriculture marketing in India with reference to development of regulated marketing in the country right from British days have been brought out. This chapter extensively analyses the constraint being faced in the traditional regulatory market mechanism leading to various kinds of market failures as manifested through large intermediation, huge post-harvest losses, non-transparency, lack of grading and primary value addition of agriculture commodities etc. Further investigation of the market reform process were carried

out starting with the period from 2003 and the evolution of market system thereafter has been detailed in Chapter-II, which has also clearly outlined the need for study, objective of study and Research Questions.

Secondary research study has relied on documents, notifications, Annual Reports, evaluation reports, reports of various committees, analysis of contents of websites of various Ministries/ Departments/ Organizations of the Government, Indian Council of Agriculture Research (ICAR), Planning Commission, Food and Agriculture Organization (FAO). Notable amongst the central government Ministries/ Departments, whose various documents and websites have been analyzed are : Department of Agriculture & Cooperation, Department of Animal Husbandry, Department of Food & Public distributions, Department of Consumer Affairs, Ministry of Food Processing Industries, Ministry of Commerce & Industries, Ministry of Panchayatiraj, Ministry of Rural Development, Directorate of Marketing & Inspection(DMI), National Horticulture Board(NHB), Agriculture & Processed and Food Product Export Development Authority(APEDA) etc. Similarly study of relevant reports, occasional papers and committee reports of Reserve Bank of India (RBI) and National Bank of Agriculture and Rural Development (NABARD), State Bank of India (SBI), ICICI Bank have been made in addition to that of World Bank, Asian Development Bank, Federation of Indian Chamber of Commerce and Industries (FICCI), Confederation of Indian Industries (CII) and PHD Chamber of Commerce and Industries (PHDCCI) etc. Also studies of various agriculture and economics journals, periodicals, books were undertaken as were available with various libraries. Secondary research through literature survey has been undertaken to understand the evolution of credit to agriculture sector both in its structural and contextual aspects.

Primary Research

The secondary research led to and helped in deciding the approach for primary research. Primary research was carried out through field survey with the help of structured questionnaires to understand the nature and system of credit

for agriculture marketing including that for agriculture marketing infrastructure. Farmers form the starting link of the agriculture marketing, while traders form the critical link as intermediaries in the marketing process, who procure from farmer or other traders and sell to the processor, wholesaler, institutional buyer and exporters, supply chain and retailers. As conventionally farmer's linkage to the traditional marketing system is through the traders/commission agents in most cases of small and marginal farmers, the field study has been designed to focus on informal credit through trader financing of farmers in the marketing system, to explore the complex nature of trader-farmer business relationship with or without inter-linkage of produce. Similarly the formal financing aspect has been designed especially for small entrepreneur including small farmer turned entrepreneur, who generally avails credit from any source including that from formal financial institutions for meeting his requirements ranging from agriculture marketing to setting up agriculture market infrastructure projects for primary value additions. In addition to the field survey, intensive discussions were carried out with officials of Central Government Ministries, DMI, APEDA, State Agriculture Marketing Boards of Maharashtra/Odisha, NABARD, SBI, FICCI, CII, National Institute of Agriculture Marketing (NIAM) to facilitate the research findings.

Questionnaires – Design and Testing

It was necessary to solicit information from trader/commission agents, farmers, formal financial institutions and agri-marketing entrepreneurs. Thus for the purpose, four different questionnaires were designed, i.e; (a) One set of questionnaires to study informal credit- (i) Questionnaire for Trader/Commission agents (ii) Questionnaire for farmers availing informal credit from traders ; (b) Other set of Questionnaires relating to formal credit for agri-marketing- (i) Questionnaire for banker sanctioning credit (ii) Questionnaire for agri-marketing Infrastructure entrepreneur. The preliminary questionnaires were prepared pertaining to all the four categories based on various literature survey and the draft questionnaires, so finalized in consultation with the supervisor, were

discussed further with field officers of Directorate of Marketing & Inspection, State Marketing Boards, Commercial Banks, officers of Supply Chain and few farmers to incorporate their feedback before all the questionnaire was fine-tuned bridging the duality of possible difficulty in carrying out the survey crossing barrier of language and level of understanding as well as academic requirement of exploration of the subject.

The questionnaire for farmers (Appendix-I) focuses, apart from general information on loan type, type of credit for various marketing related activities relating to transportation, storage, primary processing also solicits information on informal credit for marketing as well as problems faced from banking system to avail loan. The questionnaire for trader/commission agents (Appendix-II) focuses on type and nature of informal lending by the trader/commission agents to farmers and the factors facilitating such informal lending. The questionnaire for banker (Appendix-III) solicits information on type and nature of lending relating to agri-marketing infrastructure projects, type and nature of working capital loan for agri-marketing system as promoted by the bank, reasons relative slower banking credit flow for agriculture marketing. The questionnaire for agri-marketing infrastructure project entrepreneur (Appendix-IV) focuses on type and nature of agri-marketing infrastructure project and its related lending by financial institutions, type of government promoted credit-linked market infrastructure projects as well as factors affecting formal lending. The questionnaires for farmers, traders and entrepreneurs were tested in Odisha during October 2011, with respective category respondents to understand the limitations of data collections. This was particularly done keeping in mind the possible difficulty that those being surveyed might face due to use of technical words, concepts, meaning and comprehensions as embodied in the respective questionnaires. Based on the feedback received, these three questionnaires were modified. As regards the questionnaires for bankers, consultations were made with few bankers on the design of the questionnaire for banker.

Selection of Survey Area

The selection of area/markets for survey is based on both geographical and contextual. The survey is carried out to represent the geographical spread of Northern, Southern, Eastern and Western part of the country, while also including the hilly and mountainous regions of Himalayan States. As the markets are regulated by the states as per the statute, the State selection has been done based on representation from each of these regions. The states of Odisha, Andhra Pradesh, Karnataka, Maharashtra, Gujarat, Rajasthan, Madhya Pradesh, Uttar Pradesh and Punjab based on various considerations such as index of inequality (GINI Coefficient) in monthly per capita consumption expenditure in rural areas, per worker productivity in agriculture, and debt by source. Due to logistical reason, North Eastern States could not be picked up for survey. However, states of Uttaranchal and Himachal Pradesh were picked up for survey to represent the Himalayan states.

According to Coudouel et al. (world bank, 2002)²⁹, consumption is a better indicator of poverty measurement than income as consumption expenditure reflects not only goods and services that a household can command based on its current income, but also whether that household can access credit markets or household savings at times when current income is low or even negative, perhaps because of seasonal variations, harvest failure, or other circumstances that cause income to fluctuate widely. Monthly Per Capita Consumption Expenditure (MPCE) is considered to be a fair indicator of human living standards, since it aggregates the monetary value of all goods and services actually consumed during a particular reference period. During 1973-2005, the inequality (Gini Coefficient) in rural India, has marginally declined from 0.302 in 1973 to 0.297 in 2005 (Table-3.1). From 1972-73 to 2004-05, village side of Rajasthan, Gujarat, Karnataka, Madhya Pradesh, Odisha and Punjab has

²⁹ World Bank, (2002)- "Poverty Measurement and Analysis", by Aline Coudouel, Jesko S. Hentschel, and Quentin T. Wodon

registered a decline while inequality seems to have increased in rural Uttar Pradesh. Maharashtra has not shown any regular sign of decline in inequality.

Table- 3.1: Gini Coefficient for Monthly per Capita Consumer Expenditure (MPCE) – (Rural)

State	1972-73	1983	1993-94	2004-05
Andhra Pradesh	0.273	0.294	0.284	0.288
Karnataka	0.273	0.303	0.265	0.264
Maharashtra	0.310	0.285	0.303	0.310
Gujarat	0.302	0.257	0.236	0.268
Rajasthan	0.316	0.343	0.260	0.248
Madhya Pradesh	0.306	0.295	0.277	0.269
Odisha	0.312	0.267	0.243	0.282
Punjab	0.307	0.279	0.265	0.278
Uttar Pradesh	0.277	0.290	0.278	0.287
All-India	0.302	0.298	0.281	0.297

Source: NSSO, National Seminar on NSS 61st Round Survey Results, (2007)

In U.P., H.P., Maharashtra, M.P., Odisha, Karnataka and A.P., per worker productivity was lower than all-India average. While for Punjab, per worker productivity was higher; the % of indebted farmer's household was also higher, which may be explained to the application of high technological input to agriculture in both production and primary processing in the state. The % of indebted farmer household in A.P., Karnataka, Punjab and Maharashtra was much higher than all-India average (Table- 3.2). Incidentally, these states are the ones with higher level of farmer's suicide, which can also be attributed to higher level of farmer household indebtedness without achieving corresponding higher per worker productivity in agriculture.

Table- 3.2: Agriculture Productivity, Indebtedness and Debt by Source

State	Estimated ('00) No. of Farmer Household	Per worker productivity in Agriculture (in Rs.)	% of Farmer Household Indebted	Debt by Source (%)		
				Total Institutional	Total Non-Institutional	Trader
A.P.	60339	11245	82.0	31.4	68.6	4.8
Karnataka	40413	9653	61.6	68.9	31.2	1.9
Odisha	42341	7871	51.9	74.8	25.1	0.8
Maharashtra	65817	9130	54.8	83.8	16.2	0.8
Gujarat	37845	12934	51.9	69.5	30.5	4.4
Rajasthan	53080	10609	52.4	34.2	65.8	19.2
M.P.	63206	6606	50.8	56.9	43.0	9.0
Punjab	18442	35087	65.4	47.9	52.1	8.2
H.P.	9061	9796	33.4	65.3	34.7	5.5
U.P.	171575	10367	40.3	60.3	39.7	2.9
Uttarakhand	8962	N.A.	7.2	76.1	23.9	1.7
All-India	893504	12371	48.6	57.7	42.4	5.2

Source- 59th Round of National Sample Survey

The state of H.P., Punjab, M.P. and Rajasthan had a relatively higher percentage of trader financing than all-India average, while other states chosen for survey had lower than all-India average trader financing. The sample states (Table-3.3) also represent the combination of reformed (market reform as per model APMC Act 2003) states (A.P., Gujarat, Himachal Pradesh, Karnataka, Maharashtra, Odisha, Rajasthan), recently reformed states (Uttarakhand), partially reformed states (Punjab, Madhya Pradesh) and non-reformed state (Uttar Pradesh). While the sample states of A.P., Karnataka, Maharashtra, U.P. and Punjab has relatively smaller area covered under regulated markets (better proximity of the market) than all-India average, other states being surveyed have larger area covered per regulated market.

Table- 3.3: Market Spread and Status of Market Reform

State	No. of regulated Markets	No. of Rural Primary Markets	Area covered per unit regulated Market (sq.km.)	Status of Market Reform
A.P.	905	576	303.92	Yes
Karnataka	504	730	380.54	Yes
Maharashtra	880	3500	349.67	Yes
Gujarat	414	129	473.49	Yes
Rajasthan	431	312	794.06	Yes
M.P.	413	1321	596.41	Partial
Odisha	314	1150	495.88	Yes
U.P.	605	3464	398.23	No
Uttarakhand	58	30	962.84	Yes
Punjab	488	115	103.20	Partial
H.P.	48	35	1159.85	Yes
All-India	7246	21238	454.00	

Source- Directorate of Marketing & Inspection

As it is important to carry out survey of farmers in various areas spread in different parts of the country, particularly on account of need to explore the informal credit for agri-marketing, efforts has been made as to the extent logistically possible, to cover more than one market/market area in the states being surveyed. Farmer and trader survey was undertaken in A.P., Odisha, Karnataka, Maharashtra, Gujarat, Rajasthan, M.P., Punjab, H.P., Uttarakhand, U.P., M.P., NCT of Delhi and U.T. of Chandigarh. Attempt had been made to cover farmers doing market transaction in different commodities such as grains, pulses, spices and fruits and vegetables, so as to understand the broad spectrum of informal credit market in the country. Similarly trader responses have been captured to the extent possible in different markets. However, one notable observation in this context is that trader's survey is very time consuming as generally many of them have either sighed away or turned down from responding to survey with the lurking fear of being exposed due to unknown factor despite

assurances to the contrary. Banker survey was limited to the state of Maharashtra, A.P., Odisha, Rajasthan, while entrepreneur survey was carried out in the states of A.P., Maharashtra, Rajasthan, Punjab, H.P., Uttarakhand, and Odisha. Similarly, despite several persuasions, the response from the bankers has been generally slow (despite several reminders), in the pretext of remaining heavily pre-occupied on day-to-day work.

Reference Period and Period of Survey

Reference period of survey is 2011-2012. Survey through the pre-tested questionnaires was conducted from early December 2011 till middle of February 2012.

Sample Size of Survey

In each of the state of Andhra Pradesh, Karnataka, Gujarat, Rajasthan, Punjab, Madhya Pradesh, Odisha, forty questionnaires for each of category of farmers and traders, bankers(different branches of Banks/Regional Rural Banks/Cooperative Credit Societies) and entrepreneurs were administered. In the state of Maharashtra, sample size was increased to 100 for each category, while for State of Uttar Pradesh, Uttarakhand, and Himachal Pradesh, 20 questionnaires each category of farmers, traders and entrepreneurs were administered. In addition to this limited number of questionnaires for farmers and traders were administered in one regulated market each in National Capital Territory of Delhi and Union Territory of Chandigarh.

The help of some individuals, bank officials, State Agriculture Marketing Boards and that of officials of Directorate of Marketing and Inspection were also solicited. Those drafted for the survey, were explained in detail about the purpose of study, methodology and various sections of all four different questionnaires. In order to clarify the doubts, additional explanations were provided whenever required. Survey was closely coordinated and monitored on

day-to-day basis. In Maharashtra, it was felt necessary to translate the questionnaires for farmer, trader and entrepreneur in Marathi language to facilitate survey in some parts of the States, and Maharashtra State Agriculture Marketing Board rendered prompt and necessary help in that regard.

Survey Responses

Total number of survey responses received in each category of sample is; Farmer- 202, Trader- 163, Banker- 101, and Entrepreneur- 127. The response from Madhya Pradesh could not be received in time to include in the analysis, *due to time constraint in submission of the dissertation.* State-wise and category-wise survey responses are given in Table- 3.4 below:

Table- 3.4: State-wise and Category-wise Survey Responses Received

State	Farmer	Trader	Banker	Entrepreneur	Total
A.P.	18	19	9	13	59
Karnataka	20	15	----	----	35
Maharashtra	53	36	43	51	183
Gujarat	17	16	----	----	33
Rajasthan	14	15	6	2	37
Odisha	29	25	17	25	96
U.P.	7	----	----	3	10
Uttarakhand	5	2	2	8	17
Punjab	30	16	24	20	90
H.P.	5	----	----	5	10
NCT of Delhi	4	4	----	----	8
U.T. of Chandigarh	----	15	----	----	15
Total	202	163	101	127	593

The detailed analysis and observations from the field survey of various categories of respondents has been given in chapter- V. Prior to that detail findings from secondary survey through study of literature has been brought out in next chapter. The literature survey ranges from policy analysis of credit to agriculture sector, to that for agriculture marketing which is a specialized activity within agriculture sector.