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VAIKUNTH MEHTA NATIONAL INSTITUTE
OF CO-OPERATIVE MANAGEMENT

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Focus

The Co-operative Perspective is a 'must' for co-operative executives, office-bearers, academicians and students. It provides in a capsule from latest thinking on all aspects of co-operative movement. The Journal provides a ready source of knowledge and information relating to rapidly expanding and diversifying co-operative enterprises.

Specific objectives of the Journal are:

- (a) To disseminate information through articles on latest developments in the co-operative movement in India;
- (b) To appraise the readers about the current co-operative literature through articles and book reviews.
- (c) To furnish library documentation of articles on co-operation / management and allied subjects derived from various sources of publication;
- (d) To give glimpse of training activities of the Institute to build up trained manpower for the co-operative movement; and
- (e) To provide opportunity to the readers and specially ex-trainees to exchange experience through feature 'Readers' forum'.

The journal is published quarterly (April, July, October, and January) of each year. Subscribers are enlisted from any issue. The non-receipt of the issue should be reported within 2 month's time to which the issue relates.

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Editorial

As we all gradually come out of the reeling effects of the pandemic, greater efforts are being made to collect and disseminate research findings to academia as well as industry. Research around cooperatives is largely multi-dimensional and deals with cross cutting themes of development. The work and functions of cooperatives in credit as well as non credit sectors spans around agriculture and agribusiness, gender, youth, housing and welfare, health and sanitation, technology and innovation, amongst several others.

During this era of cooperative transformation, VAMNICOM has undertaken persistent initiatives to bring out contemporary research in the field of cooperation. The Cooperative Perspective journal has added immense academic value to cooperative literature over the years. It provides space for scholarly writings and policy based research for academicians and practitioners dealing with areas of cooperation, agribusiness, rural development and allied sectors. The strong need for enhanced research outcomes in this field has motivated the institute to design faculty development workshops to upgrade the skills of faculty members and research officers. This has inculcated a culture of research and learning at the institute, giving the desired impetus to scholars to engage in cooperative research. The present issue has a mix of articles from cooperative as well as agribusiness sector where scholars have focused on technology adoption, fertilizer efficacies, collective action, gender empowerment, housing welfare, battling COVID - 19 and credit utilization and challenges etc.

While most of the cooperatives play an important part in the agricultural economy, fertilizer cooperatives are very crucial for Indian agriculture as it provides a necessary input to agriculture. *Paliwal and Nistala* in their article have discussed the findings of primary survey of farmers in Maharashtra with respect to adoption of bio fertilizers. The paper also documents the focus group discussions of progressive farmers which conclude that adequate policy measures are required to ensure proper utilization of bio fertilizers along with necessary value added services like soil testing, member advisory etc. The authors also assert on the need for crop diversification for better yields and remunerative returns to farmers. Similarly, the study of *Urs Raj* which also focuses on crop diversification and yields brings out challenges of commercial cropping in the State of Kerala. The study findings reveal that while the model of dairy cooperatives has been successful, there is lack of replicability in case of commercial crops which are subject to price fluctuations. Besides price fluctuations, the author argues for the need for better cooperative structures in commercial crop segment to encourage farmers for crop diversification. This would ensure necessary forward and backward linkages as in the dairy model, thereby making commercial farming more remunerative for agricultural cooperatives.

Like all social enterprises, cooperative institutions also shape and grow through collective action. *Dr. Wadkar* in his article brings out the strength of collective action in the context of livelihood development of cooperatives, self-help groups, and farmer producer companies. The authors draw upon impactful cases from the State of Chhattisgarh and asserts on the importance of social capital, social participation and institutionalization of collective efforts for sustenance of economic and livelihood activities. This is exemplified by *Shantanu et al.* who have worked around self help groups in Uttar Pradesh. The study affirms the role of social capital and the findings reinforce that self help groups (SHGs) can be leveraged to deal with multifaceted issues of women empowerment. The authors use exploratory techniques to bring out the extent of impact of SHGs on social independence, financial independence, and lifestyle enhancement, political participation of rural and marginal women.

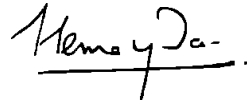
Cooperatives along with other form of collectives exhibit strong resilience during adversities. Although many social enterprises faced testing times during the ongoing pandemic, they continued to serve their members as well as their consumers through innovative mechanisms. *Wadkar and Singh*, in their paper have presented evidences from 32 Farmer Producer Companies (FPCs) from Maharashtra, which have established innovative marketing and delivery channels for their products while battling the COVID - 19. The scholars have carried out primary survey and discuss the importance of social enterprises in tackling the outbreak effectively.

An important aspect of social enterprises is gender empowerment and overall community welfare. Social enterprises, with rural and marginal women at the core, are capable of resolving economic, social, environmental as well as political issues. The case based approach used by *Paliwal et al.* clearly brings out the strength of women driven social enterprise. The authors have documented three cases from the State of Maharashtra, comprising a cooperative bank, cooperative rural business and SHG federation. The model and approach of each collective form of organization is unique in terms of the way they resolve socio economic issues of their members.

Chaudhari and Farmer write an empirical article on “The Gujarat State Co-operative Agricultural & Rural Development Bank Ltd” and bring out important findings with respect to loan borrowings of farmers. The findings reveal that credit utilization is still a challenge for small and marginal farmers. This is attributable to low levels of financial literacy as well as poor financial awareness on schemes and its utilization. The authors suggest a strategic approach to enhance credit delivery and financial inclusion. Another article by *Kumar and Dubey* stresses on the importance of governance and member

satisfaction of district central cooperative bank from Uttarakhand. The paper discusses six important aspects like member knowledge, member engagement, member details, managerial competency, infrastructure and overall satisfaction. *Shri Mehara* has authored a perspective article on “Affordable Housing for All by 2022”. The author suggests that in order to overcome the constraints with regards to affordable housing, stakeholders should work towards viable and creative solutions that address specific local needs to reduce the scale of housing shortage in the country.

The cooperative perspective journal presents rich literature on cooperative organizations by bringing out their contemporary issues, challenges as well as their role in the changing economic scenario. Cooperative Perspective promotes articles which provide insights in cooperatives and how they can play an enabling role. Feedback and suggestions are invited for better outreach of the journal. Please write to crp@vamnicom.gov.in. Please visit Cooperative Perspective Journal website <https://www.cooperativeperspective.in/>.



Hema Yadav

Editor-in-Chief

ARTICLES

Market Potential and Buying Behaviour of Farmers Towards Biofertilizers in Western Maharashtra

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Nishita Nistala²

Abstract

Biofertilizers have a huge role to play in sustainable agriculture. They have beneficial impact on soil and are also cost effective. Despite having different potential activities, biofertilizers yet could not obtain popularity among farmers to accept it sufficiently. Despite the various advantages of biofertilizers in agricultural production, several limits at different levels, i.e. from the production unit to farmers' field, make it less popular in India. In this view, the present paper aims to study the market potential and the factors influencing the buying behaviours of farmers towards biofertilizers. The data was collected through structured questionnaires with 390 farmers and dealers in western Maharashtra. Further a focus group discussion with progressive farmers was conducted to present the best practices adopted by them. The study reveals that the price of the product and past experience has significant influence on the buying behaviour of farmers. The paper concludes by suggesting various approaches to increase the consumption of biofertilizers by farmers, and more significantly the role of progressive farmers as tool for awareness.

Keywords : *Biofertilizers, Buying Behaviour, Market Potential and Progressive Farmers.*

I. Introduction :

In India, Agriculture is an important sector of the Indian economy as it contributes about 17% to the total GDP and provides employment to over 60% of the population. Even though large hectares of area are under cultivation in this country, the yield per hectare for many crops is lower than the expected level. This is because of lack of adoption of new, improved practices, advanced techniques, use of non-productive soils, decreasing soil conditions, etc. It is possible to increase yield per unit area by adopting new production technologies viz., use of biofertilizers, vermicompost, organic farming, bio-control remedies, genetically modified crops, etc.

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The fertilizer sector is very crucial for the Indian economy because it provides very important input to agriculture. Moreover, the fertilizer industry, especially the ammonia urea plants, is highly energy-intensive in their operation. There are wide variations in the vintage of fertilizer plants in the country. In terms of feedstock, the major feedstock currently being used in the fertilizer plant are natural gas, naphtha and fuel oil / LSHS. Over the years, the majority of the industry has improved its performance significantly in terms of specific energy consumption and capacity utilization. There are several state-of-the-art fertilizer plants operating in India.

Biofertilizers contribute significantly to soil fertility improvement by fixing atmospheric nitrogen, both with and without the presence of plant roots, solubilizing insoluble soil phosphates, and creating plant growth chemicals in the soil. Thus, bio-fertilizers provide a safe method of improving land fertility through the use of biological wastes and helpful microbes that transmit organic nutrients to the field. Biofertilizers have emerged as promising environmentally acceptable inputs that can be used in conjunction with conventional fertilisers to ensure healthy plant growth. They have enormous promise for supplying plant nutrient requirements without relying on artificial fertilisers.

The widespread use of synthetic fertilisers has resulted in soil degradation and contamination, contaminating water basins, eliminating beneficial microbes and insects, making the crop more susceptible to disease, and reducing soil fertility. And the high expense of chemical fertilisers is putting small and marginal farmers out of business. The enormous quantity of foreign cash required to import synthetic fertilisers can be significantly lowered by switching to biofertilizers. Apart from the foregoing, long-term usage of bio-fertilizers is more cost effective, environmentally friendly, efficient, productive, and accessible to marginal and small farmers than chemical fertilisers (FEPSAN, 2010).

In this context, the paper aims to explore the ***Market Potential and Buying Behaviour Of Farmers in Western Maharashtra.***

The main objective of the present study is ;

- To assess the knowledge level and farmers' satisfaction towards Bio Fertilizers;
- To analyse the factors influence the buying behaviour of farmers towards the use of Bio Fertilizers;
- To document practices of progressive farmers to understand their adoption behaviour towards the usage of biofertilizers; and

- To suggest appropriate long-term and short-term practices and technologies based on the issues/constraints faced by the farmers towards the usage of bio fertilizers.

The paper is further organised as follows, Section II presents a literature review on market potential, farmersbuying behaviour and biofertilizers. Section III elaborated on adopted research methodology and proposed research questions, Section IV presents the results obtained from survey and focus group discussion Section V and VI discuss the findings and suggestions of the data and lastly Section VII outlines the conclusion.

II. Review of Literature:

A systematic literature study is presented below, which broadly focuses on market potential, farmers buying behaviour and the usage of Biofertilizers by potential farmers.

Soni and Singh (2013) in their research paper discussed about cooperative society for efficient distribution of fertilizer, to ensure that the right products are available to the farmer at right time and at the optimum price, consistent with the provision of a reliable service. Authors analysed key performance of Chattisgarh markfed. Markfed is now successfully handling and distributing agriculture fertilizer and pesticides. It was also found that shortage of funds, insufficient warehouses, lack of transport facilities, malpractices, untrained personnel, lack of coordination and supervision, poor management are some problem across efficient fertilizers marketing. The paper ends with effective suggestions to overcome these problems.

MK Jain, Vikas Garg, Sumit Agarwal (2017) carried out research on financial analysis of Indian farmer's fertilizer cooperative limited-IFFCO (A case study). In their study they stated that to gain opportunities in this area, a new IFFCO cooperative was created specifically to meet the needs of farmers. It was a unique business concept in which the farmers of the country through their own cooperative societies have created this new institution to defend their interests to make the farmer and his village self-sustainable. From the analysis of main Financial Indicators it is clear that Operating Profit to Turnover Ratio, Fixed Assets Turnover Ratio, Debt Equity Ratio, Current Ratio, Liquidity Ratio, etc are more than ideal position. However, company's Return on Capital Employed, Profit Before Tax to Turnover, etc were undesirable as compared to previous years.

D. M. Arvind Mallik and Qasim sab (2018) carried out a study on analysis of market potential for bio-fertilizers – an empirical study conducted

on behalf of Kalpatharu Bio-fertilizer-Shivamogga district. The study is based on primary data and it is collected from the customers through questionnaire. The result of the survey proves that the farmers are more price conscious. To be dominant players in the market, sales promotion is a very crucial weapon. According to the market research the farmers had given the positive response towards the Kalpatharu bio-fertilizer. It shows that Kalpatharu biofertilizer is attracting the farmers. But in a competitive field one should not satisfy with one's present performance. In order to maintain higher competitive efficiency, regular market research will help an organization to ascertain the customer's preference and act according to them for creating and maintaining brand image in the minds of people.

Bhatt (2006) in his research article IFFCO in the Service of Farmers observed that IFFCO is playing a major role to promote agriculture development and to make farmers aware of efficient and balanced use of fertilizer. Large number of programs are being organized by the IFFCO to educate farmers like field programs, soil testing, farmer meetings, campaigns, use of electronic and print media, training programs for sale point personnel, etc. IFFCO's fertilizer marketing activities are spread in over 28 States and Union Territories of the country. Through various promotional and farmers educational programs awareness among farmers is brought in by the IFFCO to adopt these technologies for enhancing crop productivity.

Mujahid (2011) revealed that majority of farmers used cow dung as organic fertilizer, while 64.34% and 80.00% of farmers rely on their own production process to generate organic fertilizers and make decisions based on previous experience respectively. From this study they conclude that organic fertilizers are easily available as compared to the costly chemical fertilizer and farmers are prepared to use organic fertilizers on their own.

Kassie et al. (2009) studied Adoption of Organic Farming Technologies: Evidence from a Semi-Arid Region in Ethiopia and found that, a negative relationship between age and use of compost manure and stubble tillage in Ethiopia. Educated farmers were believed to have higher ability to perceive, interpret and respond to new information about improved technologies than their counterparts with little or no education.

Purohit, S.G., Dodiya, J.M.(2014) studied problems & issues in adoption of Biofertilizers in Agriculture by Farmers. The research study revealed that a majority of respondents i.e. 85% reported the lack of confidence towards various biofertilizer practices and methods. More than half of the respondents of the respondents i.e. 58% reported that lack of knowledge

about biofertilizers, followed by inadequate water availability i.e. 45% and lack of guidance from extension personnel are 41% of the total respondents. It is therefore, advisable that the extension agency should increase confidence level of farmers on usage of biofertilizers and also the method or practices to be used regarding biofertilizers. Information regarding utilization of biofertilizers can be shared through organizing training programmes, guest lectures, method and result demonstration and krishi mela, etc.

Raghvendra Pathak et.al (2016) made a study on knowledge and adoption behaviour of farmers farmers using biofertilizers in Ujjain district (Madhya Pradesh) and concluded that, more number respondents had adopted practices namely, type of bio fertilizer (33.33 per cent), quantity of biofertilizer used for one hectare (25.83per cent), time of application (34.16per cent), method of application (34.31per cent), yield increased by using biofertilizer (37.59 per cent) using biofertilizer before expiry date (32.50 per cent) and using bio fertilizer without mixing with chemical fertilizer (39.16per cent). Thus, the result indicates that there was considerable variation in the extent of adoption of biofertilizer practices by the farmers.

Anand Kumar Pathak, Jahanara (2018) studied extent of adoption of Bio fertilizer by the respondents in Bhadohi district (Uttar Pradesh) during 2017-18 in Abholi block of Bhadohi district. Six villages and 120 respondents were selected randomly and data were collected through personal interview method. Collected data were analyzed by using appropriate statistical methods were applied for the interpretation at data. It was found that majority of respondents (52.50%) had medium level of adoption followed by 30.84 per cent had lowest level of adoption followed by 16.66 per cent respondents had high level of adoption of Biofertilizer.

T. Rajula Shanthy et.al (2018) published Bio-fertilizers for sustainable sugarcane production: a socioeconomic analysis. The study examines the many sociological and economic implications of sugarcane biofertilizer use. Farmers received significant increase in net returns as a result of enhanced cane productivity. Each farmer has his or her own purpose for embracing biofertilizers: to obtain a lush green crop, healthy crop growth, and a high cane yield while lowering fertiliser costs and so increasing profit and soil health. Despite the fact that they faced constraints such as a lack of timely labour, high labour costs, and a lack of timely access to high-quality bio-fertilizers, farmers favoured the use of this technique. The study contributes to a better knowledge of bio-fertilizer performance in farmer fields and farmer attitudes toward this technology. While the researchers conclude that bio-fertilizer

application is a validated method, widespread adoption remains a challenge. Nonetheless, it was discovered in this study that timely application of bio-fertilizer results in a superior harvest and is cost-effective.

Shrotriya et al. (2001) mentioned that the approach of fertiliser industry for improving agricultural productivity was also by and large targeted to improve crop productivity through increasing the use of fertilisers and other inputs. There are certain special projects and programmes where integrated farming system approach was followed for productivity improvement. In this approach, arable farming, horticulture, forestry, livestock and pastoral production systems were usually followed.

Kaur et al. (2015) studies influence of psychrotolerant plant growth promoting growth rhizobacteria as coculants with *Rhizobium* on growth parameters and yield. Study stated that *Azotobacter* inoculation resulted in multiplication and establishment of the culture in the inoculated field soil. Being plant growth promoting and plant probiotic bacteria *Azotobacter* count increase is a good sign of the improved soil microbial status and hence better soil health.

Rajula Shanthi and Subramanian (2015) stated that application of farm yard manure, biocompost and biofertilizers creates a conducive environment for the development of soil flora and soil fauna and this makes the soil healthy. Increase in cane weight could be the probable reason for increased cane yield.

Maria Ajmal et.al (2018) noted in their article biofertilizer as an alternative to chemical fertilizers that biofertilizers and biopesticides offer a sustainable alternative for reducing reliance on chemical fertilisers while satisfying the expanding population's demands. The use of biofertilizers and insecticides in place of chemicals is anticipated to have a beneficial effect on the soil, air, and water, as well as on human health. They are not only nutritionally dense, but also provide beneficial bacteria to the soil. By attaching bacteria to a carrier substance, biofertilizers enhance the efficacy of chemical fertilisers. These growing organisms, which are available in both solid and liquid phases and have a shelf life of six months to two years, promote plant development and can also be used as fish feed. Additionally, biofertilizers and insecticides have been reported to have significant draw backs. Manufacturers may encounter difficulties during numerous processes. Health hazards may also develop as a result of the possibility of heavy metal pollution. If these constraints can be solved, biofertilizers and pesticides may be a viable alternative to chemical fertilisers in terms of pollution control.

Mazid et al. (2011) biofertilizer is a substance which contains living microorganisms which when applied to seed, plant surfaces, or soil colonizes the rhizosphere or the interior of the plant and promotes growth by increasing the availability of primary nutrients to the host plant organic fertilizers contain organic compounds which directly or by their decay, increase soil fertility.

III. Research Methodology :

Both primary and secondary data were collected for the study. Primary data was collected with the help of structured interview questionnaires through field visits.

The ‘structured, undisguised questionnaire’ was developed from standard questions of relevant literature as a research instrument. Responses on the questionnaire were obtained through interaction in presence of the corresponding users of the biofertilizers/ farmers. So as to get the accurate and holistic information about the attitude, behaviour and satisfaction of the farmers while using biofertilizers, average data of three years period i.e. 2015-16 to 2018-19 will be considered. For this purpose, data was collected with various stakeholders;

- Representatives of Companies
- Dealers/ Progressive Farmers
- Farmers

At the final stage, the data was collected through a semi-structured interview schedule and a Focus Group Discussion (FDG) with 15 respondents, 5 from each district. The demographics of respondents included progressive farmers and dealers, in order to identify their perception and buying behaviour towards biofertilizers.

A judgmental stratified random sampling method was used for selecting the district of Western Maharashtra state. Western Maharashtra covers seven districts namely Kolhapur, Sangli, Satara, Solapur, Pune, Ahmednagar and Nashik. Out of these districts, 3 districts i.e. Pune, Kolhapur and Ahmednagar were selected for the study based on the fertilizer consumption.

IV. Data Analysis :

The data analysis section has divided into two parts as follows:

Part A - Analysis of the questionnaire with quantitative data

Part B - Analysis of Focused Group Discussion with the select progressive farmers

Part A - Analysis of the questionnaire with quantitative data

Table 4.1: Age Group of the Respondents

Districts	Number of respondents				
	21-30	31-40	41-50	51-60	>61
Pune	20	32	41	23	14
Kolhapur	22	35	39	19	15
Ahmednagar	18	31	43	25	13
Total	60	98	123	67	42
Percentage	15.4	25.1	31.5	17.2	10.77

Source : Primary Data.

The age of the respondent farmers is presented in table 4.1. It was observed that in Western zone of Maharashtra nearly 31.5% of the farmers were found in the age group of 41-50 years and 25.1% farmers belonged to age group of 31-40 years. Remaining 17.2% of farmers belonged in the age group 51-60 years. The 15.4% farmers fell in age group of 21-30 and only 10.77 % farmers in the age of more than 61 years.

Table 4.2 : Education Level of the Respondents

Districts	Education Level of the Respondents					
	Illiterate	Primary	Secondary	Higher secondary	Graduation	Post-graduation
Pune	12	18	25	30	40	15
Kolhapur	13	20	29	27	37	14
Ahmednagar	14	23	28	28	34	13
Total	39	61	82	85	111	42
Percentage	10.00	15.64	21.03	21.79	28.46	10.77

Source : Primary Data.

The educational level of farmers is presented in the table 4.2. Out of total farmers, 28.46 % farmers had completed their graduation and 21.79% farmers attained H.S.C level. Between 15%-21% farmers were completed their primary and up to secondary level. Around 10% of the surveyed farmers were illiterate and 10% were post graduates.

Table 4.3 : Annual Income of the Respondent

Districts	Annual Income of the Respondent			
	50000-1 lakh	2-3 lakh	3-5 lakh	More than 5 lakh
Pune	14	22	38	40
Kolhapur	16	24	38	42
Ahmednagar	18	26	40	36
Total	48	72	116	124
Percentage	12.31	18.46	29.74	31.79

Source : Primary Data.

Income level of the farmers in the area surveyed revealed that, in Pune, Kolhapur and Ahmednagar Districts around 31.79% farmers had annual income more than 5 lakh from agriculture and other secondary sources, almost 29.74% farmers income in the range of 3-5 lakh, 18.46% had income between 2-3 lakhs and nearly 12.31% farmers income was less than 1 lakh. Finally it's concluded that large farmers who cultivated cash crops in all districts had income more than 5 lakh. Only a few farmers had income less than or equal to 1 lakh.

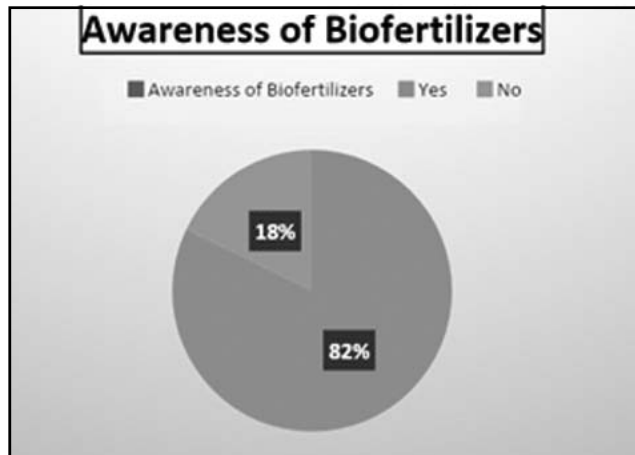
Table 4.4: Major Crops are Grown by Farmers

Major crops grown by respondents					
Food Grains	Fruits	Vegetables	Viticulture Nursery	Sugarcane	Groundnut
53.50%	46.50%	51.20%	2.30%	2.30%	2.30%

Source : Primary Data.

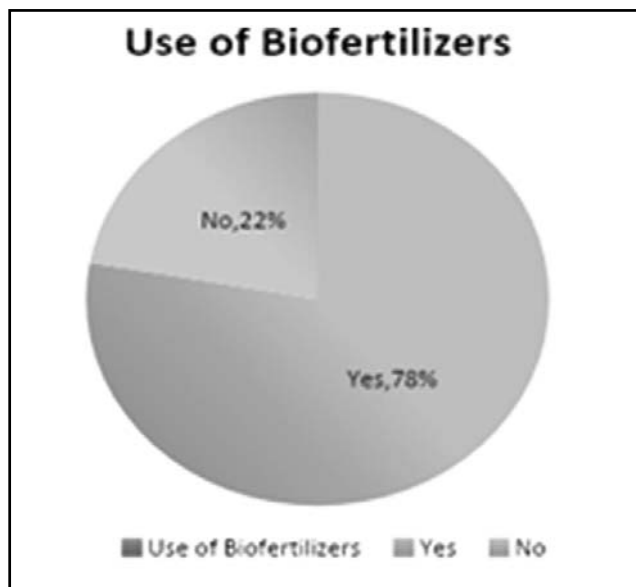
The above table indicates the major category of crops grown by the farmers in the study area. Food Grains and Vegetables are the highest categories of crops grown by the farmers at 53.5% and 51.2% followed by fruits with 46.5%. However, based on the area of study sugarcane, groundnut and viticulture nursery are also grown majorly every year. Other major crops grown by farmers throughout the year include Grapes, Oranges, Pomegranate, Wheat, Chilli, Jowar, Bajra, Maize, Brinjal, Potatoes and Bananas.

5. Awareness of Biofertilizers



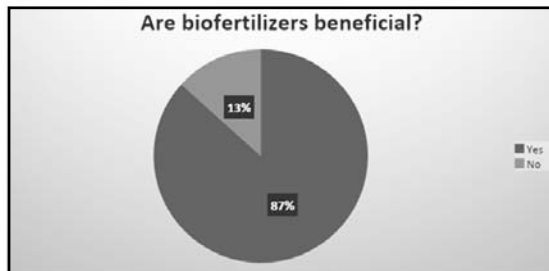
The above chart shows the awareness of biofertilizers of the respondents in the study area. It indicates that 82% of farmers were aware of biofertilizers, while 18% remained unaware.

6. Use of Fertilizers



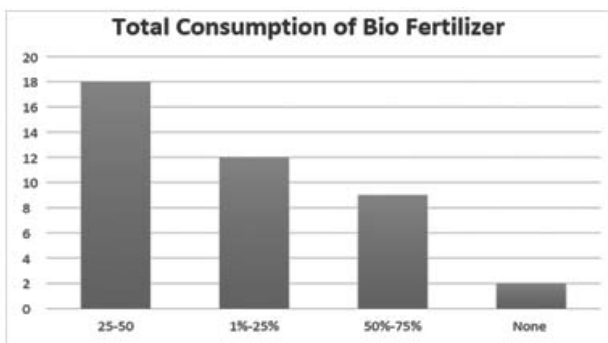
The above figure shows the use of biofertilizers in the study area. It indicates that 78% of farmers use biofertilizers and 22% farmers don't use biofertilizers, although they were aware of biofertilizers.

7. Are Biofertilizers more beneficial?



The above figure shows that 87% of farmers felt that biofertilizers are more beneficial than other fertilizers while 13% of farmers felt otherwise.

8. Total Consumption of Biofertilizers



The above figure shows the total consumption of biofertilizers in the study area. 43.9% of farmers use 25%-50% biofertilizers overall, followed by 29.3% of farmers that use 1%-25% of biofertilizers. Meanwhile, 22% of farmers use 50%-70% of biofertilizers and 4% have no use of biofertilizers.

9. Sources responsible for the use of Biofertilizer

Table 4.5 : Sources responsible for the use of Biofertilizer

Sources	Number of respondents			
	Pune	Kolhapur	Ahmednagar	Total
Friends	28	31	33	92(23.59)
Agricultural press and newspaper	25	23	22	70(17.95)
Media	19	20	17	56(14.36)
Information events/ field days	15	14	13	42(10.77)
Governmental support programs	15	14	13	42(10.77)
Farm advisors	13	15	12	40(10.26)
Family	35	33	40	108(27.69)

Source : Primary Data.

Note : Figure in parentheses indicates percentage to the total.

The above analysis indicates the sources responsible for the use of biofertilizer. It shows that in total 27.69 % of the respondents are influenced by the family members for the use of biofertilizers followed by farmers friend 23.59%, agricultural press and newspaper 17.95%, Media 14.36%, Information events/ field days and Governmental support programs 10.77% and Farm advisors 10.77%.

10. Experience of the respondents towards the Bio-fertilizer

Table 4.6 : Experience of the respondents towards the Bio-fertilizer

Sl. No.	Particulars	Number of respondents			
		Pune	Ahmednagar	Kolhapur	Total
1	Economical	56	65	75	196(50.26)
2	Good quality	68	63	63	194(49.74)
3	Costly	36	33	32	101(25.90)
4	Poor quality	33	28	30	91(23.33)
5	High yield	70	69	72	211(54.10)
6	Low yield	37	42	28	107(27.44)

Source : Primary Data.

Note : Figure in parentheses indicates the percentage to total.

The above table indicates that the perception towards the product varies from person to person. In the above analysis it was observed that about 54 percent of the respondents having perception that bio-fertilizer products having High yield and about 50% percent of respondents having perception that economical and good quality one, in other side very few respondents were having perception of Low yield 27.44 %, Costly 25.90% and Poor quality 23.33% from the Western Maharashtra. The perception of most of the respondents towards the IFFCO's biofertilizers is Economical, Good quality and giving high yield when combine with other fertilizers.

11. The Rank of Factors considered while Purchasing Biofertilizers

Table 4.11: The Rank of Factors considered while Purchasing Biofertilizers

Factors	1	2	3	4	5	6	Total
Past Experience	220	90	25	20	25	10	390
Price	112	55	40	40	47	96	390
Product Quality	65	65	95	50	50	65	390
Easily Available	65	65	65	65	65	65	390
Brand Image	44	30	33	30	133	120	390
Credit	20	15	40	40	95	170	390

Source : Primary Data.

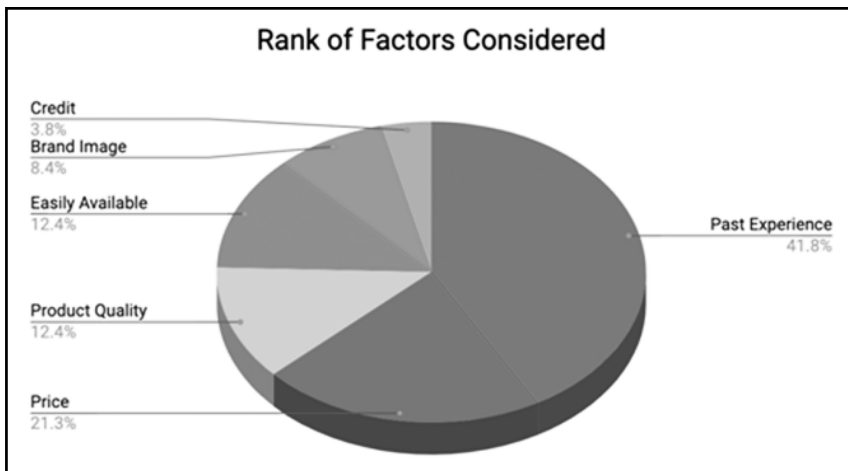


Figure : Rank of factors considered

From the table it has been depicted that the farmers were influenced more to buy biofertilizers due to their past experience; this can signify their satisfaction level with biofertilizers followed by quality of the product and price which attracts farmers to purchase biofertilizers as opposed to factors like availability, credit and brand image which were ranked low by the respondents.

12. Estimating Market Potential

Market potential is an estimate of the amount of money companies can expect to make from the product or service they plan to market. Estimating the market share or potential will allow biofertilizer companies to determine if their markets will support their businesses by covering their costs. The general formula for this estimation is simple :

Estimating Market Potential - $MP = A \times C \times P$

Where:

MP = Market potential.

A = Total estimated area under bio fertilizer

C = Average annual consumption (Doses Required (Kg/acre) of bio fertilizers)

P = Average selling Price of the product

Therefore,

$MP = 15\text{acres} \times 350\text{kg/acre} \times \text{Rs.}3000$

$MP = (15 \times 350 \times 3000) = 15,750,000 \text{ kg/acre}$

Generally, the market potential is the highest estimated net revenue that companies will realize from their enterprise. The market potential is the number

of potential buyers, an average selling price and an estimate of usage for a specific period of time.

Part B – Analysis of Focused Group Discussion with the select Progressive farmers

A focus group discussion was carried with 15 select progressive farmers and dealers to understand their best practices and adoption behaviour towards biofertilizers. The Findings and Suggestions from the discussion have been mentioned in the following sections along with the interviews conducted with 4 award winning progressive farmers which is documented in the form case study (Annexure).

V. Findings

The following section discusses the findings of the collected data from farmers in Pune, Ahmednagar and Kolhapur. The analysis conducted with farmers throws some light into the progress and usage of biofertilizers. The empirical findings can be summarized as follows.

1. Demographics :

The Demographic profile of the respondents illustrates that the majority of the farmers' age group is in the range of 41-50. A higher number of respondents have completed their higher education and graduation. Lastly, large farmers who cultivated cash crops in all districts had income more than 5 lakh and the land holdings higher than 5 ha. Major category crops grown by the respondents included food grains and vegetables.

2. Use of Biofertilizers :

A very high number of respondents are aware of biofertilizers. Amongst Biofertilizers, Chemical fertilizers, Organic compost and Other types of fertilizers, respondents prefer using Chemical fertilizers compared to other fertilizers. However, several respondents have reflected that they use biofertilizers and chemical fertilizers simultaneously and observe that biofertilizers are beneficial for the soil and plants. Only 22% of farmer respondents' total consumption of biofertilizers is more than 50%-70%.

The respondents mention that Family, Friends, Newspaper and Media sources are some of the most influential factors responsible for using biofertilizers. However, their perception of biofertilizer products varies from person to person, yet the majority of farmer respondents observed that bio-fertilizer products result in High yield.

3. Market Potential :

Determining the market potential of a product is part of a successful marketing process and requires marketing research. The findings suggest that the market potential for biofertilizer in Western Maharashtra is 15, 750,000 kg/acre.

4. Buying Behaviour :

The finding from buying behaviour depicts the factors taken in consideration while buying biofertilizers. Past Experience has been ranked the highest amongst all the other factors followed by price of the product. They have been viewed to influence their purchase decisions. Willock et al. argued that farmers can recursively modify their buying behaviour in response to the arrival of information about the outcomes of their purchases, thus justifying that past experience with a product plays a crucial role. While product availability, Credit and Brand Image didn't make significant role in their purchase decisions.

5. Focus Group Discussion :

Based on the primary data collected through formal interaction with various stakeholders, the researchers have laid down the following issues and challenges faced by Representatives of companies, Progressive Farmers and Dealers.

Issues and Challenges :

- **Open market policy :** It is likely that after complete decontrol in any market, it tends to increase the prices of commodities. Fertilizers are also no exception in this regard. This open market policy is hampering the sales volume and market of biofertilizers.
- **Competition from private players :** The private players have attractive offers to sell fertilizers on a credit basis, whereas cooperatives offer in cash only. This leads to an increase in the sale of fertilizers from private even though farmers end up at higher prices.
- **Overdue :** Some amounts of inputs are provided on a credit basis. The farmers are unable to repay it within the stipulated time period, so they face the challenge of overdue and recovery.
- **Declining business volume over a long period :** The existence of unfair competition and low margin in sales of biofertilizers are affecting the performance. The unfair price as a result of unfair competition is limiting dealers' scope of services and competitiveness in the market, and it affects the overall business of the companies.

- **Improper Marketing Structure :** Efficient marketing is required for the smooth functioning of any product. Improper marketing structure tends to have higher costs and become inefficient and/or provide poor quality services.
- **Reduction of Subsidy on fertilizer by Government :** The net result has been an overall increase in fertilizer prices, with neither the government benefiting due to subsidy reduction nor the farmer benefits. As a result, biofertilizer prices more than doubled in the last four years.
- **Reduction in Marketing Structure :** The 3-tier structure, i.e. State Marketing Federations District Sales and Purchase Cooperatives and Block level sales and purchase cooperatives, have been reduced to 2-tier structure, i.e. State and Block level, which has hampered the sales volume.
- **Market information and Technology :** Lack of information on the current market and technology is also one of the most important challenges that put its massive suppressive effect on the marketing of biofertilizers input and output of farmers and dealers. Due to lack of current information, the farmers are not benefiting from the price of agricultural inputs, the major problem for inhibiting getting the optimum price level for both agricultural input purchase time and agricultural output marketing times.
- **Infrastructural Challenges :** The infrastructural challenges are challenges that hinder the well-functioning and facilitation of companies due to lack of availability of trained manpower, lack of information on the current market, lack of mass-medias for communication purposes, lack of market infrastructure, shortage of store and transportation facilities shortage of linkage with financial institutions and shortage of technology.

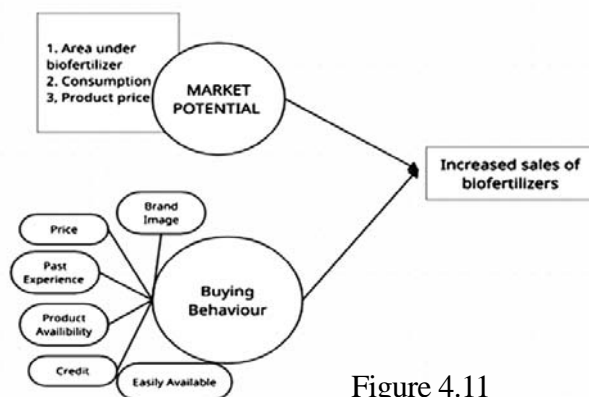


Figure 4.11

Factors of Market Potential and Buying Behaviour influencing the sale of Biofertilizers

Source : Author's Compilation based on data analysis.

VI. Suggestions :

A. Suggestions based on Focus Group Discussion:

The researchers have also sought the opinion and advice of the respondents for the growth of sales and purchase about biofertilizers. The same has been compiled and presented in the following section of the study.

- **Innovative Distribution Policy.** Efficient distribution should require so as to ensure that biofertilizers are available to the farmer at the right time and at the optimum price, consistent with the provision of reliable service and active marketing, which is a continuous process whereby the distributors are constantly looking for new ways to increase sales of fertilizer to benefit not only themselves but also the farmers. Many of the private companies provide home delivery to the farmers. Dealers should peek into these initiatives.
- **Market Linkages :** Farmers are in direct touch with the dealers. Thus dealers are a better option for using tools of inters personnel communication. Whereas manufacturers reach to their customer farmers is not that direct, close and frequent, hence channels of mass communication are to be used between them. Inter personnel communication is largely related to promotional aspects leading to the adoption of fertilizers use, and mass communication limits itself to publicity aspects leading to the creation of awareness. The linkages between manufacturer, dealer and farmer need a rethinking with the recognition of such partnership. Dealer's involvement in promotional work appears to be a necessity in the changed circumstances sales, and purchase cooperatives should focus on market connections by frequent meeting with block and primary level dealers.
- **LAB to Land :** Companies should organize various LAB to LAND visits to facilitate farmers who help to transfer the latest proven and viable agricultural technology from input manufacturers to the farmer's field, and the biofertilizer retailer is in direct contact with the farmer and is well placed to give advice on the use of the products he sells, nutrient deficiency and requirement of soil, etc.
- **Training and Development Initiatives :** Education and Training that have to be provided to farmers and dealers. They should take training related to technology and marketing at least once a year. Three levels of training are required for the effective implementation of fertilizer marketing policies :

- i) Training of senior managers must emphasize how biofertilizer marketing functions can be carried out effectively and how each can be integrated into a total fertilizer marketing system.
 - ii) The fertilizer distributors, i.e. private dealers and/or staff of cooperatives, must be trained to operate a fertilizer retailing business and be provided with appropriate knowledge of fertilizer use, thus enabling them to assist their farmer customers in making sound fertilizer purchasing and application decisions.
 - iii) Technical staff and labourers need to be trained in necessary skills, ranging from sales estimation and store-keeping to the more menial tasks of loading and offloading fertilizer without damaging the bags and spilling fertilizer material.
- **Developing IT Infrastructure :** Several members of the fertilizer industry have created their websites and also launching agricultural information portals. However, these have to be further enriched with content, farmer's friendly touch screen technology, etc. There is a need to coordinate such activities, and different websites of the fertilizer industry could provide connectivity to each other and always take advantage of the information provided by a fellow member. Similarly, there is a need to strengthen and expand the delivery system Digitalization is required, and for that, societies should have to develop an APP for all dealers or Farmers. This can be leveraged for business purposes as well promotional services.

B. Suggestions based on Data Analysis:

- **Simultaneous use of bio and chemical fertilizer**

Even though bio-fertilizer is superior to chemical fertilizer in terms of sustainable agriculture, its complete replacement in place of chemical fertilizer is not possible. A modality of the balanced path that involves the combined use of chemical and bio-fertilizer can be evolved. (Young et al. 2003) studied the effects of a combined treatment of multifunctional biofertilizer plus 50% chemical fertilizer on lettuce yield. From their results it is observed that there was a 25% increase of lettuce yield for the treatment of ½ chemical fertilizer plus biofertilizer compared to that of the chemical fertilizer treatment, indicating that at least 50% of chemical fertilizer can be saved as multifunctional biofertilizer was used along with chemical fertilizer. Again employment of multifunctional biofertilizer on rhizosphere microbial activity and the growth of water celery in a field showed that the dry weight of water celery

in the treatment with 50% organic compound fertilizer with multifunctional biofertilizer was increased by 34% compared to the treatment with 100% organic compound fertilizer [Young. et. al, 2004].

- **Role of Government in bio-fertilizer production :**

The Government of India and the various State Governments have been pushing the use of biofertilizers with differing degrees of focus through grants, extension, and sales subsidies (Alam, 2000). Farmers gradually acquire knowledge about technology, basing their perceptions on the agronomic realities of their regions, the knowledge gained from the experiences of other farmers, including themselves, and the information provided by various disseminating agents, and forming their own adoption decisions. (Khan et al., 2011c). The GOI has provided the National Biofertilizers Development Centre at Ghaziabad with six regional centres at Bangalore, Bhubaneswar, Jabalpur, Hisar, Imphal and Nagpur. In the absence of reported information on farm level use of the inputs, this can help in understanding the progress of the usage of biofertilizers and its adoption in India. There has practically been no diffusion of the technology despite the central government's interventions and the distribution among units has tended towards greater concentration especially in Maharashtra and other States of the West and South.

Despite the lack of expected response there still is a strong case for the government to intervene and possibly subsidize in the market. The reasons can be broadly classified into two groups: Social gains or 'First best' reasons if biofertilizers impart certain social and long-term gains for which private individuals may not be willing to pay at least until the gains become 'visible', there is a rationale for spreading the cost over a larger group of beneficiaries or the society at large (Yokell, 1979).

Even if the market is otherwise competitive, the government can act on behalf of society through appropriate policy.

- i) Biofertilizers have significant environmental and long-term ramifications, as they counteract the negative effects of pesticides. At the farm level, improved use of technology can benefit other farms and sectors by reducing water pollution caused by chemical fertilisers and, to a lesser extent, organic manures.
- ii) The benefits of new technology in terms of reversing soil damage may take time to manifest, in contrast to chemical fertilisers, which provide immediate returns.

Simultaneously, the farmer must spend a significant upfront cost in terms

of skill learning, trial and error, and risk. Adoption may be delayed and heavily impacted by neighbours' experiences over time in rural environments, where actors frequently operate with constrained rationality. Empirical evidence from agriculture around the world indicates that new methods take time to spread, and early adopters are frequently conservative about the percentage of acreage allocated to the new technology (Griliches, 1957). The state can play a role in encouraging farmers to adopt more efficient practises.

- iii) The producer firms have serious uncertainty about the demand or saleability of the product, which deters investment, particularly if it is irreversible (Guiso and Parigi, 1999). The success or failures of early entrants who take the initiative or those who indulge in research for an improved product convey important information to others (Stiglitz, 1989) and there by to society. The market however does not always reward the initiative. The capital market is also not always ready to provide risk capital at reasonable rates.

- **Non-competitive Market or 'Second best' Reasons :**

In many cases, the market itself is not competitive and although the first-best solution would be to promote competition, there are other ways of dealing with the situation.

1. Although biofertilizers have been promoted as a supplement or complement of chemical fertilizers, in reality, they are two alternative means of accessing plant nutrients. The strength of complementarity as against substitution between the two inputs is open to empirical verification, but there is no denying that farmers and producers do perceive the substitutability relation to an extent. The pricing of chemical fertilizers is far from marginal cost-based. In particular, urea is under administrative pricing and there are serious economic and political compulsions to continue the protection although the movement in spirit has been towards openness. In such circumstances, the price of biofertilizers along with the risk and responses will be weighed with those of chemical fertilizers, and promotion of the technology for environmental reasons would call for some degree of protection to minimize the inter-fertilizer price distortion.
2. The external or environmental cost of using chemical fertilizers, though not measurable may also be taken into account when comparing with biofertilizers if the later is to be promoted. It is a good practice to promote biofertilizers as an input conjunctive to other forms of fertilizers, but keeping in view the protection given to chemicals, there is some ground for

subsidizing the former to encourage their use. The promotion of bio-fertilizer also needs extensive extension work to convince the farmers about the need for bio-fertilizer use to increase productivity. Seminars on bio-fertilizers and micronutrients are regularly being organized by Govt. of India which are attended by executives of fertilizer industries, agriculture research and extension specialists, academicians, administrators, policymakers and progressive farmers. Marketing bio-fertilizer is a very difficult task as they are not primary inputs like seed and fertilizer. Again, progressive farmers' acceptance of bio-fertilizer use has been far from satisfactory. This is the main reason why effective demand has not been created so far. Even in a few cases there is a demand for biofertilizer but it's limited to few varieties like Rhizobium, Azotobacter, and Phosphorus Solubilizing Microorganism.

However, there is a need to work out a systematic and uniform way to give out subsidies so that they do not distort inter-unit prices and help some units at the cost of others. The States should be strongly guided on this norm. The main purpose of the subsidies would however be to induce farmers to try out the input at affordable and acceptable prices rather than to support certain producers directly. As far as producers are concerned, healthy competition would only help develop a market in the long run and benefit the farmers. Open sales in the market may be encouraged to improve the capability of the units in marketing products. Any attempt to fix a minimum price for the sake of quality or other consideration will only go against the spirit of competition and harm the interests of the industry and the farmers. The present study finds some but not conclusive role of the price factor but scientific studies may be conducted on the farmers' 'willingness to pay for the new input to determine the need and extent of subsidies.

- **Marketing challenges & Options in the biofertilizers business :**

In spite of being cost-effective input, Bio-fertilizers have not been accepted by the farmers completely till now. Some of the reasons/constraints for low acceptance of Bio-fertilizer are narrated below. However, the "Liquid form" has overcome a few limitations and has provided opportunities for Marketers. As an unavoidable component of sustainable agriculture, biofertilizer technology must meet the fundamental requirements for its primary aspects. The technology for biofertilizers must be as follows:

- a. Appropriate: in accordance with the end-users' social and infrastructural circumstances;

- b.** Economically possible and viable: appropriate to all farmers, regardless of their financial situation or position, with regards to return on investment;
- c.** Environmentally friendly: contributing to the enhancement of the environment or, at the very least, not impairing existing agro-ecological conditions;
- d.** Stable: the technology's beneficial aspects must stay stable over time;
- e.** Efficient: method of converting inputs into useful and environmentally friendly outputs;
- f.** Adaptable: capable of being adapted to current local conditions;
- g.** Socially acceptable and sustainable: agreeable to various elements of society and meeting individual requirements;
- h.** Administratively manageable: practicable within the confines of a particular bureaucratic framework;
- i.** Culturally desirable: conforms to society's many cultural trends;
- j.** Renewable: capable of being used and re-used without requiring considerable extra inputs;
- k.** Productive: rate and amount of output per unit of land/input; yield per unit of area (or labour input, or investment) as a sustainable agricultural component.

However, the successful promotion of biofertilizer technology in sustainable agriculture is contingent upon the execution of programmes aimed at increasing knowledge among producers and consumers of biofertilizers. Biofertilizers appear to be a sustainable and farmer-friendly source of low-cost agro-inputs.

Biofertilizers are also gaining popularity due to their potential for use in sustainable agriculture. However, many of the items available on the market today are of poor quality. The formulation of an inoculant is a multistep procedure that results in the inclusion of one or more strains of microorganisms in a suitable carrier, protecting them from harsh storage conditions and ensuring their survival and establishment following introduction into soils. A critical aspect of formulation development and production is product quality control at each level of the manufacturing process.

The final biofertilizer product must have significant quality management effects. These impacts are utilized to determine the biofertilizer's characteristics. The list of important consequences must include those associated with the biofertilizer's guaranteed activities. Thus, a mechanism must exist that distinguishes between resident microorganisms, targeted microorganisms, and the effect of extra components on the biofertilizer's effects.

To assure the quality of biofertilizers, the following quality control restrictions must be considered: legislative, environmental, technological, and lack of awareness. Additionally, regular training sessions must be organized by national/regional organic farming centres. Training modules for laboratory analysts, field level officers, and fertilizer inspectors must be developed and executed as part of the quality control systems that ensure efficient inoculant production and application.

• **Progressive Farmers as tool of Awareness**

Progressive farmers are considered very strategic. They have many advantages, including knowledge and stronger technical skills, because they are direct actors in the field. Progressive farmers are better able to carry out participatory education because they live with farmers, able to organize the community because they are directly involved in many farmer organizations, act as stronger change agents because they have social capital, can be potential business agents and can teach technology and farming skills more precisely because they have technical knowledge from direct experience as farmers in the field (Syahyuti 2014). The other advantage of a progressive farmer agent is the existence of more community beliefs to guide and convey information (Lukuyu. 2012; Samuel. 2012; Kiptot and Steven2015). Such advantages of progressive farmers and the current condition of government agricultural extension agents are limited, thus progressive farmers can be an alternative to complement and strengthen their role as change agents in rural areas.

Progressive farmers have the ability to regenerate farmers in the agricultural field. Progressive farmers can be good examples and motivators for young people to work in agriculture. On the other side, the regeneration of agricultural actors is very important because the data shows that the portion of young farmers is much more lower than older farmers Haryanto (2016) and Anwarudin and Haryanto (2016).

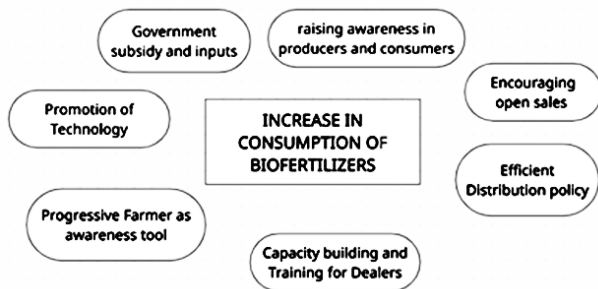


Figure. 4.12. Approaches to increase biofertilizer consumption

Source : Authors compilation based on results of data analysis.

Conclusion :

There is no doubt that bio-fertilizers are the potential tools for sustainable agriculture not only in India but also globally. Biofertilizers are low cost inputs with high benefits in agriculture. There is a need to popularize this low cost technology with the farming community to reap higher dividends. Biofertilizers have a potential role in sustainable agriculture; these can be used along with chemical fertilizers to enhance the soil fertility and crop yield. In India, farmers' specially marginal farmers can get more profit from the same size of land by using biofertilizers instead of application of chemical fertilizers alone. The use of bio-fertilizer in preferences to chemical fertilizer is always welcome taking into consideration the sustainability of agriculture and its eco benefits. It is beneficial also in terms of soil fertility, ecological balance etc. As the use of bio-fertilizer, till so far, is grossly inadequate in India, more emphasis on its production, consumption and also proper distribution need to be taken into consideration. However, most farmers are not aware of it; therefore, to popularize this technology training should be provided to the farmers and this can be done through demonstration trials on the cultivator's fields. In this case, extension workers would play an important role.

Progressive farmers to whom, we paid particular attention in this study. Our main criterion for 'progressiveness' is the Best practices and agricultural performance of the farmer. Wherever the development process becomes more dynamic, a group of progressive farmers appear, who get higher net returns from their holdings than do the mass of farmers because they make a more; rational use, of their production factors and adopt technical innovations more quickly. The case studies referred to in this paper clearly indicate that the mentioned best practices i.e. Soil testing, use of speciality fertilizers, diversified cropping pattern, modern irrigation technology, maintain farm record, social participation, and collective farming followed by farmers are responsible for their progressiveness and they have also suggested other practices which are helpful to the other farmers for their progress. Hence progressive farmers can be role model for other farmers to showcase their best practices technologies, skills and ideas to make farming more profitable.

Moreover, more researches are needed to identify crop and location specific microbial strains with higher efficacy. The government should introduce strict law and policy against the quality of biofertilizers so that farmers can get benefits of this technology. As the business matures under governmental leadership, the following observations are expected: (a) increased sales volumes and distribution across the country; and (b) a greater role for profit-motivated

private enterprise. Due to the fact that farm-level biofertilizer use and profitability of units are not reported to date, one approach to proceed is to monitor the secondary indicators included in (a) and (b) (b). Public involvement, whether monetary or otherwise, is appropriate in order to develop a market for an input that has the potential for social and long-term gains. Any government policy would place a premium on increasing farmer adoption through varietal development, information dissemination, risk covering, and sales subsidies, if scientifically warranted. Acceptance from farmers would go a long way toward supplying advertisements.

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Annexure :

Case Studies :

Best practices of Progressive farmers**Case 1 :**

Mr Rishikesh A. Meher aged 46, resident of Warulwadi village near Narayangoan of Junnar taluka belongs to the Pune district of Maharashtra. This village is mainly located in a highly hilly area and the vicinity of rivers like Pushpawati, Meena and Kukadi respectively. The location of Narayangaon is along the Nasik-Pune national high way. He Educated up to graduation and own 12 acres of land. The soil of the land is calcareous. He is mainly cultivating fruits crops. The sources of water are an open well and a farm pond. He has 20

years of experience in farming. Most of the labour requirement met through family members and hired labour only during the peak period of the crop. He is participating in different social organizations related to agriculture. There is an export group in the village whereas he is a pioneer of the group. He is participating in different types of workshops, seminars and training programmes related to agriculture. He is always connected with KVK, Narayangoan and Agriculture scientist and experts to seeking guidance related to agriculture technology. He is trying to maximum the use of organic fertilizers as much as possible so he has prepared organic manure, FYM, compost at their field only. He always paying attention to reduce the use of chemical fertilizers.

Best practices:

- **Water-soluble fertilizer** : He is always using water-soluble fertilizer because it is less expensive and give a quick result
- **Farm pond and Drip irrigation technology** : He has a farm pond on their field and using drip irrigation technology
- **Soil testing** : He is regularly doing soil testing at KVK to know the requirements of soil
- **Farm record** : He always maintains their farm record to know the Income and expenditure from farming.
- **Social Participation** : He is always participating in workshops, group discussion and seminars arranged by KVK, input companies and agriculture universities and connected with KVK, input dealers and mass media for information on new agri techonlogy.
- **Reduce the use of chemical fertilizer** : He using Water Soluble fertilizers and increase the use of biofertilizers, compost, FYM etc. and reduces the use of Chemical Fertilizers
- **Export Group**: He has formed an export group and Exporting their grapes to European countries

Award : Krishibhushan Krishiratna**Suggestion :**

He has given a very kind suggestion to the other farmers for their progress. crop management is a must increase the output. Farmers should increase the use of water-soluble fertilizers which are easily absorbed and give a quick result. Farmers should maintain their daily farm record. There is a need to create awareness for the use of biofertilizers. The government should provide subsidy for fertilizers group discussion of farmers influence on the progressiveness of

the farmers. Only one demo is not sufficient for creating awareness among the farmers for the new product. Input companies should arrange season-wise as well as different types of demos .i.e. plant protection, nutrition etc. There should be a frequent visitor of field officers at a field plot or farmers field. Input companies should arrange a maximum workshop, seminars and demos, a field trial for new products. There is a need to reduce the supply chain in the case of FPO.

Case 2

Rahul S. Bankar, Aged 43 resident of Warulwadi village near Narayangoan of Junnar taluka belongs to the Pune district of Maharashtra. This village is mainly located in a highly hilly area and the vicinity of rivers like Pushpawati, Meena and Kukadi respectively. The location of Narayangaon is along the Nasik-Pune national high way. He educated up to graduation and own 15 acres of land. The soil of the land is calcareous. He is cultivating fruits crops like grapes, banana and cash crop i.e. Sugarcane. He is using different types of chemical fertilizers as well as Bio-fertilizers. The sources of water are the well and canal. He has 18 years of experience in farming. His wife is the primary teacher. He is participating in different social organizations related to agriculture. He is always connected with KVK, Narayangoan, College of Agriculture Narayangoan and Agriculture scientist to increase awareness regarding new technology. He frequently visited NRC grapes (National Research Centre for Grapes) to know the innovative practices and technology in Grape cultivation. The research advisory committee of ICAR visited his field to see the different varieties of grapes at that time he had 30 varieties of table grapes and out of these, he has recommended 4-5 varieties. Input companies are always working on his farm for the trial of new products as well as chemical fertilizers and biofertilizers and continuously take follow up by visiting 2 times a week. Apart from this, he is doing horse business and for this frequently visited a different state. He is exporting the highest quality of grapes from the Junnar Block.

Best practices :

- **Speciality fertilizer** : He is always using water-soluble fertilizer and biofertilizers because these are required in less quantity and give a better result and always ready to try a new product.
- **Group purchase** : He is always purchasing seeds and fertilizers in the group.
- **Micro-irrigation** : He is using drip irrigation technology at their field which helps to save the water

- **Soil testing** : He is regularly doing soil testing at KVK to know the deficiency of nutrients
- **Farm record** : He is maintaining their farm record to know the profit and loss from the farm business
- **Social Participation** : He is always participating in workshops; group discussion and seminars arranged by KVK, Input companies and Agriculture universities and connected with KVK, input Dealers and Mass Medias for information on new Agri.technology
- **Diversification** : He is doingHorse business as a diversified activity other than farming
- **Export** : He has exported 95 per cent of grapes to China, Srilanka, South East Asian countries

Award : Shivneri Bhushan**Suggestion :**

Farmers should use fertilizers as per the demand of the soil. There is a need to reduce the use of chemical fertilizers and increase biofertilizers, bioagents etc. Farmers should maintain their daily farm record.Farmers should be connected with institutes and companies related to Agriculture for the information of modern technology.Farmers should participate in Group discussion, Seminar; workshop etc. Farmers should use a smartphone to create a group to exchange their ideas. The company should arrange demos for catching the markets and field officers should visit 2 times a weekat the farmer’s field to disseminate modern techniques. Cropsmanagement should be done as per the demand of the market.

Case 3

Balasaheb N. Chaskar, Age: 45 resident of Chaas village near Narayangoan of Junnar taluka belongs to Pune district of Maharashtra. This village is mainly located in a highly hilly area and the vicinity of rivers like Pushpawati, Meena and Kukadi respectively. The location of Narayangaon is along the Nasik-Pune national high way. He Educated up to graduation and own 15 acres of land. The soil of the land is calcareous. He has a diversified cropping pattern. He is cultivating Tomato, Sugarcane, Ginger and different types of vegetables. The sources of water are the river and Canal. He has 10 years of experience in farming. He is using different types of chemical fertilizers as well as Bio-fertilizers especially he is using Gomutra (Cow dung) as an organic fertilizer. He has done mulching on their field. He is doing mixed farming i.e. farming +Dairy. He is participating in different social organizations related to agriculture. He is always connected with KVK,

Agriculture institutes and Agriculture scientist to know the innovative technology in agriculture. He is a member of the farmer group and there are 20 members in that group doing collective farming.

Best practices:

Collective farming : He is doing collective farming with a group of 20 farmers.

Shares of IFFCO : Primary society of Chaas village having IFFCO shares for the purchase of inputs

Diversified cropping pattern : Diversified cropping pattern can increase the fertility of the soil and give continuous income to the farmers

Mixed farming : He is doing Dairy business with farming as a supplementary business helpful to increase farmer's income.

Soil testing : He is regularly doing soil testing to check the requirement of soil.

Technology : He has Drip irrigation technology and done mulching on their field to maintain the soil moisture.

Farm record : He has maintained their farm record to know the profit and loss in the farm business

Social participation : He has participated in many workshops, Seminar and connected with different agriculture group on social media, Agril. Officers, Field officers, Scientist, KVK, Social media etc. for information on new Agricultural technology

Export : He is exporting their Ginger to Gujarat

Award : Shetinishtha**Suggestion:**

- Farmers should follow a diversified cropping pattern
- There is a need to do mixed farming
- Farmers should maintain their daily record
- Farmers should do collective farming and prepare groups on social media to interchange their ideas, knowledge and information
- Input company should arrange maximum demos on farmers field for their new products.
- Field officers play important role in sales of fertilizers so need to arrange meetings, seminar etc.
- Export of farm produce should be done as per market demand.

Case 4

Dr. Netaji Mahadev Patil, MD, Karbharwadi Agro Producer Company Age: 45 resident of village Karbarwadi, Taluka Karvir, Dist: Kolhapur. The village is located It is situated 13km away from Kolhapur, which is both district & sub-district headquarter of Karbharwadi village. SadoliKhalsa is the gram panchayat of Karbharwadi village. The total geographical area of the village is 69.31 hectares. Karbharwadi has a total population of 404 peoples. There are about 71 houses in Karbharwadi village. As per 2019 stats, Karbharwadi villages comes under the Karvir assembly & Kolhapur parliamentary constituency. He is a PhD and working as a professor at Shivaji University, Kolhapur. He owned 1.5 acres of land and cultivating Sugarcane and rice crops. He has 20 years of experience in farming. The main source of the water is a drip irrigation system. There is a common drip irrigation system for the whole village. He shared that 400 houses in the karbarwadi village out of these 131 farmers adopted drip irrigation all the system is fully atomized. There are 65 beds of vermicompost in the whole village. We have reduced ridges and furrow size which help to increase yield. He is using the chemical as well as biofertilizers, especially IFFCO. He is actively participating in workshop and seminar arranged by the input companies, agriculture college and KVK. He is always connected with KVK, Agriculture institutes and Agriculture scientist, Agriculture officers and field officers to know the innovative technology in agriculture He is the leader of Karbarwadi village and promoted to the other farmers for reducing the use of chemical fertilizers and adopting Biofertilizers. In this village 80% of farmers doing organic farming. He is the leader of Karbharwadi village and established Karbharwadi Agro Producer Company. All farmers of the village has marketed theirs produces through this company. He also guides the farmers to do collective farming as well as organic farming which make farming profitable. This village is called as “Model Village of IFFCO”.

Best practices:

Micro-irrigation system : There is one common drip irrigation system for all village. Jain has supported this project.

Vermicompost Bed : He has a vermicompost bed at their farm and there are 65 beds of vermicompost from a 71 family

Collective farming : He is doing collective farming with all farmers of the village.

Biofertilizers : He is using Biofertilizers of IFFCO and trying to make 100% organic farming.

Diversified cropping pattern : Diversified cropping pattern can increase the fertility of the soil and give continuous income to the farmers. He produces vegetables with cash crops.

Mixed farming : He is doing Dairy business with farming as a supplementary business helpful to increase farmer's income.

Farm Record : He has maintained the farm record and arranges a meeting every Independence day for checking the account and farm record of the village.

Soil testing : He is regularly doing soil testing to check the requirement of soil.

Technology : He has Drip irrigation technology and done mulching on their field to maintain the soil moisture.

Social participation : He has participated in many workshops, Seminar and connected with different agriculture group on social media, Agril. Officers, Field officers, Scientist, KVK, Social media etc. for information on new Agricultural technology

Karbarwadi agro Producer Company : He has established karbarwadi agro producer company and marketing their products through this company.

Award : Krushibhshan from Aviskar foundation, Member of Kolhapur Jilha Jal Arakhada committee, Krushibhshan form Agriculture department Kolhapur.

Suggestion:

- Farmers should give preference to the organic farming
- Farmers should follow a diversified cropping pattern
- There is a need to follow micro-irrigation technology
- There is a need to do mixed farming
- Farmers should maintain their daily record
- Farmers should do collective farming and prepare groups on social media to interchange their ideas, knowledge and information
- There is a need to prepare manures at the farmer's field.
- Input company should arrange maximum demos on farmers field for their new products.
- Field officers play important role in sales of fertilizers so need to arrange meetings, seminar etc.
- Export of farm produce should be done as per market demand



Price Stability – A Comparison of Prices of selected Commercial Crops of Kerala with Milk Prices

B. Niranjan Raj Urs¹
Dhanya. V. K²

Abstract

Prices of different agricultural products play a major role in deciding cropping pattern and production of crops. Unless the farmer is not guaranteed remunerative prices, he will not have incentive to produce. Recognizing the importance of ensuring remunerative prices, the practice of declaring minimum support price(MSP) for different crops in advance before the start of the sowing season has been in vogue in India since the introduction of Green Revolution in late 1960's. Real benefit to farmers will accrue only when they actually get the declared assured minimum price and for this to happen active presence of public procurement agencies (PPA) through effective market intervention is necessary. Even though government of India announces MSP for 22 different crops, the benefit of the scheme is not reaped by the farmers uniformly across crops and across regions in the country. Overall, the benefit of MSP is confined to major food crops like wheat and paddy and that too the benefit is confined mostly to farmers in states like Punjab, Haryana, Andhra Pradesh only. The results for other food grains- pulses and oil seeds are rather mixed and success is mainly dependent on the initiative taken by individual state governments.

While intervention by PPA's depends on the political will of governments, farmers' own proactive initiative in developing Institutions including Cooperatives could be the best solution in assuring remunerative prices on a sustainable basis in the long run. AMUL in Gujarat and its clones in different states are classic examples of farmer-owned and farmer-managed cooperatives ensuring fare and remunerative prices to dairy farmers over the past many decades. Further, these dairy cooperatives by creating required backward and forward linkages control the value chain of milk and thereby are in a position to influence the market price through the supply side. The relative stability of milk prices in the country can be attributed to the impact farmer-owned institutions like dairy co-operatives are able to exercise over the market. Lack of such farmer-owned

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institutional arrangement is perhaps the main reason for the price volatility observed in respect of most other crops including commercial crops in the country.

The present work attempts to test the above assumption that farmer-owned and farmer managed institution like a cooperative is the best guarantee against price volatility in the market by comparing the empirical data, spanning 17 years from 2001-02 to 2017-18, on the prices of some select commercial crops with that of milk prices in Kerala. The commercial crops covered include coconut, rubber, coffee, tea, cardamom and cashew nut. While coconut and rubber are under MSP, the prices of remaining four crops are determined solely by market forces. The study conclusively reveal that milk prices have displayed greater stability in comparison with other commercial crops of the state, with both crops enjoying price support and those crops having no such price support. Interestingly, the three tier dairy cooperative structure in Kerala has achieved what they have with their combined procurement accounting for only 11.34% of the total milk production in the state. Based on the above finding, the authors recommend for replication of AMUL Model to other commercial crops of Kerala with necessary modification for ensuring the benefit of stable price support to the farmers.

Keywords : *Farmers, Dairy Cooperatives, minimum support price, Commercial Crops*

1.1 Introduction

Prices of different agricultural products play a major role in deciding cropping pattern and production of crops. Unless the farmer is not guaranteed remunerative prices, he/she will not have incentive to produce. Recognizing the importance of ensuring remunerative prices, the practice of declaring minimum support price (MSP) for different crops in advance before the start of the sowing season has been in vogue in India since the introduction of the Green Revolution in late 1960's. Real benefit to farmers will accrue only when they actually get the declared assured minimum price and for this to happen active presence of public procurement agencies (PPA) through effective market intervention is necessary. Even though the government of India announces MSP for 22 different crops, the benefit of the scheme is not reaped by the farmers uniformly across crops and across regions in the country. Overall, the benefit of MSP is confined to major food crops like wheat and paddy and that too the benefit is confined mostly to farmers in a few states like Punjab, Haryana, Andhra Pradesh etc. The results for other food grains- pulses and oil seeds are rather mixed, and success is mainly dependent on the initiative taken by individual state governments.

While intervention by PPA's depends on the political will of governments, farmers' own proactive initiative in developing Institutions including Cooperatives could be the best solution in assuring remunerative prices on a sustainable basis in the long run. AMUL in Gujarat and its clones in different states are classic examples of farmer-owned and farmer-managed cooperatives ensuring fair and remunerative prices to dairy farmers over the past many decades. Further, these dairy cooperatives, by creating required backward and forward linkages control the value chain of milk and thereby are in a position to influence the market price through the supply side. The relative stability of milk prices in the country can be attributed to the impact farmer-owned institutions like dairy cooperatives are able to exercise over the market. Lack of such farmer-owned institutional arrangement is perhaps the main reason for the price volatility observed in respect of most other crops including commercial crops in the country.

The present work attempts to test the above view that a farmer owned and managed institution like a cooperative is the best guarantee against price volatility in the market by comparing the empirical data on the prices of some select commercial crops with that of milk prices in Kerala.

1.2 Study Objectives

In the light of the chosen task in para1.1.3, the present study proceeds with the following specific objectives.

- a) To collect empirical data for the period 2001-02 to 2017-18 on milk prices and prices of such commercial crops of Kerala like coconut, rubber, coffee, tea, cardamom and cashew nut.
- b) To analyze the data on each of the above said commercial crops for understanding price volatility in both seasonal and secular.
- c) To compare the prices of the said commercial crops with that of milk to draw lessons on long term price stability of agricultural products.

1.3 Methodology

1.3.1 Empirical data for the present work is collected from official sources like Kerala Economic Review (different volumes) published by the State Planning Board, websites of Coconut Board, Rubber Board, Tea Board and Coffee Board. For reasons of convenience, the study period is limited to 17 years from 2001-02 to 2017-18. Statistical tools like index numbers, compounded annual growth rate (CAGR), coefficient of variance (CV) etc, are used for analyzing and comparing the data.

2.1 Price Trends of Some Select Commercial Crops of Kerala

In terms of objective 2 (a) and 2 (b) data on the prices of select commercial crops of Kerala-coconut, rubber, coffee, tea, cardamom and cashew nut is collected and analyzed and results are presented in Table 2.1. An attempt is made in the following paragraphs to draw inferences on price trends of each of the commodities chosen for the study.

Table 2.1 Price trends of some select commercial crops of kerala

YEAR	RUBBER				coconut			coffee				
	PRICES (annil)	MIN&MAX(mnth)	c.v		price (100no)	min&max(mnth)	c.v	price (100no)	min&max(mnth)		c.v	
			2a	2b					2c	3a		3b
2001-2002	3228	2013(N)	4016(M)	21.11	340.64	321(N)	456(O)	10.58	28.54	19(M)	36(Jn)	21.84
2002-2003	3919	2301(A)	4523(AU)	20.64	475.63	352(Jy)	565(Jn)	16.41	28.12	19(M)	36(Jn)	21.84
2003-2004	5040	3221(O)	6232(M)	20.43	582.73	325(O)	589(D)	16.60	32.29	24(S)	39(J)	14.74
2004-2005	5570	3956(N)	6129(M)	14.48	635.00	556(Jn)	698(J)	7.38	53.36	37(Jn)	58(N)	13.52
2005-2006	6699	4562(AU)	6998(D)	13.26	494.89	456(Jn)	535(Jy)	4.79	62.86	45(D)	69(Jn)	14.18
2006-2007	9204	7898(A)	11230(O)	10.82	473.36	437(Jy)	515(J)	5.62	65.34	52(J)	78(My)	13.32
2007-2008	9085	7943(JY)	9757(J)	6.75	485.72	427(O)	558(J)	9.69	67.61	54(M)	74(S)	10.07
2008-2009	10112	9321(F)	14723(O)	14.61	544.25	433(Jn)	584(D)	8.79	53.06	42(Jn)	58(N)	9.61
2009-2010	11498	9789(S)	17822(M)	21.36	463.20	419(O)	500(Jn)	7.50	38.49	32(Jy)	46(S)	12.03
2010-2011	19003	14568(MY)	28956(O)	17.16	874.00	513(Jy)	927(MY)	21.10	49.03	42(Jy)	58(M)	10.97
2011-2012	20805	12321(JY)	28965(D)	27.80	542.00	607(MY)	891(Au)	13.70	45.78	40(O)	51(J)	7.28
2012-2013	17146	15695(F)	19680(A)	7.84	788.00	532(O)	677(F)	9.07	58.64	45(Jy)	68(MY)	11.64
2013-2014	16602	16238(A)	19177(JY)	6.88	1254.00	689(Jy)	1453(MY)	24.66	54.36	52(M)	60(J)	4.69
2014-2015	13257	12327(O)	14546(JU)	7.44	1266.00	1349(Jn)	1472(A)	3.71	41.73	39(S)	41(MY)	1.66
2015-2016	11306	9251(JU)	12895(M)	12.32	1088.00	910(Jn)	1291(Au)	12.80	43.28	41(A)	44(Jn)	2.49
2016-2017	13549	11692(O)	15024(F)	7.55	976.00	902(Jy)	1383(MY)	17.51	59.14	58(O)	62(MY)	2.38
2017-2018	12981	12413(F)	14339(A)	4.38	1428.00	1428(Jy)	2084(F)	11.79	62.10	60(M)	63(Au)	1.45

SOURCE : 1. Data on prices are from respective commodity board websites and of cashew nut from economic review of kerala planning board

2. Analysis is by the researchers

Note : 1. C.V - Coefficient of Variation

2. January(J), June (Ju), July (Jy) 3. March (M), May (My) 4. April (A), August (Au)

Table 2.1 Price trends of some select commercial crops of Kerala

Tea			Cardamom			Cashewnut		
PRICES (A)	MIN&MAX (mnth)	c.v	PRICES (A)	min&max (mnth)	c.v	PRICES (A)	min&max (mnth)	c.v
5a	5b	5c	6a	6b	6c	7a	7b	7c
52.21	48(O)	4.32	622.96	443(O)	20.19	2569.33	1456(A)	15.83
47.21	45(Au)	2.84	561.13	455(S)	19.53	2730.30	2115(Jn)	12.07
45.78	42(S)	9.98	361.03	256(S)	28.70	2831.75	2015(My)	23.06
52.14	42(M)	9.15	298.13	114(M)	12.83	3533.00	2713(Jn)	38.50
54.41	45(J)	8.15	217.42	112(Jy)	15.52	2899.54	2215(Jn)	27.29
68.65	58(Jy)	10.50	312.03	203(D)	33.91	2463.90	1278(Jn)	16.06
66.65	60(A)	5.27	455.28	298(D)	15.54	3000.42	2600(Jy)	24.32
71.08	64(Jy)	6.48	506.44	389(O)	14.22	3665.09	2721(Jn)	19.04
81.03	74(Jy)	4.50	800.09	663(My)	15.91	3871.99	3000(Jn)	10.19
67.69	62(N)	5.44	638.00	534(M)	19.58	6104.00	4533(Jn)	11.96
70.03	67(Jy)	3.36	549.00	312(S)	8.22	5599.00	4780(Jn)	26.41
87.55	78(S)	5.59	612.00	456(O)	25.19	5017.00	3100(Jn)	17.98
99.17	90(O)	3.28	671.00	566(D)	22.80	6425.00	4366(Jn)	13.89
93.35	90(Jn)	2.52	754.00	637(Jy)	18.73	6988.00	5500(Jn)	10.25
81.67	74(Jn)	5.92	618.00	534(M)	13.91	9081.00	6700(Jn)	11.96
114.63	96(S)	8.71	1093.00	841(Au)	18.13	11029.00	7375(Jn)	15.78
121.36	105(S)	6.11	963.00	837(N)	21.92	11779.00	7860(Jn)	8.43

SOURCE : 1. Data on prices are from respective commodity board websites and of cashew nut from economic review of Kerala planning board

2. Analysis is by the researchers

Note : 1. C.V - Coefficient of Variation 2. January(J), June (Ju), July (Jy) 3. March (M), May (My) 4. April (A), August (Au)

Rubber prices in the state have increased fourfold from 3228 per qntl to 12981 per qntl (col. 2a) between 2001-02 and 2017-18 (CAGR 8.40%). The rate of increase in rubber price however is not uniform—prices have increased at a CAGR of 18.99% between 2001-02 and 2006-07 (period I), at 11.11% between 2007-08 to 12-13 (period II) and at (-) 4.80% between 2013-14 and 2017-18 (period III). After steadily increasing, rubber prices reached a peak of Rs 20805 per qntl in 2011-12 but have shown a secular decline thereafter. In fact govt. of Kerala started intervening in the market from 15th October 2014 onwards by offering a support price of Rs 17600 per qntl for RSS 4 rubber and for this purpose appointed Kerala State Rubber Marketing Federation, State Cooperative Marketing Federation and Rubber Producers Societies as the three designated nodal agencies for procuring rubber from the market at the support price¹. A budget provision of Rs 10 crores was made for this purpose. The support price scheme is continued by the succeeding LDF government, which has fixed the support price as 15000 per qntl². However, the market price figures in the above mentioned period III have consistently fallen way short of the declared support price. The support price scheme is rendered somewhat ineffectual as adequate budget provision is not made commensurate with the quantum of rubber production and to further compound the problem, the government does not have sufficient funds to compensate the farmers immediately of the difference between the assured support price and the actual market price. It is observed that the time lag between the date the farmer sells his product to the authorized dealer at the current market price and the actual date on which the differential price (between support price and market price received) is credited by the government to the farmers' bank account could stretch from 5 to 6 months.

As regards seasonal variations in rubber prices, the maximum prices have been recorded in any one of the three months –August /September/ October every year. While no definitive conclusion can be drawn with regard to the minimum prices (col.2b). Overall, seasonal volatility in rubber prices is quite high (column 2c), the average variance being 13.81%. Interestingly, highest seasonal volatility in rubber prices is during period I (avg. variance 16.79%) and incidentally as we have seen earlier this period recorded the highest CAGR in rubber price at 12%. While average variance recorded in period II is a shade lower at 15.92%, minimum average variance is recorded in period III at 7.71% and this period also happens to be the one showing a negative CAGR of 5% in rubber prices.

Coconut prices have increased by nearly 4.2 times from Rs.340 / thousand nuts to Rs.1428 / thousand nuts between 2001-02 to 2017-18, recording a CAGR of 8.67% (col. 3a). However, the CAGR figures are quite uneven, recording growth rate of 5.63% ,8.39% and 2.63% during period I, period II and period III respectively. Thus, there has been a significant secular increase in coconut prices over the years with the upward trend picking momentum from 2006-07 onwards even though the prices are somewhat plateauing in recent years. In fact, the above development is a matter of great joy for coconut farmers of the state for several reasons. For, Kerala no longer enjoys the monopoly position in respect of coconut production it once enjoyed, as states like Tamil Nadu, Karnataka and Andhra Pradesh are catching up and even out-paced Kerala in terms of coconut output³. Secondly, soap and vanaspathi producers and even consumers (in Kerala) have a host of edible oils to choose from like palm oil, sunflower oil etc and need not depend on the use of coconut oil only for cooking. Despite these structural changes in demand and supply of coconut oil market in the country, the fact that coconut prices show a secular increase is a matter of great satisfaction and relief. The one factor that has contributed to this happy situation is the consistent policy of the central government to declare support prices for all oil seeds, coconut included, with a view to encourage oil seeds output in the country and reducing imports. For instance, between 2008 and 2018 the support prices for ball copra and milling copra have been increased respectively from Rs3910/qntl and Rs. 3660/qntl to Rs. 7750/ qntl and Rs. 7500/qntl⁵.

As regards seasonal variations in prices of coconut is concerned, no definitive conclusions can be drawn as to which period of the year the prices will either peak or fall, though tentatively one may conclude that prices will be at its trough generally during the months of June and July (col.3b). An interesting finding is that despite support prices, seasonal price volatility of coconut is quite high as revealed by the high figures of both the range values (col.3b) and C.V (col.3c). The average variance in coconut prices during the study period is 11.86 % and the figures were higher than the average in 7 out of the 17 years covered in the study. The average variance figures in each of the three periods respectively are 10.23 %, 11.64 % and 14.09 %. In other words, these figures only reinforce our conclusion that seasonal variability in coconut prices is significantly high despite the support prices declared by the government. One of the factors for this situation could be that the facility of support price may not be available throughout the year and may be restricted to limited

periods during the year. Such implementation of price support schemes could generally end up favoring traders than the actual farmers⁶.

The price of coffee has more than doubled from Rs 28.54/ kg to 62.14/ kg between 2001-02 and 2017-18, the CAGR being 4.71 %. The rate of growth during each of the three periods are 15 % (in period I), -2.36 % (in period II) and 2.8% (in period III) (cl.5c). The low growth rate in coffee prices could easily be attributed to local climatic conditions, international market situation influenced by demand and supply. Unlike rubber and coconut, there is no price support policy for coffee and other crops that are covered under the present study and the growers of these crops are required to bear the brunt of market forces.

As in the case of coconut, no specific seasonality can be attributed to the highs and lows in coffee prices during a year (col.4b).The average price variance of coffee during the study period is 10.22%, the variance being the highest during period I (16.57%) followed by period II (10.27%) and period III witnessing the least average variance at 2.53 %(cl. 4c).

The price of tea has more than doubled from Rs52.21/ kg to 121.36/ kg between 2001-02 and 2017-18, the CAGR being 5.02 %. The rate of growth during each of the three periods are 4.5 % (in period I), 4.6 % (in period II) and 4.09% (in period III)(col.6a).

The average price variance for the whole period is 6.01 %, the price variance in period: 7.49%, period II: 5.11 % and period III: 5.31% (col.6c).

The prices of cardamom has just increased by 1.5 times from Rs 623/ kg to 963/ kg between 2001-02 to 2017-18, the CAGR being 2.56 % .The rate of growth during each of the three periods are -10.82 % (in period I), 5.04 % (in period II) and 7.4% (in period III) (col.7a).

The average price variance for the whole period is 19.11 %, the price variance in period: 21.78%, period II: 16.44 %, and period III: 19.10% (col.7c).

The prices of cashewnut increased five times from Rs. 2569/qntl to 11779/ qntl between 2001-02 and 2017-18, the CAGR being 9.2 %. The rate of growth during each of the three periods are -0.69 % (in period I), 8.9 % (in period II) and 12.88% (in period III) (col.8a).

The average price variance for the whole period is 17.82 %, the price variance in period: 22.13%, period II: 18.32 % and period III: 12.06% (col.8c).

2.2 Comparison between Milk Value and Values of some selected Major Commercial Crops of Kerala.

After analyzing the price trends of some major commercial crops of the state, those with some price support policy and those which are simply left to the mercy of market forces, we now come to the crux of our basic premise/ belief that the best guarantor for ensuring steady prices of a product is to have an institutional arrangement which is wholly farmer-owned and farmer-managed. We proceed in this section to empirically test the veracity of our belief and the results are presented in table 2.2.

With base year 2001-02 as 100, the growth in index numbers of value of production for the year 2017-18 is the highest in respect of coconut at 400 (col. 3c), followed by rubber 374 (Col.4c), cardamom 338 (col.7c), milk 291 (col.1c), tea 218(col.6c), coffee 216 (col.5c) and cashew nut 178(col.8c).

We are, however, not per se interested in the increase in absolute values of commodities, but are focused on price stability. Here milk value scores over every other commodity. While milk value in a year has declined over milk value of the preceding year in 4 out of the 17 years understudy, the corresponding figures for coconut, rubber, coffee, tea, cardamom and cashew nut are 7,6,7,6,7 and 8 respectively. Further in terms of contraction of value, it is the least in the case of milk -the figures ranging between -2.25% to -11 % (col.2b) - with the average being -7.06%. In comparison, the corresponding figures of other commercial crops are much higher:coconut-4.39% to -30.32% and avg.-15.83% (col.3b), rubber -4.12% to -37.46% and avg. -19.04% (col.4b), coffee -2.32% to -24.86% and avg.-12.62% (col.5b), tea -0.76% to -24.27% and avg.-11.51% (col.6b), cardamom -0.11% to -34.22% and avg.-15.84% (col.7b) and cashew nut -1.34% to -22% and avg. -7.33% (col.8b).

Interestingly, there is not much difference in decline in values between crops having price support and those crops having no such price support.

On a more in depth examination, it is revealed that the years recording fall in milk value (col. 2b) happens to be the years where milk production has fallen (ANNEXURE TABLE Col.8). On the other hand, in respect of both coconut (col.3b) and rubber (col.4b), the two commodities enjoying price support during the years recording fall in their value also happens to be the years where both production (**Annexure Table** coconut (col.2b) & rubber (col.3b) and price (**T 2.1** coconut (3a) & rubber (2a) figures have fallen, pointing to the existence of market distortion in respect of both these commodities.

Interestingly, in respect of coffee, tea and cardamom (an - T col. 4b, 5b & 6b respectively), the commodities having *no price support scheme*, the years recording fall in their value also happens to be the years when their production has witnessed an increase. True to economic theory, prices of these three commodities have fallen (T 2.1 col. 4b, 5b & 6b respectively) in the years following their increased production. On the other hand, cashew nut is a curious case where both figures of production (an-T col.7b) and prices (T 2.1col. 7a) have fallen, and this may be more due to international market situation and import policy.

The discussion in the above paragraphs clearly establishes that milk prices have displayed greater stability in comparison with other commercial crops of the state, with both crops enjoying price support and those crops having no such price support. Thus, we can safely conclude that greater stability in milk value is attributable to the institutional support provided by the three-tier dairy cooperative structure in the state. Interestingly, the Dairy Cooperative Milk Federation with the three Regional Milk Unions have achieved what they have, with their combined procurement accounting for only 11.34% on an average (for the period 2001-02 to 2017-18) of the total milk production in the state. Certainly, the market share of dairy cooperatives in the state would be much higher than 11.34% indicated above, if we take into consideration the following two additional realities -one, if we consider the actual market surplus instead of total production figures of milk and two, the figures of total procurement of milk made by Primary Dairy Cooperative Societies (DCS). In the latter case, primary DCS transfers only around 60-70% of their procurement to the dairies run by Regional Cooperative Milk Producers unions (RCMPU), the balance 30-40 % of milk is sold locally by primary DCS.

3.1 Conclusion

The present study was undertaken based on secondary data. To give perspective, data on area, production and productivity of major crops in Kerala is presented in Annexure table (An-T). More importantly, the study examines the price volatility of major commercial crops of the state like coconut, rubber, tea, coffee, cardamom and cashew nut, and compares the same with the prices of milk, a product which enjoys a robust 3-tier institutional framework wholly owned and managed by dairy farmers. Following are the important findings of the study.

3.1.2 The price trends of major commercial crops were analyzed from 2001-02 to 2017-18 in **Table 2.1** and the results are summarized below.

Summary Of Table 2.1				
Crop	Overall period (2001-02 to 2017-18)	Period I (2001-02 to 2006-07)	Period II (2007-08 to 2012-13)	Period III (2013-14 to 2017-18)
1. rubber-				
a) CAGR%	8.4	18.99	11.11	-4.8
b) CV%	13.81	16.79	15.92	7.71
2. coconut-				
a) CAGR	8.67	5.63	8.39	2.63
b) CV	11.86	10.23	11.64	14.09
3. coffee –				
a) CAGR	4.71	15	-2.36	2.8
b) CV	10.22	19.57	10.27	2.53
4. tea-				
a) CAGR	5.02	4.5	4.6	4.09
b) CV	6.01	7.49	5.11	5.31
5. cardamom-				
a) CAGR	2.56	-10.82	5.04	7.4
b) CV	19.11	21.78	16.44	19.1
6. cashew nut-				
a) CAGR	9.2	-0.69	8.9	12.88
b) CV	17.82	22.13	18.32	12.06

Source :- As shown in Table 2.1

All commercial crops whether enjoying price support from the Government (as in case of rubber & coconut) or not, uniformly display high price volatility even though the figures vary across periods. Without institutional support, price support scheme is found to be less effective; there is time lag of 4 to 5 months in the payment of the difference between the support price and actual market price received by the farmers in case of rubber, and the price support scheme is reported to have benefitted the traders more than farmers in case of coconut. Further, the prices of coconut are influenced by prices of other edible oils, as both producers of soap and consumers have a range of oils to choose from.

Milk values compared with the values of the other commercial crops for the period 2001-02 to 2017-18 and the results analyzed in table 2.2. Milk value shows the least variation (-2.25 to -11) in comparison with every other crop: - coconut (-4.39 to -30.32), rubber (-4.12 to -37.46), coffee (-2.32 to -24.86), tea (-0.76 to -24.27), cardamom (-0.11 to -34.22) and cashew nut (-1.34 to -22). On a closer examination, it is established that in the year's milk value has recorded a fall, happen to be the years when milk production has fallen. On the contrary, in respect of both rubber and coconut, the years recording decline in value have seen decline both in production and prices. Years of increased production in respect of coffee, tea, and cardamom have witnessed fall in their value due to fall in price.

Milk prices have displayed greater stability in comparison with other commercial crops of the state, with both crops enjoying price support and those crops having no such price support. Stability in milk value is attributable mainly to the institutional support provided by the three-tier Dairy Cooperative Structure in the State. Interestingly, the Dairy Cooperative Milk Federation with the three Regional Milk Unions have achieved what they have with their combined procurement accounting for only 11.34% on an average (for the period 2001-02 to 2017-18) of the total milk production in the state.

Based on the above findings, we may safely conclude that farmer-owned and farmer-managed institutional arrangements as in the case of the dairy sector should be replicated for each of the commercial crops. The number of members and area of operation are to be decided based on considerations of kinship, economic viability, future plans of expansion and diversification into value addition activities etc. A blueprint clearly defining the objectives, activities, rules and procedures governing the role of organization at every tier as in the case of AMUL/MILMA may be replicated in farmer institutions to be developed for each crop, albeit with necessary modification considering the nature of activities. Such a farmer-owned and managed arrangement will be a better guarantor for ensuring price stability for commercial crops than any scheme of price support by the government. We hope that policy makers will think of implementing sustainable long term programs proactively rather than taking recourse to ad-hoc, short term and knee-jerk reactive solutions.

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Collective Action Model for Promoting Sustainable Livelihood Interventions: Lessons from Case Studies in Chhattisgarh State, India

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Abstract

The promotion of sustainable livelihood interventions is an integral part of agriculture and rural development. The sustainability of any (development) interventions through the collective action approach primarily depends on the 'sense of belongingness and ownership' by the clientele group. The paper aims to examine the process of collective action in promoting sustainable livelihood interventions for tribal people by analyzing the three case studies from Chhattisgarh State. The study analyses the three case studies viz. "Enroute women empowerment through convergence and group formation in Surgujadistrict", "Creating market linkages for millets produced in tribal regions of Kabirdham district" and "Harihar Bastar Bazaar, Bastar district" of Chhattisgarh State. The author had observed the planning and implementation of the above intervention and collected data collected during 2015 to 2017 from Prime Ministers Rural Development Fellows (PMRDF), who had worked at the district level to improve effectiveness and efficiency of flagship programmes, as part of the Prime Ministers Rural Development Fellowship Scheme (PMRDFs), Ministry of Rural Development, Government of India. As a result, author has modified the collective action model developed by Kruijssen, et al. (2009) in order to understand the collective action process in promoting sustainable livelihood interventions in a given area. The case studies illustrated underscore the importance of first two levels of collective action model – 'conscientization' and 'social capital' in the process of collective action, and how 'social learning', a byproduct of each level, feeds into the goal of achieving a collective action for the sustainability of efforts undertaken. These

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² World Bank 2012 'India: Issues and Priorities for Agriculture' accessible at <http://www.worldbank.org/en/news/feature/2012/05/17/india-agriculture-issues-priorities>

³ India Rural Development Report 2014-15

cases differ in their degree of collective action and its form as cooperatives, self-help groups, and farmer producer companies. Comparative analyses of cases identified that 'the institutionalization of collective efforts' and 'developing forward/ market linkages' contributes to the sustenance of efforts undertaken.

Keywords : *Collective Action; Conscientization; Social Capital; Social Learning; Sustainable Livelihoods.*

1. Introduction

Livelihood promotion is an integral part of the rural development. In developing countries, three out of every four poor live in rural areas, and most of them depend directly or indirectly on agriculture for their livelihood (World Bank 2007). In India, nearly three quarters of the households depend on rural incomes for their sustenance. However, about 70 percent of the India's poor reside in rural areas and 40 percent of the rural poor are agricultural labourers . Thus, though agriculture contributes only 15 percent to the national GDP, it continues to be a fundamental instrument for stimulating livelihood opportunities and poverty alleviation. In 21st century, rapidly expanding domestic and global markets; institutional innovations in markets and finance, and revolutions in biotechnology and information technology offer compelling opportunities that enable agriculture to foster development

Simultaneously, changing economic and regulatory environment, with the advent LPG (Liberalization, Privatization and Globalization) era in developing countries is posing numerous constraints to the small and marginal farm holders. These farmers possess low bargaining power due to low quantity of marketable surplus resulting in an unequal distribution of value among the actors in the market chain (especially with seasonal and perishable agricultural products). Other issues faced by them are constraints in marketing their produce due to limited capital, limited access to physical and financial resources, high transaction costs, inability to create economies of scale and scope, lack of awareness and know-how about value-adding technologies, market imperfections, and poor infrastructure and communication. Further, they possess limited technical skills and lack access to training or requisite information on market.

Additionally, it is frequently asserted that small producers have more difficulty in coping with the increasing prevalence of safety standards in global

food markets (Narrod et al 2009, Reardon et al 1999, World Bank 2005). This has resulted in exclusion of small farmers from high value markets and deterioration of their economic situation. Thus in order to improve their livelihood opportunities will require the environment including strong political will to move forward with reforms that improve the governance of agriculture (World Bank 2007).

Against this backdrop, authors argue that the Collective Action (CA) by the poor particularly farmers would improve their current living standards. CA will enable them to achieve common objectives and to solve their economic and social issues. In doing so, this paper considers three case studies that explore the role of CA in livelihood promotion of the tribal people in Chhattisgarh State in Central India. The case of tribal population is of peculiar importance given that 77 percent of the tribal's in India is small and marginal land holders⁴ and 81.4 percent of them are multi dimensionally poor⁵. Central India is homelands for tribal's, comprising roughly 100 districts and running across the belly of the country, are home to roughly 55 million tribal people.

For millennia, tribal communities have lived in forests and survived on hunting and gathering. About 90 per cent of the tribal's are engaged in rainfed agriculture and most of them are landless labourers practicing shifting cultivation. The tribal's possess uneconomic holdings leading to low crop yield and extremely weak market linkages as they reside in remote areas with minimal connectivity. In addition, lack of access to institutional credit and other facilities available to farmers with land title, inadequate health and education facilities and cultural issues has lead to degeneration of tribal's life. Thus, the dearth of opportunities to enhance livelihood in this region is one of the major cause of tribal's backward status.

The paper evaluates the three case studies under a CA model developed for the purpose. The analysis helps us to understand the fundamental questions associated to CA- How does it emerge? How do we define and measure the willingness and ability of people to work together? What is the extent of CA and the impact of it on improving tribals' livelihood opportunities?

⁴ Agriculture census 2010-11

⁵ OPHI 2010 Country Briefing India

2. Methodology :

The paper aims to examine the process of collective action in promoting sustainable livelihood interventions for tribal people by analyzing the three case studies from Chhattisgarh State. The study analyses the three case studies viz. “*Enroute women empowerment through convergence and group formation in Surguja district*”, “*Creating market linkages for millets produced in tribal regions of Kabirdham district*” and “*Harihar Bastar Bazaar, Bastar district*” of Chhattisgarh State. The author had observed the planning and implementation of the above intervention and collected data collected during 2015 to 2018 from Prime Ministers Rural Development Fellows, who had worked at the district level to improve effectiveness and efficiency of flagship programs, as part of the Prime Ministers Rural Development Fellowship Scheme (PMRDFs)⁶, Ministry of Rural Development, Government of India

A total of 33 Fellows (from the both Batches 2012-15 and 2014-17) were placed in 15 conflict-affected districts of the State. During their period of fellowship and as part of their work, Fellows had undertaken many development initiatives in general and livelihood interventions in particular. For the present research three case studies from three different zones (i.e. north, central and south) of the State was selected purposively, to assess the process of collective action and drawn implications for the collectivisation people for the larger developmental cause.

3. Theoretical Framework :

Collective action approach: A tool to initiate process

A renewed interest in collectivizing small and marginal farmers into different forms of group⁷ especially Farmers Producers Company (FPC) has developed in recent years. However, the foundational work on this notion is by Mancur Olson in his book - *The Logic of Collective Action: Public Goods and the Theory of Groups* (Olson 1965). Kumaran (2002) states that individual approach to poverty alleviation is increasingly replaced

⁶ Prime Ministers Rural Development Fellowship Scheme (September 2011-December 2017) was an initiative of the Ministry of Rural Development, Government of India implemented in 111 conflict affected districts across 18 State, where PMRD Fellows works as a development facilitators to improve the efficiency of flagship programmes.

⁷ Like Cooperatives, Self Help Groups (SHGs), Farmers Interest Groups (FIGs), Commodity Interest Groups (CIGs), association, Federations, and more recent form is the Farmers Producers Company by amendment of the Companies act 1956.

by group approach. The farmers organizations are formal forms of CA. Marshall (1998) defines collective action as ‘the action taken by a group (either directly or on its behalf through an organization) in pursuit of members’ perceived shared interests’. On the other hand, Bandiera et al (2005) defined collective action as the “ability to refrain from individually profitable actions for the sake of the common good”.

Many development practitioners called for ‘Collective Action’ to overcome the constraints of the small and marginal farmers, discussed in the earlier section (Reardon et al 2009). The CA by small and marginal holders in developing countries has been recognized as a tool to correct market imperfections in the agriculture sector. It provides better access to inputs and high value demanding markets, reduces transaction costs, increases bargaining power of the members and provides acquisition of a collective reputation that serves as a guarantee while marketing the product (Markelova et al 2009).

Furthermore it increases farmers’ capacity to undertake joint investments (infrastructure, labelling and certification); provides farmers with information, technical assistance and appropriate inputs; facilitates vertical integration; enables building favorable conditions for the establishment of public-private partnerships; monitoring and evaluation at farming level and likes. (Moustier et al 2010, Narrod et al 2009, Roy and Thorat 2008, Naziri et al 2014). In the context of long-term investments for perennial crops and agro-processing technologies, it also reduces individual farmers’ risk (Di Gregorio et al 2004).

Thus most of the CA literature emphasizes on increasing economies of scale and bargaining power of the group members, lowering of input, transaction and coordination costs , creation of countervailence, easy access to capital markets and improved risk management as the main benefits. However the outcomes of the CA depends on at least three factors: group characteristics; institutional arrangements within the group; and institutional and economic environment (Markelova et al 2009).

However, there is one major challenge while engaging in CA, which is ‘free riding’. Free riding can be referred to as opportunistic behavior that leads self-interested individuals to enjoy the benefits of a collective effort while contributing little or nothing to the effort (Olson 1965). Nonetheless, several

scholars have identified a number of conditions and institutional mechanisms that could limit free riding and facilitate the creation and maintenance of the collective good.

Sustainable Livelihood Frameworks (SLF)

To promote livelihood opportunities, the Sustainable Livelihood Frameworks (SLF) offers a coherent and integrated approach for strategizing livelihoods activities as per the characteristics and requirements of the community. It addresses people's strengths, available resources and their conversion into positive livelihood outcomes in order to address issues of vulnerability, risk, and insecurity. Following the strong advocacy for sustainable livelihoods approaches in development planning since the 1990s (Chambers and Conway 1992 and later Scoones 1998, Carney 1998, Ashley and Carney 1999), many international development agencies like DFID⁸, UNDP, Oxfam and CARE started to advocate livelihood approaches as central to their programs and organizational structures.

Conceptually these SLF helps us to a. Identify people's resources/ assets, sources of livelihood and their coping mechanisms to deal with risk and uncertainty; b. Explore factors that constrain or enhance their livelihoods and its linkages with markets on the one hand, and policies, processes, and institutions in the wider environment, on the other hand; c. Identify appropriate measures that can strengthen assets, enhance people's capabilities and reduce their vulnerability. Thus the sustainable livelihood approaches explicitly recognizes the role of five capitals (human, physical, economic, social and natural) in constructing and improving livelihood opportunities, which are often determined by the state policies, processes and institutions. It is therefore essential to plan a form of CA "*as per people's needs, interest by keeping in view their present status, capability and local demands of the region*".

4. Results and Discussions :

Case Study 1 : Women Empowerment in Surguja⁹

In *Surguja* district, tribal women contribute significantly toward their family income but they possess low income generating resources. Moreover, due to poor levels of education they tend to ignore the basic health issues

⁸ 7See Carney et al (1999) Livelihood approaches compared (Available on: http://www.start.org/Program/advanced_institute3_web/p3_documents_folder/Carney_et.al.pdf)

⁹ Gupta, D. (2017). Enroute Tribal Women Empowerment through Group Formation and Convergence: An Action Research in Surguja District of Chhattisgarh. Unpublished Thesis – M.Sc. in Development Practice, Tata Institute of Social Sciences, Mumbai.

resulting in poor nutritional and health status among the women and children. Status of tribal women of Surguja in terms of skill and access to resources is very poor which leads to low productivity and income.

In 2014, district administration took an initiative to mobilize all 150,000 women of the district, aged 18 to 60, into self-help groups under NRLM (National Rural Livelihood Mission) scheme of Government of India. Through the coordinated effort of district, block, and field-level government staff, facilitated by PMRD Fellow, 12,411 SHGs were formed. Each of these SHGs were linked to credit and financial services, government social safety nets, and new livelihoods opportunities. As a result, these women have greater decision making power in their households, the opportunity to raise the household income through additional livelihood opportunities, and address pressing human development challenges: widespread illiteracy, maternal and child health, poor sanitation and hygiene, and prevalent alcoholism and in their communities.

The characteristic feature of women empowerment especially in tribal region was evident in form of increase in income level, improvement in knowledge and skills and their increased capacity over public resources and assets. It also shows that the SHGs have greater impact on social and economic aspects of beneficiaries.

Case Study 2: Kodo-Kutki Millet: Value Chain Analysis in Kabirdham

Kabirdham district is known for mountainous terrain as its two blocks are flanked by *Maikala* range of Satpuda mountain chain. It is a typical case where the tribal population in remote mountainous regions produces *Kodo-Kutki* millets in large quantity. These crops are cultivated with the help of traditional knowledge and no external input is utilized for this production. However, most of the production is at subsistence level and surplus is sold at meager price to local traders. Considering the lower levels of income generated through these crops, communities are moving away from Kodo and Kutki production to other crops. Today, when the nutritional values of these minor millet is being realized, the demand in the market (especially metropolitan markets) is increasing rapidly. However, the dominance of middlemen over the supply chain of the minor millet obstructed the benefits of the growing demand to trickle-down to the millet growers and thus remained aloof from the higher returns.

Kodo-Kutki millet has more nutritional values with five anti-diabetic compounds and has always been staple food of *Baiga* and *Gond* tribal

communities in a district. The current price is somewhere at level of Rs. 8/- per kg and even if people get Rs. 30/- per kg there would be substantial rise in per capita income in the village. On the other hand, the price of *Kodo*, as per online portal such as Organic depot, is Rs. 180/- per kg. It was a crucial moment, when the huge difference between price at the level of producer and at the end user was realized. It led to a strong feeling that an intervention is needed to ensure better returns to millet producers. Community members were not aware about the 'value' *Kodomillet* possess in urban markets. Hence, PMRDF led-district govt. has initiated a value chain analysis of millets. The process started with sensitizing the people about the true value of their produce in urban markets and drew a line of action to expedite the process.

Focused efforts were undertaken to make community aware about the possible economic gains, in the process several public meetings were organized and all the stake-holders - officers at district level were informed about this idea. As a result, two SHGs were formed and they were also strengthened through capacity building efforts. They were made aware of similar project carried out in Dindori district of Madhya Pradesh.

Case Study 3: Linking collectives directly to market : Harihar Bastar Bazar

Many of the small holders in Bastar districts have been following traditional farming practices and they grow on indigenous varieties. Being located in remote area far from the market, weak institutional support, poor infrastructure and services, poor policies are some of the major challenges of tribal farmers in Bastar district. Further, they lack in market intelligence and depend on money lenders for credit making them prone to abject poverty. The price that they are offered for their product is extremely volatile and has no relationship with the costs involved. Against this backdrop, district administration with the help of tribal farming community came with an idea of promoting collectivization amongst small farmers as a panacea to all their woes and setup marketing platform called "Harihar Bastar Bazaar" under Mahila Kisan Sashaktikaran Pariyojana (MKSP) – NRLM.

Currently, more than 100 products (milk and dairy products, vegetables, varieties of rice (including scented and red rice), pulses, minor millets, processed products (mahualaddu, tamarind candy, tomato ketchup, jaggery) organic fertilizers, pesticides and likes are available at the Harihar Bazaar, which now has 22 producer groups (comprising of four Farmer Producer

Companies, five cooperatives, and 13 women SHGs. Each farmer producers group was been given the charge of supplying a niche product in the market. Thus Harihar Bazaar was established as a supermarket owned and run by tribal producers group and provides all relevant facilities. These members sell their products to Harihar Bazar and in return receive remunerative price for their products.

Case Study Analysis

The cases are diverse, owing to different approaches employed, but their purpose is similar to demonstrate the effect of CA in promoting livelihood opportunities to tribals. Table 1 gives an overview of the case studies and their characteristics.

Table 1 : Overview of the case study characteristics

Case	Enroute women empowerment through convergence and group formation	Creating market linkages for millets produced in tribal regions	Hariharbazar bazaar
Purpose	For women empowerment by linking them with livelihood activities	Promotion of Nutricereals and Value addition	Linking Collectives directly to market
Location	Surguja district, Chhattisgarh	Bairakh, Bodla block and Polami, Pandariya, Kabirdham district, Chhattisgarh	Bastar district, Chhattisgarh
Stakeholders	WDS (Widow, Divorced, & Separated) Tribal Women's and Women's	Kodo-Kutki millet producers	Tribal farmers' and Women's
Partners	District government and its enablingagencies	District government & itsenablingagencies; local NGO; NellaKerai, Chennai formarketing	District government and its enablingagencies
Forms of Collective Action	Self-HelpGroups	Self-Help Groups	Producersgroups: SHGs, FPCs, Cooperatives
Trigger	Community requested assistance and district government	Community requested assistance and district government	Community requested assistance and district government

Year of Action	2014	2014	2015
Size	1,50,000 women	40 community members (2000 quintals of Millet)	3500 community members
Activities	Sensitization and Mobilization; SHGs membership drive; Credit linkages, Linked to livelihood activities Training & capacity building	Sensitization and Mobilization; SHGs formation; Processing of millets; Collective marketing	Sensitization Mobilization; formation; marketing
Functions	Social, Economic	Economic	Economic
Governance	Democratic	Hierarchical	Democratic

Collective Action Model

The CA model has been developed for the purpose of research after analyzing the process of three collective action livelihood interventions. This paper analyses the three cases in terms of the role CA plays in promoting livelihood opportunities within a conceptual framework. Fig. 1 provides a schematic overview of the framework depicting the process leading to CA and discusses plausible outcomes and threats that may result from CA. The process begins with conscientization on the left-hand side of the diagram.

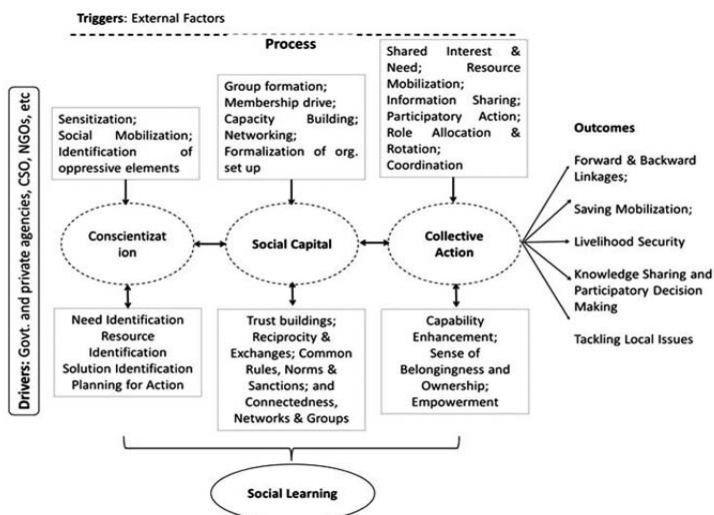


Figure 1. Collective action model to promote sustainable livelihood interventions

(Source : Modified version of Kruijssen, et al. 2009.

The Process of Collective Action for smallholder market participation)

Conscientization : The theory of critical consciousness or conscientization by Paulo Freire (1970 and 2005) talks about how people's critical consciousness enables them to express their social discontent (oppressive elements), think critically about their problems and actively resolve them. Consequently this led to the realization of felt and unfelt needs¹⁰ of people. It necessitates exploration of ground realities by raising people's consciousness. It is the moral awareness which propels individuals to disembrace from their cultural, social, and political environment. It encourages them to take action against the oppressive elements that are illuminated by that understanding (Possardt 2003). Thus the process of conscientization makes people reflect on their realities.

All the case studies has been used this approach of sensitization & mobilisation of people to identify the oppressive element / community issues, keeping in view the sustainable livelihood framework The PMRD Fellows had played crucial role in 'mass awareness' of the people and created '*desire to take participatory action*' to resolve the economic and social issues. They have identified the problems and solutions, shared relevant information, and planned mutually convenient activities to achieve common goals. This process led to develop a "*sense of belongingness and ownership*" towards the development initiatives, which is the primary criterion that determines the effectiveness of any CA and thereby help to ensure the '*institutional sustainability*' of the efforts undertaken.

Social Capital : The next stage is of social capital, a concept often referred in the literature of CA (Coleman 1988, Uphoff 1995, Koelen and Das 2002). Social capital recognizes the fundamental role social relations play in promoting livelihoods and ensuring sustained economic growth. This group approach (for e.g. SHGs) improves the social capital base (Srivastava 2005). In the context of CA, there are many interpretations of social capital, but one useful definition is: "*the shared knowledge, understandings, norms, rules, and expectations about patterns of interactions that groups of individuals bring to a recurrent activity*" (Ostrom 1999). This includes both 'horizontal ties' among a group (referred to as "*bonding social capital*") as well as 'vertical ties' between different groups (referred to as "*bridging social capital*"), also described by Coleman (1988 and 1990) as "*the structure of relations between actors and among actors*" that encourages productive

¹⁰ In psychological point of view, needs classified as felt or conscious and unfelt or unrecognized. The development facilitators need to take intense efforts in identifying unfelt needs and make them aware about it.

activities. Hence, social capital facilitates CA, as the process develops confidence among people to invest in collective activities with the belief that other members will also do so.

Johnson et al (2002) state that where markets fail and transaction costs are high, social capital can contribute significantly to stable performance by providing access to information and reducing the costs of contracting and coordination. Pretty and Ward (2001) documented growth of social capital as evidenced by group activities in wide range of natural resource management and further have identified four aspects to build social capital asset viz. *relations of trust; reciprocity and exchanges; common rules, norms and sanctions; and connectedness, networks and groups.*

In the selected cases, participatory action planning took place at the district level, where people started to build a group¹¹ as per their need and interest to engage in CA. Case study 1 and 2 has used SHGs as a form of CA and in the case study 3, producers group comprising of Cooperatives, SHGs and FPCs formed became the part of 'Harihar Bastar Bazar' initiative. Subsequently, Fellows and district government officials undertook many activities to increase membership of people in this efforts, organized capacity building workshops and meetings at regular interval and finally registered these groups as business entities.

Collective Action : The theory of logic of CA by Mancur Olson (1965) explains the rationale, reason and need for group formation to achieve the purpose/ goal of their togetherness. Most definitions on CA highlight that its success requires involvement of a group of people, common interest within the group and some kind of common action which works in pursuit of their shared interest (Meinzen-Dick 2004).

The literature has shown that CA involves various aspects including development of institutions, resource mobilization, coordination of activities and information sharing (Poteete and Ostrom 2003). The purpose of CA varies as per the level at which, we have to analyse the phenomenon such as institutional level and social unit (individual, group, community and intra- community, etc). Similarly indicators of analysis might differ depending on the specific objective of a CA.

¹¹ The study followed the Tuckman's model (Forming - Setting the stage; Storming - resolving conflict and tension; Norming; and Performing - implementing and sustaining projects), which has been used extensively in development practice and considered as an excellent model for analysing individual and group behaviour.

Field studies and evidence from all across the globe have shown that the ‘tragedy of the commons’¹² is not unavoidable and people can efficiently cooperate and build institutions to govern collective goods (Ostrom 1990). Most of the literature on CA is related to the management of common pool resources. Agrawal (2001) synthesized the works of several authors in an effort to identify enabling factors that would lead to successful outcomes such as group size, social capital, education, organizational factors and institutional arrangements (Naziri et al 2014).

Social Learning : Koelen and Das (2002) emphasize that the basis of exchanges between different stakeholders while engaging in a collective activity is determined by social learning. Albert Bandura (1963 and 1977) posits that “*learning is a cognitive process that takes place in a social context and can occur purely through observation or direct instruction, even in the absence of motor reproduction or direct reinforcement*”. This process entails the shift from ‘multiple cognition’ to ‘collective cognition’ (Koelen and Das 2002). Social learning processes are seen as the ‘engine of collective cognition’ (Jordan et al 2003). To benefit from collective cognition, it is important that convergence on a shared idea occurs only after engaging in a dialogue between divergent viewpoints. The interaction that takes place during CA also feeds back into the social learning process changing the nature of social capital over time vis-à-vis conscientization in order to redefine problems and challenges and to tackle the consequences, if any. Hence, in order to design policies that are effective and sustainable it is important to understand the process of social learning, as this will greatly enhance the sustainability of a CA

In present research, authors argue that the ‘learning’ takes place at all levels viz. at conscientization, building social capital, engaging in CA and even after the process of group formation is completed and the group engages in certain defined CA. At the conscientization level, it has been observed that the group of people (key persons) learns together to identify and define problems, to search for and implement solutions, and to assess the value of a solution for a specific practice. These key persons then further guided the collective action process.

At Social Capital level, it has helped to develop the trust & confidence among group members, define their own sets of rules and regulations.

¹² It is an economic theory of a situation within a shared-resource system where individual users acting independently according to their own self-interest behave contrary to the common good of all users by depleting or spoiling that resource through their collective action. The concept originated by William Forster Lloyd (1833) and popularized by Garrett Hardin in 1968 and 1998.

The momentum generated has developed their capability to deal with an individual and community problems collectively, which further leads to 'Collective Capability'¹³. It has been observed that tribal people has their own limitation and faces to number of constraints (financial, physical, human capital), which has encouraged them to act collectively to strengthen their capabilities. Thus the CA acts as a stimulus for collective capability.

Triggers and Drivers : This process of CA is normally initiated by a 'triggers'. This may be an external factor beyond the control of the individual (in this case tribal people). CA is more likely to emerge where an individual's fail to address his/her issues related to livelihoods and/or other relevant local issues.

In contrast, the 'drivers' facilitates the process of CA and it could be external (for example, government and private agencies, Civil Society Organizations - CSOs, NGOs, etc.), or internal (community leader, progressive farmer, etc.) and takes a principal role. The driver can also play a role in sensitizing and mobilizing local people to identify felt and unfelt needs and create the willingness to work together.

In this case the PMRD Fellows and district government & its enabling agencies played an imperative role to facilitate the entire process of CA with ensuring its institutional and financial stability.

Thus, this collective action process has helped to develop the habit of saving for SHGs members, further helped them to connect with any livelihood activities by strengthening forward and backward linkages, inculcated the need for participatory decision making, culture of information sharing and thereby lead to achieve livelihood security for the beneficiaries. In addition to this, the beauty of these collectivization efforts, as this has contributed significantly in addressing the local issues as well. For instance, in *Surguja* district, SHGs women's had undertaken many initiatives to eradicate '*alcoholism*' from villages, and educational campaign about health & nutrition issues. Since the process is highly dependent on the social (milieu)/ cultural, economic, and political contexts, it usually takes place in a collective setting. Thus, the process of collectivism and its influence in increasing people's consciousness, enhancing social capital, facilitating social learning and building group capabilities, contributes substantially in improving the livelihood opportunities of a community. It thereby also helps in creating a social identity.

¹³ It empowers the group with certain valued beings and doings which an individual alone wouldn't have been to achieve

5. Conclusion:

The above cases show that collective action is a social process, which can be triggered by a range of factors, often prompted by the difficulties in securing their sustainable livelihood source. The drivers in each case played a vital role in facilitating the process of CA, once the demand was raised by the afflicted people. The District level government functionaries and its enabling agencies with the help of local NGOs played a pivotal role in expediting the process. In each case, the PMRD Fellow served as a vital link between the government and the community.

The cases presented illustrate how CA has enabled the expansion of local livelihoods opportunities thereby, improving the well-being of the tribal people. It is clear that '*raising consciousnesses*' of people is fundamental to initiate the CA process. Once people come together and form groups, the process then promotes building off social capital as the basis for the trust and connectedness requisite for sustainable planning and execution. Increased social capital reduces individual risks; stimulates CA to achieve mutually benefitted outcomes. This process served as a catalyst for institutionalizing CA. As illustrated in the cases above wherein SHGs were linked to livelihood activities in *Surguja*, marketing channel was established for value-added *Kodo-Kutkimillets* in *Kabirdham* and marketing platform was created for producers groups in *Bastar*.

Further this CA process helps to acquire, assimilate and internalize the knowledge, behavior and skills from peer farmers starting from need and resource identification to developing a sense of belonging and ownership towards the development efforts undertaken. Finally CA leads to empowerment of the members by enhancing their capabilities and improving their participatory decision making skills.

It requires huge efforts and investment to achieve successful and sustainable collaboration among several individual small and marginal holders. Based on these cases we are unable to conclude whether public or private interventions are more suitable. At times public spending seems necessary to create the necessary conditions for private investment. Private investors are increasingly aware of the potential of smallholder market chains. Public funds should therefore be utilized for the most marginalized farmers who do not have access to private investments. As CA to be sustainable in the long run, requires an enabling environment, including the policy framework. These efforts have bailed the tribal people out of the "deprivation trap"¹⁴.

¹⁴ The concept given by Robert Chambers (1993) in his book - Rural Development: Putting the last first. Deprivation Trap: Powerlessness; Vulnerability; Physical Weakness; Poverty; and Isolation.

Hence CA offers a promising platform for shared experiences, social learning's, participatory decision making, securing livelihood and thus can help to constitute a unique 'social identity'.

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Role of SHG for Women Empowerment in the State of Uttar Pradesh: A Success Route For Rural Areas

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Abstract

In the current scenario the weaker section of the society is out of the reach of formal financial institutions for their need of finance. Therefore, need was felt for some alternative policies, systems, procedures, methods, strategy for an easy access of financial services to poor people, which resulted into the formation of informal financial institution. Women Empowerment is a strategy in which women challenge the existing norms and tradition, to effectively promote their wellbeing. The participation of women in Self-Help Group (SHGs) made a significant impact on their empowerment in both social and economic aspects. This study addresses women empowerment through SHGs in Uttar Pradesh. The growing social awareness across the world has brought the number of issues, to which gender biasness and lack of women empowerment were significant. Women don't have equal status to that of men because of social tribulations i.e. violence against women, illiteracy, poverty, stumpy health position, lack of active involvement and participation in family as well as in society, financial reliance on men, social backwardness (in regards with rules, regulations, customs, traditions of the society) etc. continue to be great concern for which women empowerment is needed. Discernment against women should be reduced by empowering them in every aspects of lifespan. Mahatma Gandhi states that the position of women in the society is an index of its civilization. "Train a man and you train an individual, Train a woman and you build a nation".

Keywords : Women Empowerment, Self-Help Groups (SHGs) & Uttar Pradesh

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1.0 Introduction

India is the second most populated country in the world after China, where 70% of the total population lives in rural areas and most of them are poor. The weaker section of the society is out of the reach of formal financial institutions for their need of finance. Therefore, need was felt for some alternative policies, systems, procedures, methods, strategy for an easy access of financial services to poor people, which resulted into the formation of informal financial institution i.e. “Microfinance”. The growing social awareness across the world has brought the number of issues, to which gender biasness and lack of women empowerment are significant. Women don’t have equal status to that of men because of social tribulations i.e. violence against women, illiteracy, poverty, stumpy health position, lack of active involvement in family as well as in society, financial reliance on men, social backwardness (in regards with rules, regulation, custom, tradition of the society) etc. continue to be great concern for them. Discernment against women should be reduced by empowering them in every aspects of lifespan. Mahatma Gandhi states that the position of women in the society is an index of its civilization. “Train a man and you train an individual, Train a woman and you build a nation”. Empowerment of women includes economic opportunity, property rights, political representation, social equality, personal rights, right to education, active participation in family, decision making and personality development and so on. This could be achieved through “Self Help Groups” which is one of the best strategies of microfinance for the empowerment of women thereby reducing the gender biasness in the society. Poor and marginalized people lack facilities at individual level; thereby they organize themselves into a group for mutual and self- help called Self Help Group or in-short SHGs, which is now a well-known concept. SHGs model dominates microfinance in India. The principle of SHGs based on three words i.e. “by the people, of the people and for the people”. It reveals the real participation of people’s in the process of development at micro level. It’s a small deliberate association of deprived people, preferably from the same socio-economic backgrounds for some common interest and benefits. Generally Self-Help Group consists of 15–20 members either women or men but not the mixed group. In India, more than 90% SHGs are formed by women.

1.1 Review of Literature

Jitendra Ahirrao (2009) has analyzed the role of National Agricultural Bank for Rural Development (NABARD) in working as a catalyst in promoting and linking SHGs to the banking system. He has observed that

majority of the rural women who are associated with the SHG activity positively succeeded to gain them empowered. He has concluded that micro-finance programmes being promoted as a key strategy for addressing both poverty alleviation and women's empowerment. **Pandey, Jatin and Rini Roberts (2011)** and they concluded that the SHG could be effective only when ensuring the proactive involvement of the women with the changes in the social norms. **Ramakrishna, et al (2013)** studied based on secondary data source and considered as the powerful instrument for women empowerment and eradication of poverty. The SHG bank Linkage has made an adventure in the economy by transforming the formal banking services to rural poor and needy people particularly women's group. **Kondal (2014)** SHGs Comprises very poor people who do not have access to formal financial institutions. It enables its members to learn to cooperate and work in a group environment. The study highlighted that there was a positive impact of Self Help Groups on Women empowerment in Andhra Pradesh. SHGs created greater confidence in social and economic self-reliance as a whole. study justifies the greater role played by the SHGs in increasing empowerment of women, by making them financially strong, as well as how it helped them to save money and invest it for further development. It is a tool to remove poverty and improve the women entrepreneurship and financial support for their activities in India.

1.2 Research Methodology

1.2.1 Research Objectives

1. To study the magnitude of relationship between SHGs and women empowerment in the state of Uttar Pradesh, in general and selected districts in particular.
2. To review the degree of relationship between microfinance availability and economic growth of women through SHGs.
3. To study the empowerment of women in decision-making power.
4. To study the enhancement of women in social independency.
5. To offer pragmatic suggestions for the effective functioning of SHGs in the State of Uttar Pradesh for improving the scenario of women empowerment.

Time Period of the study: 2013-2017

Area Coverage: Rural Areas

1.2.3 Coverage of the Study

This research has put a bird's eye view on the implication of SHGs, for women empowerment in the state of Uttar Pradesh. In Uttar Pradesh, there are 18 divisions, 75 districts, 822 blocks, 52,021 panchayats and 1,07,452 villages. For the purpose of my study I have chosen 7 districts i.e. Ballia, Allahabad, Mirzapur, Varanasi, Lucknow, Ghaziabad and Jhansi. Among the 7 districts 4 have been taken from Purvanchal, which is the eastern part of U.P. comprising of Ballia, Allahabad, Mirzapur and Varanasi. Lucknow is the capital of Uttar Pradesh, and the major city of Awadh sub-division. Ghaziabad has been selected from western part of the Uttar Pradesh and Jhansi is in the southern part of the Uttar Pradesh, which lies in Bundelkhand part of the state. Due to limited time framework and resources 1,450 respondents were contacted, but only 1,000 was appropriate in all respects for evaluating the empowerment of women. In this way 450 filled questionnaires were found inaccurate, so these were rejected.

1.2.4 Sources of Data Information

For the purpose of collecting the adequate information both primary as well as secondary data were collected for generating the evidence (data & information) in order to supplement the research for proper analysis of women empowerment in Uttar Pradesh through SHGs.

1.2.5 Research Instrument & Tool

The summated rating scale technique or R C Likert's scale technique is used for collecting the opinion of the respondents, which normally applies to 5 point grading technique i.e. a) strongly agree b) agree c) indifferent d) disagree e) strongly disagree. The technique of Factor Analysis is used for testing the hypotheses for measuring the empowerment of women in Uttar Pradesh through SHGs.

1.3 Statistical Analysis and Interpretation of Data

To effectively evaluate the Empowerment of Women through SHGs, a structured questionnaire consisting 25 statements have been framed. The statements have been judged by the Likert's five point rating scale. The Likert's Scale assists in availing the different opinions of the respondents through numbers ranging between 1 to 5 thereafter all the opinions of the respondents were summed up for calculating the aggregate Women Empowerment Score (WES) for each respondents. The factor analysis is a mathematical approach, which explains the correlation between large set of variables in terms

of small number of underlying factors. The key concept of factor analysis is that, multiple observed variables have similar patterns of responses because they all are associated with latent variable (i.e. not directly measured).

For testing and evaluating the reliability and internal consistency of the researcher's instrument to measure the empowerment of women, mathematical technique of Cronbach's Alpha was used. "Reliability" means how well the test measures what it intends to measure. The alpha coefficient of reliability ranges from 0 to 1, where 0 indicates no correlation between the items in the scale and 1 indicates that there is correlation and covariance between the items in the scale. Generally the acceptable alpha coefficient ranges between 0.7 and 0.8; good alpha coefficient ranges between 0.8 to 0.9 (or higher in many cases leads to excellent) but not less than 0.5, which is unacceptable. The Cronbach's Alpha value is calculated with the help of SPSS, and the value is summarized and given below in the table:

TABLE: 1**Reliability Statistics for Women Empowerment**

Cronbach's Alpha	Number of Items
.701	29

As per the above table, the Cronbach's Alpha value is 0.701 which means the instruments/scale developed (i.e. questions/statements in the questionnaire) by the researcher is reliable and internally consistent for measuring the empowerment of women. The derived alpha value is 0.701 which is more than 0.7 (the instrument is acceptable at this point for its reliability to measure what it intends to measure). So the scale constructed for measuring women empowerment is reliable.

Technique of factor analysis was applied which helps in reducing the large number of inter-related variables into manageable numbers by combining related variables into common factors. Before applying factor analysis technique, the adequacy of the sample for factor model needs to be tested by using Kaiser Meyer Olkin (KMO). KMO is the measure of sampling adequacy, which ranges between 0 and 1. The values near to 1 are better and the value 0.5 is considered as minimum suggested level. The Bartlett's Test of Sphericity is the test for null hypothesis. These two tests will provide the minimum standard for application of factor analysis.

TABLE : 2
KMO AND BARTLETT'S TEST

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.604
Bartlett's Test of	Approx. Chi-Square
SphericityDf	325
	Sig.
	.001

(Calculated)

Normally KMO lies between 0 and 1. If $KMO > 0.5$, the sample is adequate. In this study the value of KMO is 0.604, which indicates that the sample is adequate and factor analysis technique can be applied. As it can be seen from the above table, that the null hypothesis is rejected because calculated value is less than alpha value ($0.001 < 0.05$) at 5% level of significance. The approximate of Chi-square is 3.12153 with 325 degrees of freedom, which is significant at 0.05 level. As per the above test results, factor analysis is considered as an appropriate technique for further analysis of the data.

For further analysis, Principle Component Analysis Method of Extraction and Varimax Method of Kaiser Normalization have been used. The Principle Component Analysis Method of Extraction helps in extracting out the major components/factors out of the 25 original variables through Eigen values ≥ 1 . The Eigen values are the variance of the factors. The Eigen value table has been divided into three sub-sections i.e. Initial Eigen Values, Extracted Sums of Squared Loading and Rotation of Sums of Squared Loading. For the purpose of analysis and interpretation, Extracted Sums of Squared Loading is considered as prominent one. The first factors will always account for high Eigen values due to presence of maximum variance in it; the next factor will have less variance in comparison to the first factor. Only those factors will be considered, which have Eigen value ≥ 1 . In the present research, 8 factors have been allocated through factor analysis that explains total variance of 57.708%. The Rotation of Sums of Squared Loading represents the distribution of variance by using Varimax Method of Kaiser Normalization. This method maximizes the variance of each factors extracted through extraction method.

TABLE: 3
TOTAL VARIANCE EXPLAINED

Com- po- nents	Initial Eigen Values			Extracted Sums of Squared Loadings			Rotation of Sums of Squared Loadings		
	Total	% Variance	% Cumulative	Total	% Variance	% Cumulative	Total	% Variance	% Cumulative
1	3.947	11.498	11.498	3.947	11.498	11.498	3.111	10.489	10.489
2	2.728	9.567	21.065	2.728	9.567	21.065	2.236	9.899	20.388
3	2.101	7.535	28.600	2.101	7.535	28.600	2.159	8.168	28.556
4	1.872	6.457	35.057	1.872	6.457	35.057	1.816	7.251	35.807
5	1.775	6.315	41.372	1.775	6.315	41.372	1.705	6.813	42.620
6	1.690	5.989	47.361	1.690	5.989	47.361	1.616	5.777	48.397
7	1.465	5.559	52.920	1.465	5.559	52.920	1.519	5.389	53.786
8	1.273	4.788	57.708	1.273	4.788	57.708	1.485	3.922	57.708
9	.987	4.535	62.243						
10	.973	4.113	66.356						
11	.930	3.989	70.345						
12	.905	3.685	74.030						
13	.898	3.338	77.368						
14	.874	3.111	80.479						
15	.733	2.859	83.338						
16	.712	2.546	85.884						
17	.695	2.453	88.337						
18	.686	2.212	90.549						
19	.612	2.009	92.558						
20	.570	1.755	94.313						
21	.534	1.749	96.062						
22	.506	1.715	97.777						
23	.495	1.112	98.889						
24	.486	1.313	99.920						
25	.413	0.080	100.000						

Extraction Method : Principal Component Analysis.

(Calculated)

On the basis of Varimax Rotation with Kaiser Normalisation, 8 factors have been extracted out of 25 original variables. Factors consist of only those variables, which have factor loading above 0.5. Varimax Rotation simplifies the process of interpretation because each factor has small number of large loadings and large number of small loadings on factors which are ignored at the time of analysis and interpretation. The rotated factor loadings represent the correlations between the variables and the factor.

TABLE: 4
ROTATED COMPONENT MATRIX^a

	Component							
	1	2	3	4	5	6	7	8
Physical properties like livestock, jewellery, etc.	-.107	-.059	.191	-.148	.239	-.078	.789	.076
Easy approach and access to financial institutions	.989	.266	.405	.132	-.032	.161	.273	-.089
Increase in employment opportunity	.029	.478	.367	.896	.000	-.101	-.063	.145
Enhancement in annual income	.368	.213	.000	.756	.123	.412	-.078	-.111
Savings habit and capital formation	.914	-.089	.154	.341	-.168	.188	-.172	.123
Involvement in managing the budget	.421	.367	.834	-.054	-.145	-.054	-.145	-.054
Active participation in decision-making in society and family	.217	.313	.712	.487	-.054	-.145	.291	-.066
Easy access to market	-.089	.806	.000	-.101	-.063	.368	.213	.000
Improvement in confidence level	-.172	.123	.487	-.054	-.145	.154	.341	.589
Participation in community programmes and events	.000	.749	.456	-.289	.154	.341	-.168	-.450
Increase in tourism activity	.129	.699	.348	.415	.222	-.098	-.432	-.167
Swachh Bharat Abhiyan Enhancement in	-.098	-.191	-.148	.491	.219	.788	.000	.209

girl education	.378	-.178	.244	.000	.865	.213	-.056	.312
Frequency of nutritional diets	.154	.341	-.168	.816	.412	-.078	-.111	.209
Helping and motivating others at the time of need	-.045	-.098	-.178	.244	.000	.409	.217	.734
Self-respect and independency in personal life	-.178	.978	.377	.188	.188	-.172	.123	-.033
Family literacy	.487	-.054	-.145	.291	.719	.487	-.054	-.145
Easy access to credit	.839	.341	-.168	.188	.244	.000	.409	-.178
Freedom from social bounding like pardha system, child marriage , male child, widow marriage etc	.188	-.172	.123	.842	-.289	.154	.341	-.168
Curtailment of money lenders and exploitation	.918	.340	-.089	.154	.341	-.168	.188	-.172
Political activism	.409	.188	.891	-.172	.188	-.289	.154	.341
ATM and Bank Account	-.054	-.145	.333	.400	-.066	.209	.878	-.013
Health Consciousness	-.054	-.145	-.054	.145	-.054	.729	.267	.416
Access to schools, colleges without any hindrance	.134	-.333	.000	-.234	.844	.434	.069	.188
Moveable and immoveable properties	.154	.341	-.168	-.172	.123	.245	.690	.387

Extraction Method : Principal Component Analysis.

Rotation Method : Varimax with Kaiser Normalization.

a Rotation converged in 9 iterations.

(Calculated)

As per the above matrix 8 core factors have been extracted out of the 25 variables. Generally every single variable is highly loaded in one factor and less loaded in others factor in each respective row. To recognize the variables, incorporated in every factor, the variable having highest value in each row will be included in factors to which the variable is having maximum value. The List of the factors that were identified is given below in the table along with the variance in each factors starting from the maximum variance and moving toward the low variance and concluding it with the total variance accrued by all the factors:

TABLE : 5
WOMEN EMPOWERMENT FACTORS

S. No.	Women Empowerment Factors	Variables included in each Factors	Factor Loading	Variance	Cumulative Variance
1	Improvement in Financial Access and Credit	<ul style="list-style-type: none"> • Easy approach and access to financial institutions • Savings habit and capital formation • Easy access to credit • Curtailment of money lenders and exploitation 	.989 .914 .839 .918	10.489	10.489
2	Social Independence	<ul style="list-style-type: none"> • Easy access to market • Participation in community programmes and events • Increase in tourism activity • Self-respect and independency in personal life 	.806 .749 .699 .978	9.899	20.388
3	Political / Participation in Decision-Making	<ul style="list-style-type: none"> • Involvement in managing the budget • Active participation in decision-making in society and family • Political activism 	.834 .712 .891	8.168	28.556
4	Improvement in the Life Style	<ul style="list-style-type: none"> • Increase in employment opportunity • Enhancement in annual income • Frequency of nutritional diets • Freedom from social bounding like pardha system, child marriage, male child, widow marriage etc 	.896 .756 .819 .842	7.251	35.807
5	Improvement in Education	<ul style="list-style-type: none"> • Enhancement in girl education • Family literacy • Access to schools, colleges without any hindrance 	.865 .719 .844	6.813	42.620
6	Improvement in Health/Sanitation Awareness	<ul style="list-style-type: none"> • Swachh Bharat Abhiyan • Health Consciousness 	.788 .729	5.777	48.397
7	Improvement in Assets and Properties	<ul style="list-style-type: none"> • Physical properties like livestock, jewellery, etc. • ATM and Bank Account • Moveable and Immoveable properties 	.789 .878 .690	5.389	53.786
8	Building the Confidence Level	<ul style="list-style-type: none"> • Improvement in confidence level • Helping and motivating others at the time of need 	.589 .734	3.922	57.708

(Calculated)

As per the above table 8 core factors have been extracted after rotation method of Varimax with Kaiser Normalization, which shows the empowerment of women in Uttar Pradesh through SHGs.

1.4 Findings

As the value of KMO is 0.604, which indicates that the sample is adequate and factor analysis technique can be appropriately applied. The null hypothesis (H01: There is no significant impact of SHGs on women empowerment in Uttar Pradesh) is rejected because calculated value is less than alpha value ($0.001 < 0.05$) at 5% level of significance. The approximate of Chi-square is 3.12153 with 325 degrees of freedom, which is significant at 0.05 level of significance.

Eight core factors have been extracted after Rotation Method of Varimax with Kaiser Normalization, which maximizes the variance of each factors extracted through extraction method. In the present research, 8 factors have been allocated through factor analysis that explains total variance of 57.708. The individual variance of each factors are as follows: **Improvement in Financial Access and Credit to Women** this factor amounts to maximum variance of 10.489% (H02: There is no significant improvement in the financial access and credit of women due to SHGs in the state of Uttar Pradesh), **Social Independence** this factor amounts to total variance of 9.899% (H04: There is no significant improvement in social independency of the women in Uttar Pradesh), **Participation in Decision-Making vis-a-vis Political Activities** this factor amounts to total variance of 8.168% (H03: There is no significant improvement in decision-making power of the women in Uttar Pradesh), **Improvement in the Life Style** this factor amounts to total variance of 7.251%, **Improvement in Education** this factor amounts to total variance of 6.813%, **Improvement in Health/Sanitation Awareness** this factor amounts to variance of 5.777%, **Improvement in Assets and Properties** this factor amounts to total variance of 5.389% and **Building Self-Confidence Level** this factor amounts to total variance of 3.922%.

So, there is an empowerment of women to the respective areas as revealed by the 8 factors calculated through factor analysis. However, differences exist among the factors which signify that women are empowering themselves but not with equity to all the factors. This particular fact indicates that there is women empowerment in the state of Uttar Pradesh but the discrimination lies which resulted in the inequitable distribution to the different parameters decided for the study.

• Suggestions For Improvement In SHGs Of Uttar Pradesh

In nut shell, it can be said that the overall performance of SHGs was remarkable, as it is one of the largest micro-financing programme in the world under the guidance and support of NABARD for including the financially excluded marginalized people thereby eradicating the poverty & creating employment opportunities for them. Although, the different parameters under study reveal that women empowerment has been possible in considerable way in Uttar Pradesh but in some other states, there has been better understanding and implementation of SHGs for empowerment of women. So as a researcher, following steps are suggested for the accelerated growth of SHGs for bringing the inclusive empowerment of women working in the state of Uttar Pradesh:

- Self-Employed Women's Association (SEWA) should be promoted to all the districts of U.P. for bringing the overall improvement in the empowerment of women in Uttar Pradesh.
- Grameen Bank Model should be adopted and implemented specially in the Purvanchal (East U.P.) and Bundelkhand, which are the most backward zones of U.P.
- It is suggested to establish various resource centres on the pattern of Andhra Pradesh Mahila Abhivruddhi Society (APMAS) in various parts of our country in general and Uttar Pradesh in particular.
- SHGs women should be actively made aware about the existence of various ICT tools; in the development and empowerment of their livelihood, through short films and documentaries in television.
- The procedures involved in the formation of SHGs and linking it to the bank should be simplified with increase in initial amount of loan for the up gradation and development of marginalized section of the society through expert advice and opinions from technical persons.
- Government along with NGOs and other Organization can do alot by providing effective marketing facilities and techniques with proper infrastructure to the members of SHGs for advertising their products, so as to fetch the good returns for their business.
- Government not only frame policies but make it sure that people are aware about it existence and approachable applicability for deriving the optimum benefit of it.
- Effective training programs need to be conducted and organized from time to time for imparting quality knowledge so as to develop the SHGs members in diverse areas for managing the activities of business effectively.

- Women SHGs need to be given special training for managing professional as well as personal life effectively, so as to reduce the conflicts among women SHGs.
- It is the need of the hour to educate the illiterate members of the SHGs in a minimum time frame, as the uneducated members creates several hurdles in the operation & working of SHGs effectively.

1.6 Conclusion

The position of women is not appropriate in many countries to which India is not an exception. So, SHGs are acting as a bridge between have and have not sections of the society. The pace of SHG movement is not similar in all the countries simultaneously due to lack of adequate programmes and support from Government of different countries. India lacks behind in regards to success and progress of SHGs in comparison to developed countries. Even in India there is disparity in growth of SHGs as Andhra Pradesh, Tamil Naidu, Maharashtra, West Bengal, Karnataka etc. are the states where SHGs are performing immensely good whereas Bihar, Madhya Pradesh, Rajasthan, Uttar Pradesh are the states where SHGs are performing but not up to satisfactory level. SHGs help in creating favourable environment for inspiring and empowering the women in order to make them self-independent. Women in Uttar Pradesh have not been benefitted at a remarkable level through SHGs, but no doubt, there is an improvement in the condition of women after joining the SHGs. There is no confusion at all in regards to acceptance gained by SHGs as an alternative of formal credit delivery system for meeting the credit requirements of marginal people, the poorest of poor part of the society. There are numerous hurdles, coming in the smooth flow of SHG movement in U.P. that is why it comes under the category of BIMARU states of India. If the Government of India and the Government of various states work together in co-ordinated way for removing the shortcomings, coming in the path of SHGs, it can immensely creep the positive impact & progress of SHGs in the nation by regulating and monitoring the work of SHGs in those states where it is lacking behind. Empowerment of women has improved tremendously; still the hope of getting the best results of empowerment is yet to come by unleashing the uncovered area for women empowerment. It is women who manage the family and if every woman in the family is empowered, it will automatically develop the entire nation and the society by generating employment and eradicating the poverty.

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Battling the COVID-19 Agricultural Crisis through Collective Action and Social Entrepreneurship

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Abstract

The study attempts to capture the role of farmers' producer companies (FPCs) before and during COVID-19 in the Maharashtra State, India. The primary data collected from 32 FPCs across 16 districts of the State. Descriptive statistics and the Garrett ranking method were used to analyze the data. The results reveal that aggregation of produce was major business activity before and during COVID, with reorientation in their distribution systems. These enterprises contributed in building local resilience through campaigns about COVID-19, distribution of fruits & vegetables, masks, and sanitizers to marginalized sections of society for free. While the FPCs battled issues like agro produce wastage, piling losses and non-availability of labour, they continued marketing by adhering to COVID-19 protocols. The extension services and peripheral support provided by the state government, and its enabling agencies facilitated a good connection between FPCs and urban consumers. The authors assert that a collective action is a strong form of social entrepreneurship for battling the COVID crisis and revival of agricultural value chains. However, considering the present state of affairs, the FPCs model should be further strengthened with the help of capacity-building activities to build better "organization management systems".

Keywords : *Collective Action, Farmer Producer Company (FPC), Social Enterprise, Agri Value Chain, Aggregation, COVID-19, Supply Chain, Agripreneurship, Extension Services.*

1. Introduction

The agriculture sector, in India, employs 50 per cent of the total work force of the country and contributes 16.5 per cent to Gross Domestic Product (GDP) (Economic Survey, 2019-20) and 12.86 per cent to the national export (DAC&FW, 2018). Given this context, vulnerabilities in the sector have

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a potential footprint on the overall economy in general and on marginal and small farmers (hereafter smallholders) in particular. Agriculture and food system have come into sharp focus as fallout of the COVID-19 pandemics in the most of countries across the globe. The susceptibility of agri value chains to COVID-19 in various parts of the world has been well elaborated (Morton 2020). According to the International Monetary Fund (IMF), the global economy is expected to shrink by over 3 per cent in 2020 and the unprecedented rise in the disease continues to affect all nations at large, economically as well as socially.

The impact of lockdown on Indian Agriculture Sector has been complex and diverse in many ways. In India, farmers have been affected on multiple fronts, especially by the lack of buyers in markets and heavy restrictions on transportation and logistics (Lai, 2020). The farm enterprises witnessed acute shortage of labor, logistics and transportation issues, reverse migration and all-time high export stagnation. Amidst such time the role of community-based enterprises like Farmers Producers Companies (FPCs) is quite vital to the recovery of rural economy. FPCs provide an organisational mechanism by building an enterprise based on collective action that can mobilize farmers' collective interests and seek to improve their economic well-being. These enterprises can give a greater bargaining power to its members by creating better markets for their produce.

Today, agriculture and food system have come into a sharp focus as fallout of the COVID-19 pandemic in most parts of the world. Until May, 2020 the current pandemic has essentially and largely remained an urban outbreak in India. Since there was immense pressure on maintaining adequate food supply, it has put pressure on the system to think and act immediately by addressing the core issues of the agricultural marketing system and undertaking appropriate measures for the time being to cope with the COVID crisis. Farmers who largely live on sustenance find it difficult to bear even a small disruption in cash flow and find themselves in deep debts. The governments' move to alleviate their troubles by putting agriculture under the list of the essential services has not done much to allay their fears during COVID-19.

In response to the COVID-19 pandemic, the Indian government imposed a stringent national lockdown from March 24 – May 31, 2020, announced many relief measures and subsequently imposed lockdown, which caused severe disruptions across agri-food supply chains (Ramakumar, 2020; Rawal and Kumar, 2020). The full nationwide lockdown brought all activities to a complete halt. Even though the restrictions were slowly eased from May 2020 in many States, production and trade has been disrupted due to transportation restrictions and labour shortages, which has made it extremely difficult for many retailers

to secure fresh and processed foods and to conduct business (Narayanan and Saha, 2020).

Collectivization has always been seen as an institutional platform for addressing the agrarian distress, particularly for smallholders and especially during current unprecedented times brought by COVID-19 which is no different. Indeed, the government is also trying to leverage the potential of FPCs for restoring the supply chain, ensuring livelihood security and meeting essential services of consumers. The State of Maharashtra is among the worst affected in terms of COVID-19 and it had wide repercussions for the FPCs as the largest number of such enterprises operates in the State itself. This has forced producers' collectives (farmer producers' groups, cooperatives, farmer organizations, and producers' companies) to look at direct marketing model to reach out to consumers to provide essential services by stretching themselves beyond the conventional value chain paradigms. In many ways, the model has turned out to be a success with farmer groups who could pocket in decent revenue by eliminating the middleman.

Against this backdrop, in the present study, an attempt is made to understand the role of FPCs, especially before the outbreak of COVID-19, during COVID-19 and post COVID-19 training and capacity building requirements for farmer entrepreneurs in the FPC model.

2. Literature Review

The impact of outbreaks and epidemics like COVID 19 is deep and widespread in social and economic spheres and therefore, "Agriculture" is not an exception. Similar outbreaks in the past have reported that panic and quarantines impact economic growth and human welfare (Hanashima and Tomobe, 2012). The severity of outbreak has raised serious question marks on food security and nutrition as supply chains crumble (Burgui, 2020; Torero, 2020). The series of shutdowns have brought global trade to a standstill by spurring local and domestic food substitute system and lesser dependency on global value chains (IFPRI, 2020). Export restrictions have limited the market access and completed broken down the value chains, which has been further exasperated due to closure of ports and restrictions on agriculture freight on commercial flights (Laborde, 2020; Ivanov, 2020).

In India, the agrarian distress was initially very widespread as harvesting could not be completed due to lack of access to inputs, shortage of workers, social distancing, lack of fuel etc. (NABARD, 2020). Although the sector has gained special attention amidst the pandemic, on account of high concerns for food safety and security, its potential role in economic recovery cannot be undermined. Agriculture always leads to broader economic development

and rural development and therefore should find a proper place in policy and strategic planning (FAO, 2017; Hwa, 1988; Timmer, 1992; McArthur et al., 2017). It is asserted that agriculture is a major driver of regional development and contributes to growth by raising gross output in direct and indirect ways (Loizou, et al. 2019). It should be accorded a special status and should be a key policy focus. The present pandemic has only reinforced the idea of strengthening agriculture to ramp up domestic value chains. Despite the widespread repercussions felt in the sector there are many examples to illustrate the important and critical role played by FPCs in combating the crisis situation.

Ramakrishnan (2020) observed that the COVID-19 lockdown brought many opportunities to FPCs, numbering 550 in Tamil Nadu State. FPCs have voluntarily involved themselves in the supply of fruits, vegetables and other essential commodities to consumers amidst the nationwide lockdown. According to official data, over 100 tons of fruits, 447 tons of vegetables and 116 tons of grocery were supplied by 90 FPCs through various marketing channels such as 65 farmers markets, 44 wholesale markets, 125 retail market shops and 45 mobile units. Nikam and Kale (2020) analyzed that many FPCs have showcased immense resilience and continued their operations despite un-harvested farm produce, transportation challenges, COVID protocols and availability of inputs. These definitely are the hallmarks of a striving entrepreneurial system to work out ways through adversities. Yet another study by Ranadive (2018) on *Abhinav Farmer Club* which is a network of 305 farmers spread across 17-18 villages, producing 22-23 vegetables as per market demand, found out that new models of marketing emerged. They have tied up with many malls, housing societies and corporate houses with proper transport facility in the form of '*vegetable vans*' to undertake direct marketing activities during lockdown.

Community models are more suited to alleviate local problems. Such models are innovative, multi sectoral and inclusive as compared to any external initiative (White and Morton, 2005; Gillespe, 2006). These communities exhibit resilience and empathy amidst crisis and there is a great deal of learning to draw upon these local-level responses for further panning and recovery of rural development systems (Gillepse, 2006; Morton, 2020).

3. Methodology and Data Collection

The present study has been conducted using primary data that has been collected from 32 FPCs spread across four regions (*Western Maharashtra, Khandesh, Marathwada, Vidarbha*) and 16 districts in the State of Maharashtra. The researcher has purposively selected the State on account of two reasons.

Firstly, the State has the largest number of registered FPCs and also the region was severely affected by COVID-19 outbreak. The primary data was collected through a detailed telephonic conversation with the entrepreneurs during April to June 2020. The design and administration of the questionnaire followed extensive preliminary qualitative inquiries with FPCs representatives. Due care has been taken to select the districts from all regions of the State, except Konkan region because of the communication and network connectivity issues and minimal presence of FPCs.

For each of the selected district, minimum five FPCs were contacted randomly and as per their availability, the discussion was completed with an average of 2-3 calls. The responses were recorded for the further analysis. Descriptive analysis and Garet ranking method was used for the analysis and interpretation of the results.

Table 1 : Number of FPCs selected across the State

Sl. No.	District	Number of FPCs Contacted	Number of FPCs responses recorded
	Western Maharashtra		
1	Pune	5	5
2	Satara	5	1
3	Solapur	5	3
4	Sangli	5	1
	Khandesh		
5	Ahmednagar	5	2
6	Nashik	5	2
	Marathwada		
7	Jalana	5	2
8	Parbhani	5	2
9	Aurangabad	5	2
10	Latur	5	1
11	Beed	5	3
12	Hingoli	5	2
	Vidarbha		
13	Amravati	5	2
14	Akola	5	2
15	Nagpur	5	1
16	Gondia	5	1
	Total	80	32

Paganini *et al.*, (2020) revealed that in Cape Town, farmer respondents reported selling their products to local communities, 25 per cent more frequently to compensate for the loss of demand from and sales to restaurants and high-end markets due to COVID-19 restrictions. Similarly, urban farmers responded to the temporary cessation of Non-Governmental Organization (NGO) retail markets by establishing neighborhood WhatsApp marketing groups and initiating word-of-mouth advertising for their produce.

Gogoi (2020) reported that tea growers faced serious problem of getting labour for different activities on the farm. Mahapatra (2020) found the importance of smartphones and its applications for farmers in providing information related to crop growth status, weather forecast & advisory, farm advice, market price & post-harvest management, online trading, advertising of their produce during this COVID19 lockdown.

4. Results and Discussion

The authors have made a conscious attempt to discuss the results in terms of 'Before outbreak of COVID-19' (in terms of Business Activities before COVID-19, and Supply-Chain before COVID-19); 'During COVID-19 and resultant Lockdown' (Business Activities undertaken during lockdown; Agencies involved in facilitating provision of essential services during State and Nation-wide lockdown; Working pattern during Lock down; Supply-Chain during COVID-19 and Lockdown; Licensing for Direct Marketing during Lockdown; Challenges faced during COVID-19 and Lockdown); and 'Post-COVID 19' (Training and Capacity Building requirements).

4.1 Before outbreak of COVID-19

Table 2 : Business Activities before COVID-19

Sl. No.	Activities before COVID-19	Frequency (Percentage)
1	Bulk Purchase of inputs and distribution to members and non-members	16 (50.00)
2	Facilitating to get benefits of Central and State governments scheme	13 (40.63)
3	Aggregation of produce for collective marketing	32 (100.00)
4	Value- addition by primary processing	32 (100.00)
5	Value addition by secondary and tertiary processing	12 (37.50)
6	Export of fruits to foreign country	2 (6.25)
7	Supply of veggies and food grains to modern retail centers	11 (34.38)
8	Collection of food grains for NAFED through MAHA-FPC	14 (43.75)
9	Supply of vegetables to hotel	7 (21.88)

(Source : Primary Survey)

Business activities performed by FPC members before COVID-19 are presented in Table 2. It may not be wrong to say that almost all FPC members performed aggregation of produce for collective marketing and value addition by primary processing (grading, sorting, standardization, packaging, labelling, etc.) before COVID 19. This is followed by bulk purchase of inputs and distribution to the members and non-members as well (50%). The collection of food grains for National Agricultural Cooperative Marketing Federation of India Ltd. (NAFED) through Maharashtra State level Farmer Producers Company (MAHA-FPC), as a State Level Producers Company (SLPC) (43.75%) and value addition by secondary and tertiary processing (37.50%) respectively was also an important activity. There were some FPCs i.e. 6.25 per cent have performed activities like export of fruits to foreign country and supply of exotic as well as regular vegetables to hotel and modern retailing centers i.e. 21.88 per cent and 34.38 per cent respectively.

It was observed that FPCs are collecting agro produce and at the farm level members are undertaking the primary processing like grading, sorting, packaging and standardization for fruits and vegetables, whereas for food grains, cleaning and packaging is done at their respective FPCs collection center. It was further observed that, to begin with, most of the FPCs have started the bulk purchase of inputs and few of them have established their own 'input shop', which has significantly reduced the farmers burden and thereby production cost.

Table 3: Supply-Chain for Marketing before COVID-19

Sl. No.	Supply Chain before COVID 19	Frequency (Percentage)
1	Village level (local) market	4 (12.50)
2	Taluka level (weekly) market	6 (18.75)
3	Other State market	3 (9.38)
4	District Market through Agricultural Produce Marketing Committee, APMC	5 (15.63)
5	Direct Marketing to consumers	27 (84.38)
6	Procurement through MAHA-FPC (on behalf of NAFED)	14 (43.75)
7	Manufacturing Companies	6 (18.75)
8	Wholesaler	6 (18.75)
	Total	(100.00)

(Note : Multiple responses were made available for respondents)

(Source : Primary Survey)

Supply chain of different food grains, fruits and vegetables before menace of the COVID-19 are presented in Table 3. Most of the FPC's used to sell their produce directly to consumer (84.38%) because they want to break the traditional supply chain by reducing number of middlemen in order to create new value-chain. They connected directly with consumers, particularly for the fresh fruits and vegetables (as these commodities were out of the purview of local physical agricultural markets (Mandis) since 2016 in the Maharashtra State). About 43.75 per cent FPC's did business transactions through MAHA-FPC for NAFED procurement of pulses and some of the FPCs also have a NAFEDs procurement center. This was followed by selling of their produce to the Taluka level (weekly) market, manufacturing companies and wholesalers, (18.75%). About 15.63 per cent FPCs sell their produce to district market (managed and controlled by local physical markets). Still some FPCs sell their produce to Village level (local) market (12.50%) and very few FPCs (9.38%) are involved in selling their produce out of the State markets. However, it was observed that many FPCs are facing problems in managing and streamlining their forward linkages including financial management of the business transactions.

4.2 During COVID-19 and resultant Lockdown

Table 4 : Activities undertaken by FPCs during COVID-19 and Lockdown

Sl. No.	Activities undertaken by FPCs during COVID-19	Frequency (Percentage)
1	Awareness creation about COVID-19	12 (37.50)
2	Distribution of mask and sanitizer	6 (18.75)
3	Aggregation of produce and direct marketing	20 (62.50)
4	Distribution of fruits and veggies to CORONA warriors	4 (12.50)
5	PM Jan Dhan money and cooking gas distribution	3 (9.38)
6	Distribution of fruits and veggies to marginalized and poor people	12 (37.50)
(Multiple responses were made available for respondents)		
(Source : Primary Survey)		

Activities undertaken by FPCs during COVID-19 are presented in Table 4. Major activities undertaken by FPCs during COVID-19 were the 'Aggregation of produce and direct marketing (62.50%) followed by 'awareness creation about COVID-19' (37.50%) and 'distribution of fruits and vegetables to marginalized and poor people (37.50%)'. Many FPCs not just distributed masks and sanitizers (18.75%) in their respective working

areas but also made a masks with the support from women oriented Self-Help Groups (SHGs). FPCs also distributed the fruits and vegetables to Corona Warriors (12.50%) to combat the ill effects of the virus. Few FPCs (5.2 %) acted as intermediaries by helping the district administration distribute cooking gas and transferring cash benefits under PM Jan Dhan Yojana (9.38%) bank accounts.

Table 5 : Agencies involved in facilitating provision of essential services during State and Nation-wide lockdown

Sl. No.	Name of Agencies	Frequency (Percentage)
1	District Agricultural Officer (DAO)	4 (12.50)
2	Agricultural Technology Management Agency (ATMA)	9 (28.13)
3	Maharashtra State Agricultural Marketing Board (MSAMB)	7 (21.87)
4	Maharashtra Cooperative Development Corporation (MCDC)	1 (3.12)
5	Other FPCs members	4 (12.50)
6	Promoting Institutions/ NGOs	7 (21.88)

(Source : Primary Survey)

The developmental agencies which supported the work of FPCs in direct marketing during COVID-19 are presented in Table 5. The district level agency i.e. Agricultural Technology Management Agency (ATMA) provided information related to direct marketing to the FPCs (28.13%) followed by Maharashtra State Agricultural Marketing Board (MSAMB) and local NGO's/ promoting institutions (21.88%). The District Agricultural Officer (DAO) and other FPCs members both take equal responsibility i.e. 12.50 per cent in spreading the information related to direct marketing.

Table 6: Working pattern during Lock down

Sl. No.	Working Pattern	Frequency (Percentage)
1	Daily	14 (43.75)
2	Weekly	2 (6.25)
3	Alternate day	5 (15.63)
4	Twice a week	3 (9.38)
5	Stop working during lockdown	8 (25.00)

(Source : Primary Survey)

Table 6 highlights the working pattern of FPCs during lockdown. Most of the FPCs preferred working daily (43.75%) even during the lockdown period followed by alternate day working (15.63%) and twice a week working (9.38%). About 25 % of FPCs couldn't work during lockdown because of anxiety and fear of COVID-19 on one side and lack of internal management on the other.

Lack of labor and equipment's availability disrupted harvesting operations and also brought warehouse operations to a virtual standstill. Regulated markets where farmers sell produce were intermittently closed and village traders and merchants did not show up to make purchases. Our survey of 32 FPC representative farmers found that among those who had harvested some produce of Rabi season, 40 per cent were still holding on to it; 10 per cent had sold the harvests at throwaway prices and about 6 per cent reported that they had to let the produce go waste.

Table 7: Supply-Chain during COVID-19 and Lockdown

Sl. No.	Name of Markets	Frequency (Percentage)
1	Village level market	5 (15.63)
2	Taluka level market	5 (15.63)
3	District market (APMC)	3 (9.38)
4	Stop working during lockdown	8 (25.00)
5	Direct marketing to consumers	11 (34.38)
	(a) Consumer societies in Pune	9 (81.81)
	(b) Consumer societies in Mumbai	5 (45.45)
	(c) Consumer societies in Navi Mumbai	6 (54.55)
	(d) Consumer societies in respective districts	8 (72.73)

(Source : Primary Survey)

Markets where FPCs sold their produce during lockdown are presented in Table 7. It was found that during lockdown 34.38 per cent of FPCs sold their produce directly to the consumers particularly the consumer societies in cities like Pune (81.81%), Mumbai (45.45%), Navi Mumbai (54.55%) and consumer societies in their respective cities (72.73%). The findings are in consonance with Ranadive (2018), where he found that many FPCs explored the direct marketing during COVID-19 and suggested that this trend of direct marketing will exist forever, subjected to FPCs adherence to quality and timely delivery.

In addition the table also highlights that 15.63 per cent of FPCs were selling their produce through village level and Taluka level markets followed by 3.17 per cent who went to local physical markets (mandis) as and when it was open. About 25.00 per cent of FPCs stopped their marketing and other company activities due to fear of COVID-19. It has been observed that consumers preferred to purchase fruit and grocery items directly from FPCs over hawkers or other retailing chains during lockdown. The findings are in agreement with Nikam and Kale (2020) and Paganini et al., (2020), where it was shown that during COVID-19 and lockdown, the farmers worked hard to develop a direct supply chain.

During COVID-19 situation, many consumers were afraid to go out and purchase fruits and vegetables. FPCs took advantage of this situation and tried reaching customers directly through online channels by using safe packaging material. With the extension of lockdown, these enterprises tried to find innovative ways to reach consumers, went mostly online to tap consumers and directly sell their fruit and vegetable produce to housing societies. They focused on convenient and customized packaging of fresh produce depending upon the consumer needs by maintaining hygiene factor and using sanitized vehicle for safe delivery of products. These agri ventures also identified all best possible routes for door-to-door delivery and deployed loading autos and handcart vegetable sellers to cover thousands and lakhs of households. They appointed nodal officers to overlook the working of the system, packaging of foods & quality checks. Before COVID-19, the FPCs sold their produce directly to consumers through weekly farmers' market which was held at a local place and which was easily accessible to consumers. However, many new marketing models emerged during and post the lockdown period (Ramakrishnan, 2020).

Table 8 : Licensing for Direct Marketing during Lockdown

Particulars	1	2	3	4
Agencies issued license for direct marketing of Commodities				
Name of	Taluka Agricultural	District Agricultural	Maharashtra State	Online Pass
Agencies	Officer (TAO)	Officer (DAO)	Agricultural Marke- ting Board (MSAMB)	
No.	6	11	7	8
Percentage	18.75	34.38	21.88	25.00
Agencies issued license for Transporting Commodities				
Name of	Regional Transport	Online Pass	Police Commissioner	Transporting
Agencies	Office (RTO)			Company
No.	6	11	5	10
Percentage	18.75	34.38	15.63	31.25

(Source : Primary Survey)

Agencies which issued license for direct marketing and transporting commodities during lockdown are presented in Table 8. Amongst all, the District Agriculture Officer (DAO) issued license for direct marketing to the interested FPCs (34.38%). Some of them also had an online pass (25.00%) through State governments' application, which was found to be very convenient during lockdown. This was followed by Maharashtra State Agricultural Marketing Board (MSAMB) (21.88%) and Taluka Agriculture Officer (TAO) (8.75%) who also issued licenses for direct marketing. Some FPCs approached the RTO (18.75%) and few of them were permitted by police commissioner (15.63%) to facilitate movement of goods by giving proper licenses for movement during and immediately after the lockdown

Table 9 : Challenges faced during COVID-19 and Lockdown

Sl. No.	Challenges	Frequency (Percentage)
1	Getting Transport permission	8 (25.00)
2	Stoppage of vehicles at multiple check points	15 (46.88)
3	Availability of labour on time for harvesting of Rabi crops	14 (43.75)
4	Higher transportation and labour cost	10 (31.25)
5	Commodity prices has gone down	10 (31.25)
6	Wastage of agro-produce due to lack of demand and labour	29 (90.63)

Note : Multiple responses were made available to the respondents
(Source : Primary Survey)

Challenges faced during COVID19 and lockdown is described in Table 9. During harvesting of rabi crops and its marketing, FPC member faced three major issues as the wastage of agro-produce due to disruption in the supply chain (90.63%), lack of availability of labour for harvesting, loading/unloading and for primary processing, un-availability of inputs for processing of commodities and irregularities in consumer behaviour. , The vehicles transporting agro produce were stopped at multiple checkpoints (46.88%) and about 25.00 per cent farmers could not get transport permission. In addition to this, most of the FPCs faced problem in harvesting and transportation of produce because of non-availability of labour on time for harvesting of Rabi crops (43.75%) and higher transportation and labour cost (31.25%). Many FPCs (31.25%) also highlighted that commodity prices have gone down.

It was also observed that there is difference between the consumers and producers' prices. The overall decline in demand, especially in cities due to closure of hotels, restaurants, and catering services and in part because of the large exodus of migrants—has flowed upstream, leading to a substantial fall in producer prices. At the same time, consumer food prices have risen, because of disruption in the supply chain, limited availability of labour and higher transport costs. This gap between wholesale and retail prices increased sharply during the first phase of the lockdown (March and April 2020) and remains wide.

It has derailed harvest preparation due to lack of agricultural labour and disruption in the transportation of produce. Moreover, farmers who have just harvested crops or about to harvest (especially perishable crops) are most vulnerable due to supply chain disruption. Farmers had to discard tonnes of produce and many left several quintals of crop and fruit to rot.

Table 10: Functional Challenges faced by FPCs

Sl. No.	Challenges	Mean Score	Rank
1	Getting bank credit	57.54	I
2	Financial management and record keeping	55.30	II
3	Lack of farm-gate infrastructure at FPC's level	55.07	III
4	Difficulty in performing online tasks	53.26	IV
5	Participation of members in business activities	51.79	V
6	Increasing membership base	50.65	VI

(Source : Primary Survey)

Functional challenges faced by FPCs are presented in Table 10. The member farmers either have bad credit or existing debt or do not have anything to mortgage due to which majority of FPCs reported that getting bank credit was very difficult. In addition to this, they stated that in general bank officials are reluctant to finance FPCs and in fact most of them reported that the Bank officials were not aware of this concept and its functioning. Further, FPCs also reported the lack of availability of infrastructure (mean score 55.07) to prevent the wastage of agro produce. Almost all respondents stated that '*Development of Agri-Logistics*', is a need of primary processing to create facilities closer to the farm gates to develop the value-chains.

The FPCs are also facing difficulty in record-keeping and documentation of activities (mean score 55.30) which also includes regulatory and statutory compliances. This was followed by difficulty in performing online tasks (53.26 per cent) i.e. online trading, payments and advertisement of products and services, etc. The active participation of members in business activities (mean score 51.79) and increasing membership base (mean score 50.65 per cent) was also a key concern for these enterprises.

It is proposed by the authors that the approach used in forming and promoting such enterprises can create a big difference in the sustainability of the Company. In most of the cases, the FPCs were formed on target driven mode through policy push programmes. The potential of these enterprising models remains unrealized as it needs strong collective action, sense of belongingness with the enterprise, good governance practices and more stable management systems. It was also observed that while most of these enterprises had intricate understanding of local and regional context and could immediately respond to the crisis, they lacked clarity on governance and management. The authors recommend that there is a strong need to evolve a departmental structure whereby *each member farmer may be entrusted with different responsibilities like production, procurement, marketing, advertising & digital marketing, processing and so on. Headed and guided by Board of Directors, this would build necessary responsiveness in decision making and inculcating a sense of belongingness and ownership among member farmers.*

The FPCs representatives have also suggested that ‘*direct finance to FPCs*’ is need of the hour, especially working capital loan. As of now, many financial institutions are hesitant to give credit to these ventures which may limit their pace of work and innovation. Although loan processing by NBFCs is fast, interest rates are typically high as compared to the commercial banking system. So there is a greater need to support the movement by sensitizing external stakeholders like banks and financial institutions as their role is equally important in addressing the present crisis. Further, it is also suggested that these social enterprises can be considered as Micro, Small and Medium Enterprises (MSMEs) by inclusion of FPCs in the definition of MSME. This can additionally open up new avenues for farmer entrepreneurs for raising capital to carry out business operations.

Table 11: Training and Capacity Building of FPCs Post COVID-19

Training Programme Attended						
Sl. No.	1	2	3	4	5	6
Topics	Not attended	FPCs Organization and Management	Export-Import & Marketing of Commodities	Procurement and Processing of Commodities	Sericulture	Hi-tech Floriculture
Frequency Percentage	8 25.00	18 56.25	2 6.25	2 6.25	1 3.13	1 3.13
Training Institutions						

Name of the Institute	Not Attended	NGOs	State Agricultural Universities (SAU's)	ATMA	National Agricultural Bank for Rural Development (NABARD)	National Institutes
Frequency	8	3	3	10	3	5
Percentage	25.00	9.38	9.38	31.25	9.38	15.63
Requirement of Training and Capacity Building						
Topics of Training	Online Trading	FPC Organization and Management	Export-Import and with Traceability	Post-harvest Management	Advertising & Digital Marketing of Commodities	Processing of Commodities
Frequency	5	9	4	4	7	3
Percentage	15.63	28.13	12.50	12.50	21.88	9.38

(Source: Primary Survey)

Post COVID-19, the training and capacity building requirements of FPCs are presented in Table 11. Over the period of time various capacity building initiatives were undertaken by Institutions such as ATMA (31.25%), NGOs (9.38%), State Agricultural Universities (SAU's) (9.38%), National Agricultural Bank for Rural Development (NABARD) (9.38%) and national institutes (15.63%) for member farmers of FPCs. ATMA does not only provide training but also helps with direct marketing and establishment of NGOs at the district level. These institutions have organized programmes mainly on the 'FPC organization & management' (56.25%), Export-import & marketing of commodities (6.25%), Procurement & processing of commodities (6.25%), Sericulture (3.13%) and Hi-tech Floriculture (3.13%).

Table 11 also indicates that these FPCs are still in need of the 'FPC organization & management (28.13%) training programme, particularly on how to run and manage day-to-day business affairs of the company followed by the 'advertising and digital marketing of commodities' (21.88%), online trading (15.63%), Export-import with traceability of products & services (12.50%), Post-harvest management of commodities (12.50%), and Processing of commodities (9.38%).

However, the field level observations on modus operandi of such initiatives, pointed that such activities were executed with strong handholding support by promoting institutions. Operating such businesses in these times require high level of responsiveness which are usually being achieved by bypassing various processes that were set to strengthen FPCs governance capabilities. Board of Director's meetings and their involvement are usually lacking in most of these

activities and thereby weakening of the institution and ownership of the community over their FPCs. There is need to promote design principles which can strengthen governance framework of FPCs while providing necessary responsiveness in the business activities as well.

5. Conclusion

The COVID-19 pandemic has disrupted the existing supply chain in agriculture and food system in many developing countries including India. The outbreak has generated extreme vulnerabilities for rural communities, especially in agriculture and farming space. In the initial phases, India imposed a three-week long lockdown starting from March 25th, 2020, which affected almost every activity of agriculture and created huge socio-economic impacts on Farmers' Producer Companies (FPCs), which is an emergent form of social enterprise, restive on the principles of collective action, ownership and belongingness. Amidst a paradigm shift from agriculture to agribusiness, India has been promoting the FPC model of agripreneurship in a mission mode to relieve farm distress. The emergent role of these community owned enterprises has assumed greater importance in the widespread COVID – 19 crisis. Further this can also be transformed into a great opportunity for Indian farmers, particularly the social enterprises like farmers' producer companies, agri-tech startups, and budding entrepreneurs. The innovative model of FPCs has showcased how social capital blends with appropriate and innovative technology to solve problems across the value chain ranging from production to harvesting to procurement, processing and distributing to ultimate consumers. During COVID-19 and resultant lockdown, the existing marketing system and/or supply chain of agri and allied commodities were dismantled by some inefficiencies such as poor access to marketing channels, inadequate transportation, improper storage, handling and processing, post-harvest losses and information asymmetry.

The FPCs are evolving with time and have a great potential to bring back the rural economy on track. Before COVID-19 they were involved mainly in input business followed by aggregation of produce and collective marketing. However, during COVID-19, they played very crucial role with the support of State level administration, local administration, enabling agencies and promoting institutions. In the process FPCs realized the importance of direct marketing, thereby viewing the farmer as an entrepreneur and not merely a producer. It has also brought about a change in the mindset of consumers as they are better aware about local ventures like FPCs who could serve their needs. The FPC model has a great potential in fostering agripreneurship in the rural space and strengthening domestic agri value chains by reducing dependency on imports.

Amidst these unprecedented times, strong entrepreneurial approach is required to restore back economic activity in agriculture. The government has already created a good ecosystem of social enterprises by encouraging agripreneurship through FPCs. This should be harnessed in order to spur up local food chains and reduce dependency on global food supplies. There is a far greater opportunity to evolve a series of process innovation by connecting directly with consumers and clearing the middle men. The resilience showcased by FPCs as strong social enterprises is a testimony to the fact that agripreneurship is a powerful model for battling the COVID 19 socio-economic crisis. However, it is crucial to explore what skills FPCs have in dealing with a crisis like this, and how can they build resilience to tackle the outbreak effectively.

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- ⁱ FPCs is one of the forms of producers collectives formed by primary producers, voluntarily coming together to enhance and expand their livelihood opportunities. This form of collectives gets registered under the Indian Companies Act 1956 as amended in 2002 and 2013.
- ⁱⁱ NAFED - National Agricultural Cooperative Marketing Federation of India was set up in 1958 “with the object to promote Co-operative marketing of Agricultural Produce to benefit the farmers. Agricultural farmers are the main members of Nafed, who have the authority to say in the form of members of the General Body in the working of Nafed.” Retrieved from <http://www.nafed-india.com/>
- ⁱⁱⁱ MAHA-FPC is a state Level Producer Company (SLPC) which is federation of farmer producer companies registered under the Company Act 1956, and was established in the year 2014 in the state of Maharashtra. “It is only multi-

commodity growers, for profit making association registered under the Company Act. The MAHA-FPC is working directly with Farmer producer companies to help mitigate the difficulty of farmers through Institutional Development services, capacity building services, system and process integration, technical training dissemination, financial intermediation, Market linkage development, policy advocacy and facilitating social security and economic development.”

- iv ATMA is a society of key stakeholders involved in agricultural activities for sustainable agricultural development in a district.
- v The Maharashtra State Agricultural Marketing Board (MSAMB), was established in Pune in the year 1984 under section 39A of Maharashtra Agricultural Produce Marketing (Development & Regulation) Act, 1963. “MSAMB has done pioneering work in the field of Agricultural Marketing in the State and achieved success in various areas. MSAMB is having an important role in developing and coordinating agricultural marketing system in the State of Maharashtra”. Retrieved from <https://www.msambp.com/>
- vi Maharashtra Cooperative Development Corporation Limited was “incorporated under Companies Act, 1956 by the State Government in year 2000. It is registered and head quartered in Pune and incorporated as NBFC under the loan company class category.” Retrieved from <http://www.mahamcdc.com/index.html>



An Exploratory Study of Women Collectives in Maharashtra

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Abstract

Women co-operative societies are the unique co-operatives which are established for targeting specific goals. Nearly 62% of the people in India are living in rural areas and the movements like co-operatives are very less concentrated in these areas. The women in rural areas have been most disadvantaged because of male dominated society. They have all the potential but lack the support and a movement of their own. The women co-operative societies are promising strategies to empower women in all the spheres of life. The role of women in co-operative is not apparent that of men. But there is a robust need to include all of them in the ambience of co-operatives.

The present study aims to analyze the status of Women Centric Organizations (NGOs, SHGs, and Women Cooperatives etc.) with reference to their growth and sustainability. The study also attempted to know the various issues and challenges faced by Women Centric Organizations (WCOs). The success of many cooperatives in India is directly or indirectly supported by the suitable marketing efforts extended by cooperative marketing societies. The study suggested a suitable marketing and expansion strategies for women-oriented enterprises, while documenting their best practices which may be adopted by other WCOs in the region. The study showed that Women Collectives selected for the study have done considerable work towards women empowerment and development of women entrepreneurship. While Mann Deshi group and Lijjat Griha Udyog are cooperative based model, MAVIM is supported by the Government of Maharashtra. All the three interventions were completely women centric. It was led by the women and for the women. This has led to enhancement of their confidence and attaining better social status in their families and households and led a dignified life.

Keywords : *Women co-operative, Women Centric Organizations, empowerment, self-empowerment, leadership*

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Introduction :

Cooperatives are democratic, self-supporting and voluntary community based legal entities. The cooperative movement in with an extensive network and reach has emerged as an indispensable sector of Indian economy. Co-operatives are expected to realize social, economic and political objectives ranging from self-help and grass root participation to production, distribution and social control over resource allocation and mobilization. A large number of cooperatives cover segment like: agriculture, consumer, housing, thrift and credit, transport banking, fisheries, workers, industrial and general services. Again, almost half of the cooperatives operate in the agricultural sector and a large number of them are production and its distribution through consumer cooperatives. Self Help Groups are also a powerful form of women collective that work on principles of mutual help and reap socio economic benefits for a group, region of village.

These collectives phenomenal role in uniting people and marching them towards the realm of development. It has also been found that through cooperatives in urban and rural areas, women have been empowered by the correct support with the right support system; they too have shown that they can lead and contribute positively to the well – being of the society. Women’s empowerment through cooperatives shows the collective well-being of the women. Women collectives have achieved a significant status in India, However, much more needs to be done to spur rigorous innovations in both the public and private sector to increase women’s economic engagement.

Women co-operative societies are the unique co-operatives which are established for targeting specific goals. Nearly 62% of the people in India are living in rural areas and the movements like co-operatives are very less concentrated in these areas. The women in rural areas have been most disadvantaged because of male dominated society. They have all the potential but lack the support and a movement of their own. The women co-operative societies are promising strategies to empower women in all the spheres of life. The role of women in co-operative is not apparent that of men. But there is a robust need to include all of them in the ambience of co-operatives. Today there are many women cooperatives being formed to deal particularly with women’s needs. Majority of the cooperatives are registered under cooperative society’s act 1959. These societies not only deal with accepting and depositing the money from the members but focus much on self-employment development, creating awareness programmes on dowry, family planning etc. These societies also thrusts in encouraging women to save money regularly and form SHGs and

include them as members (Awotide,2012). The key statistics of the Indian Cooperative Movement are presented in Table 2.

Table 1.1: Indian Cooperative Movement at a Glance

Total Number of Cooperatives	8,54,355
Of Total, Defunct/ Dormant	52,440
Total Membership of Cooperatives	290.06 million
Credit Cooperative (All Types)	206.16 million
Non-Credit Cooperatives (All Types)	83.921 million
State Level Cooperative Federations	390
District Level Cooperative Federations	2,705
Multi State Cooperative Societies	1,435
State Level Cooperative Federations	390
Primary Agricultural Credit Societies (PACS)	97,961

Source: NCUI (2018)

Women Cooperatives :

Women have never been completely left out of the socio-economic life of India. They did play a distinctive role in the traditional Indian economy. Though the traditional upper class norm was to exclude women from labour outside the family; a large number of women from the middle and lower classes either worked on their family land or worked as land labourers on other people's farms. Women of the poor class, the scheduled classes, and the scheduled tribes were also involved in crafts like traditional embroidery (Padmini, 2003). In fact, in the old economic system the whole family was involved as a unit. Women sewed and transplanted, while men ploughed and irrigated the fields. Harvesting was a combined operation. The crafts were supplementary jobs to agriculture, and men, women and even children participated as time and resources permitted. With the advent of the Cooperative Movement, small industrial units—such as the weavers, tanners, cobblers, milkman—came together and formed their Cooperatives. Women had no special industry in their hands. They were only working in the family industry as unskilled or semi-skilled labourers, and they found no way open to enter the Cooperative field. However, some social or political activists were conscious of the needs of the new age. They started Women's Cooperative Societies and then only common women in search of jobs could find an entry in the Cooperative

Society. Women found it necessary to form Consumer's Societies as prices of essential commodities were rising speedily and the problem of adulteration had become a serious social danger. With the formation of Women's Industrial Cooperatives, Women's Cooperative Banks and Women's Multi-Purpose Societies also began to be formed.

The services of the co-operative institutions improve the socioeconomic condition of the member and strengthen the economy of the country, The co-operative movement plays a vital role in all walks of life of the society in general and women in particular institution like co-operative credit societies, housing, consumer, weaver, fishermen, marketing, dairy, industrial, and the like to fulfil the need of the people and have integrated with their day to day life. Many evolution studies have found that women can lead a co-operative institution more successfully compared to men, which in turn helps improve the socio economic conditions of the women members.

The co-operatives provide varied opportunities for women members. No doubt, their standard of living is improved by the income they earn and their quality of life is enhanced due to social awareness, entrepreneurship, development of skill, increased participation in the affairs of the society, leading to better understanding the skill, effective participation in management and reducing unemployment. Despite these, there exists the discrimination against women in the Indian society. Today, women co-operative guild has been established in many leading countries of the world and an international women's co-operatives guild has been formed. While addressing the international co-operative congress, held at Prague in 1948 the president stated that it was the women with the basket, who would decide the necessary time to attain the distinct objective of a new economic order of justice and peace.

Cooperatives and other types of collective business already play an important role in the worldwide agricultural production framework, especially in developing nations. Cooperatives, from the other hand, cannot reap their gains unless gender disparity is addressed (Mayoux, L., 1992) Women are still underrepresented in agricultural cooperative membership and leadership, despite their significant role in agricultural output. Creating women-only cooperatives is a technique for engaging women in the advantages of cooperative organisations while also addressing some of the cultural and societal norms that would otherwise prevent them from fully participating. As a result, whenever policies and practices are aimed at empowering women economically, self-employed women employees and women entrepreneurs must be notified of the advantages of forming cooperatives or joining existing ones. Simultaneously,

when cooperative membership is available but women face significant hurdles to full involvement, steps should be undertaken to raise awareness of women's rights and the merits of active participation among cooperative members and leaders. Even in situations when cooperatives are already in operation and women's membership is substantial, capacity training is indeed required for successful involvement. Cooperatives and other forms of collective business never operate effectively unless its members are completely informed of and committed to the values and principles at their heart. Members must be informed of their rights and duties as members, as well as appropriate strategies to handle cooperative leadership, in order to function properly. This is particularly true in women-only cooperatives and among women cooperative members in households and communities where women often play submissive, fewer prominent roles. In terms of operations, it is critical that cooperative members, both women and men, have a thorough understanding of the producing, marketing, and legal processes in their area. This is particularly essential to stress when building the competencies of women cooperative members, especially in instances when women's access to education and knowledge is restricted. It is critical, in particular, to ensure that women's cooperatives receive equitable and appropriate access to extension services as well as applicable production and modern communication. In a similar manner, ensuring that women's only cooperatives have access to financing is critical to their growth. This necessitates not just a study of institutional impediments to finance for women and/or cooperatives, but also the promotion of cooperative networks or groups that may help cooperatives who need funding enhance their assets base and creditworthiness. It's critical to have clear channels of communication amongst women's cooperatives, governments, and other partners in this and other areas. Governments and other stakeholders may be more attentive to the demands of women's cooperatives as a result of this. In fact, encouraging women to form cooperative organisations is a worthwhile approach for self-empowerment, but it comes with its own set of political, social, and cultural obstacles. If the full advantages to women and their families need to be fulfilled, an essential balance must be maintained between cooperative creation, individual and organisational capacity building, government support and promotion, and organisational liberty.

In today's context, SHGs and federations have evolved as an important form of informal co-operative to provide various socio-economic benefits to the farmers particularly women farmers. It can be concluded from the above discussion that the co-operatives have made significant contribution to agricultural progress. Co-operatives also hold lot of promise to support agriculture production and profitability. However, largely these co-operatives

face the challenges on management and governance issues. In a study by Wang, Chen and Araral (2016), it was mentioned that social ties and bonding is the most important governance instrument used in microfinance institution. These agro-service centres are SHG-led organization, similar concept worked for them as well. In a paper on discussing the commons, it was argued that commons are socially constructed and we need institutional entrepreneurs to govern commons and manage resource mobilization (Ansari, Wijan and Gray 2013). The need is to provide proper policy framework to help these member-based co-operatives deal with these challenges and come up as a strong support to the Indian farmers and the Indian agricultural system. In recent years, women were able to mobilize and enhance collective action and they offer a new governance option, if empowered properly by the facilitating organizations (Du et al. 2019). New developments in decentralization of governance have opened possibilities for women's agency at the local level (Jain 2007). Collectives in any form, particularly women collectives, have played an important role in strengthening of the Indian Agriculture.

1.2 Women Empowerment

India like any other developing country has a large unorganised sector where the majority of women work. This sector has been largely neglected as far as provision of social services and social security benefits are concerned. Things are changing for Indian women, slowly but surely. Over five decades, in the areas of women's programmes, there has been a shift from the purely welfare and consumption oriented approach to a more pragmatic and development oriented one, which recognises the women as a productive worker and the contributor to the country's economy. The current state of women in India is shown in table 1.2.

Table 1.2: Status of Women in India

Particulars	India	Maharashtra	Pune
Total Population	121,02,00,000	11,23,74,333	31,15,431
Total Male	62,37,00,000	5,82,43,056	16,02,137
Total Female	58,65,00,000	5,41,31,277	15,13,294
Sex ratio/1000	940	954	945
Female Literacy Rate			
(per cent)	65.46 %	75.5 %	87.44 %
Women Share in employment	30 %	34.01%	30.6 %

Source : Census of India 2011 and Office of the Registrar General, India

According to the 2011 census of India, India's total population was 121 crores 2 lakh, with Maharashtra accounting for 11.24 crores, or 9.28 percent of the total. The percentages of female and male population are also included in the table, which are 48.46% and 51.544%, respectively. Males appear to outnumber women. Similarly, according to the Sex Ratio, there are 940 females for every thousand males. It indicates that there are fewer females than males. The figure also reveals that more than 25% of the people is still illiterate, while the percentage of women in work is also lower (at 30%) than that of males. Sex ratio is higher in Pune (study area) than in India but lower in Maharashtra, but literacy rate is higher in Pune than in India and Maharashtra.

Empowerment of women is necessary to help them gain control over their lives through raising awareness, taking action and working in order to exercise greater control. Being small economically and resource-wise, a Cooperative can provide the best forum for the women to organize economic activities in a most meaningful and economic way. In this connection, Cooperatives serve as the main organisation providing the self employment opportunities even with small means, thereby improving the socio-economic conditions of the area, ensuring the upliftment of women and strengthening the sustainable development. Cooperatives are autonomous bodies. Their main aim is raising the socio-economic status of members. Sociologists, economists and lawyers view cooperation differently. To a Sociologist, it is a social order in which man is free from class struggle. Economists believe that the Cooperative is a business organisation in which there is no scope for exploitation by the intermediaries. Lawyers view it as a legal entity in which members enjoy special privileges and concessions conferred by law. Thus, Cooperatives promote cooperation among people and serve as a means of community development. (Jan and Muzamil. (2007)). Rural women in India have limited avenues to enhance their income. Lack of access to formal banking services, appropriate opportunities for skill up-gradation and easy and timely access to support networks restrict them to spread their business and hence have a dampening impact on community business development. Rural women population hardly have a say too on utilization of their own income. The foundation was quick enough to realize that “entrepreneurship and livelihood development” was the only route towards “empowerment”. Since, empowerment was an ambitious goal with several dimensions, the entire model was carefully planned and broken down into three distinct set of activities that is (i) access to capital and institutional finance (ii) access to knowledge and skills (iii) access to support network.

Forms of Women's Empowerment through Cooperatives

There are mainly three forms of women's empowerment.



Figure 1.1 Women Empowerment Forms

Economic empowerment : Economic empowerment is facilitated by cooperatives' access to economic resources and opportunities, such as jobs, financial services such as loans, productive assets, development skills, and industry knowledge. Economic empowerment enables individuals to engage in, contribute to, and profit from innovation process that value their contributions, respect their dignity, and allow for the equitable sharing of development gains to be achieved.

Increased well-being : Economic empowered women contribute to the well-being of their families and their husband and are in position to raise income through entrepreneurship. An increase in income is utilized towards improving the family wellbeing.

Social and political empowerment : As a consequence of economic empowerment women increase confidence and are in a position to raise their voices, make choices and be able to contribute in social & political matters that affect their daily lives.

The co-operative societies play a phenomenal role in uniting people and marching them towards the realm of development. It has also been found that through cooperatives in urban and rural areas, women have been empowered by the correct support with the right support system; they too have shown that they can lead and contribute positively to the well – being of the society. Women's empowerment through cooperatives shows the collective well-being of the women. However, only if they are respected well in the decision making process in the five progressive levels of equality through cooperatives denoting a higher level of empowerment in areas of social or economic life.

The government of India has made it a priority to empower women politically, educationally, economically, and legally. For this objective, the Indian government planned and executed the following initiatives and schemes during a five-year plan period.

Table 1.3: Change in perception with respect to women in Five Year Plans

Plan	Activity	Approach
First Plan (1951-1956)	The Central Social Welfare Board was established	Carry out initiatives through volunteer groups, charity organisations, and charitable trusts.
Second Plan (1956-1961)	Assisted the formation of Mahila Mandals to operate on the ground level.	Development of Rural Areas
Third, Fourth and Interim plan (1961- 1974)	Women's education, prenatal and child health care, and supplemental nutrition for children, nursing moms, and pregnant mothers are all included.	Women as family planning "targets" and "beneficiaries" in the social sector.
Fifth Plan (1974-1978)	Women's development program-mes and schemes	The focus has shifted from welfare to development.
Sixth Plan (1980-85)	In the plan, there is a whole chapter dedicated to women.	Accepted as a separate economic goal, women's development used a multidisciplinary approach with a three-pronged focus on health, education and employment.
Seventh Plan (1985-90)	Women's Workgroup Women's quotas in development plans statistics	Including women in national development as a priority.
Eighth Plan (1992-97)	The outlay on women in the main areas of education, health, and employment increased from Rs.4 cores in the first plan to Rs. 2000 cores in the last eight.	Women gain from a paradigm change from development to empowerment.
Ninth Plan (1997-2002)	The idea of the women's component plan is to ensure that at least 30% of all development funding go to women.	As a strategic goal, it seeks to empower women.
Tenth plan (2002-2007)	Groups for self-help	Specific policies, programmes, and methods for women's empowerment have been proposed.
Eleventh Plan 2007-2012)	Shift from women becoming more empowered to women being recognised as drivers of long-term socioeconomic change.	A five-point plan for addressing gender equity problems.

Source : http://planning.commission.nic.in/reports/genrep/rep_engpub.pdf

Economic empowerment, engineering social empowerment, facilitating political empowerment, effective execution of women-related laws, and the establishment of institutional structures for gender parity are all part of the eleventh plan. The plan further aims to protect all women's rights and entitlements, acknowledging that their needs vary depending on their caste, community, religion, geographical region, and development zone. As a result, the Eleventh Plan includes a provision on the unorganised sector and home-based employees, as well as female concentrations in both, for the first time.

Table 1.4: Sex-wise Distribution of Workers

Sl. No.	State/Union Territory	Male/ Female Total	Per cent to Total Workers			
			Cultivators	Agricultural Labourers	Household Industry	Other Workers
1	All-India	Male	24.92	24.93	2.95	47.20
		Female	41.1	5.7	29.2	
		Total	24.64	29.96	3.81	41.60
		Male	23.28	20.77	2.12	53.83
		Female	29.61	39.92	3.18	27.29
		Total	25.43	27.28	2.48	44.81
		Male	17.8	7	2.1	73.1
		Female	31.1	17.6	3.8	47.5
		Total	21.9	10.2	2.6	65.3

Source : Statistical Profile on Women Labour, Labour Bureau ministry Of Labour & Employment, Government of India.

Cultivators, Agricultural Laborers, Household Industry, and Other Employees made up 24.64 percent, 29.96 percent, 3.81 percent, and 41.60 percent of all labours, according to Table 1.4. Other Employees made up a significant share of male workers, accounting for 47.20 percent of all workers. Agricultural labourers also made up a large share of female employees, accounting for 41.1 percent of all workers. Maharashtra's cultivator's agricultural labour, domestic industry, and other employees accounted for 25.43 percent, 27.28 percent, 2.48 percent, and 44.81 percent, respectively, at the state level.

Among the male workers in Maharashtra, Other employees account for 55.83 percent of all male workers in Maharashtra. Agricultural labourers, too, made up a significant part of female employees, accounting for 39.92 percent. Other workers comprised a significant proportion of male employees

(73.1%) at the study area level, whereas other workers constituted a major proportion of female workers (47.5%) at the study area level, i.e. Pune city. Other employees made up 65.3 percent of the total workforce in Pune. In terms of the household industry, 3.81 percent, 2.48 percent, and 2.6 percent, respectively, at the national level, Maharashtra level, and Pune City level.

This present study aims to analyze the status of Women Centric Organizations (NGOs, SHGs, and Women Cooperatives etc.) with reference to their growth and sustainability. The study also attempts to know the various issues and challenges faced by Women Centric Organizations (WCOs). The success of many cooperatives in India is directly or indirectly supported by the suitable marketing efforts extended by cooperative marketing societies. The study attempts to suggest a suitable marketing and expansion strategies for women-oriented enterprises, while documenting their best practices which may be adopted by other WCOs in the region. The researchers aim to answer the following set of questions through a comprehensive investigation into three WCOs in Maharashtra.

1. How Women Centric Organizations (WCOs) are working towards women empowerment and entrepreneurship development?
2. What are the different models of women collectives for women empowerment?
3. What are the issues and challenges faced by WCOs with regards to their business activities?

Review of Literature :

Many attempts has been made to raise the standard of women by setting up various organization responsible for empowering women by way of promoting self reliance, self confident, self dependant and educating them to realize their fundamental rights. Lijjat as a trust is a service organization engages in serving poor and destitute and to empower women for social development (**Shaikh Shafeequr Rahman, 2012**). Women's economic independence makes it easier for them to start businesses. Through remunerative and non-remunerative labour at home, in the community, and at work, women are significant contributors to the economy and poverty eradication. Women's economic contributions are linked to their position and function in the home and society. (**Khyadagi Kashibai S. and Sivashankar N., 2007**). Three variables, namely economic, social, and political identities, influence the level of women's empowerment in a country. The Tenth Five Year Plan (2002-07) advocated for a three-pronged approach of social empowerment,

economic empowerment, and gender justice in order to establish a conducive conditions of favourable economic and social policies for women, as well as to eliminate all kinds of discrimination against them. **(V. S. Ganesamurthy, 2008)**. For the first time in India's Eleventh Five-Year Plan (2007-2012), women are recognised as agents of economic and social progress, not merely as equal citizens. Without incorporating women, who account for half of the world's population, any development strategy will be lopsided. Since the early 1980s, when Asian countries, notably India and China, and others began liberalising their economies, women's entrepreneurship has grown in popularity **(T.Lavanya, 2010)**.

The social, educational, and economic backgrounds of women entrepreneurs influence their success. Entrepreneurial education can help you enhance your results. Existing government initiatives also aid in the development of these female businesses. Various issues, such as male dominance, bank discrimination, family duties, and so on, are reaching a tipping point in society. Better education facilities, proper training and skill development programmes, government support for marketing and financial aid, and other initiatives are available to help women entrepreneurs succeed **(Awati Shubhangi, 2009)**. The success story of Hina Shah the most successful women entrepreneurs of India in plastic packaging and Founder of ICECD, revealed that a major change in traditional attitudes and mindsets of people in society is required for the elimination of obstacles for women entrepreneurship rather than being limited to only creation of opportunities for women and it is imperative to design programmes that will address attitudinal changes, training, supportive services **(Mahajan,2013)**. **Sanchita (2013)** analyzed the socio- economic profile of the woman entrepreneurs and interpreted the management problems of women entrepreneurs of small-scale sector in Haryana. The study was based on primary data which was collected by the researcher by conducting a survey of 210 women entrepreneurs of small-scale sector in Haryana (out of the list of 321 made available by the directorate of Industries Haryana, Chandigarh) by personal interview method by using a comprehensive interview schedule. It was recommended that to harness the potential and continued growth and development of women entrepreneurs and to devise effective ways for boosting, supporting, and maintaining their activities to run smooth functioning of enterprises, we need to provide them a level -playing- field for healthy competition.

There are many promotional efforts of the government for the growth of women entrepreneurship. The focus is on empowering women with the entrepreneurial skills, information technology, micro and macro finance options

which will foster economic growth of the nation (**Nandini 2014**). In recent years, women were able to mobilize and enhance collective action and they offer a new governance option, if empowered properly by the facilitating organizations (**Du et al. 2019**). Women collectives are playing a vital role in Indian agriculture. New developments in decentralization of governance have opened possibilities for women's agency at the local level (**Jain 2007**). Collectives in any form, particularly women collectives, have played an important role in strengthening of the Indian Agriculture. The "Triple Bottom Line" concept developed by John Elkington has changed the way businesses, nonprofits and governments measure sustainability and the performance of projects or policies. The concept of TBL allows organizations the flexibility to apply the concept in a manner suitable to their specific needs even beyond the foundation of measuring sustainability on three fronts—people, planet and profits (**Slaper, 2011**).

Many attempts have been made to focus on the strength and achievements made by the women in cooperation as well as economic empowerment of women. The growth and success of Lijjat Papad Organization has brought the change in not only in women's life but also in the development of Indian society and culture. It highlighted the concept of women entrepreneurship in India, their traits in business, motivating factors and the problems faced by them when they set up the business in the corporate field. The attitude, social responsibility, support to family, lack of resources, etc which have created a major hurdle for women in their path (**Malathi Ramanathan, 2004**). Women's empowerment is important, but its when community recognises her beneficial role that the ultimate aim is realised. Lijjat's contribution is simply the first step toward empowerment; other firms like Lijjat's should follow that example (**Rahman and Sultana, 2012**).

A case study of MAVIM is developed to understand the design and implementation of SHG model (**Nisha Bharti, 2014**). Among various micro-finance models, SHG model is identified as one of the most successful models for providing access to credit for the poor. Further, a sample of 50 participants from the organisation is taken and evaluated the effect of intervention on promotion of micro-enterprise. The results showed that this approach has been successful in establishment of microenterprise but due to limitation on loan amount from bank, it failed in helping micro-entrepreneurs in expansion of their business. MAVIM has a number of schemes and programmes for women in the Kolhapur District, as well as support for women's business growth (**Mahajan and Kamble, 2011**). Under the SCP, Swayamsiddha, and Tejaswini programmes, MAVIM has established 1236 SHGs. On behalf of the government, MAVIM's performance was critical in encouraging women to start

businesses and improve their living standards. MAVIM has a lot of room to create different women's programmes. MAVIM must thus be made more widely known among women. MAVIM was able to promote women empowerment through their interventions. Women are managing all interventions at the forefront without the involvement of men. This has led to increasing the decision-making by women in agriculture sector (Bharti, N., 2020). The agro-service centers promoted by MAVIM are doing well and being a form of collective, have helped farmer's in reducing the cost of operation and increasing their bargaining power in the market. With small changes in the design and structure of the intervention, the organization can help them in achieving their objectives.

Research Objectives

The study proposes the following research objectives

1. To identify and discuss the role and functions of various WCOs in women development /empowerment.
2. To find out the growth/ development of WCOs since their inceptions.
3. To critically analyze the various problems faced by the WCOs.
4. To draw lessons from the successful cooperatives and their interdependence with cooperative marketing societies.
5. To suggest a suitable plan of action for marketing strategy and business expansion

Methodology

The present study is exploratory in nature and uses a case based approach to study the selected organisations in detail with respect to their evolution, present status, business activities and futuristic plans. The researchers have selected Maharashtra state for the study. A total of three WCOs have been selected for the study in this district

- ☞ Shri Mahila Griha Udyog Lijjat Papad
- ☞ Mann Deshi Bank and Foundation
- ☞ Mahila Arthik Vikas Mandal

The data has been collected through primary and secondary sources. The following mechanisms were used for collecting the primary data.

- ☞ Structural Personal Interviews
- ☞ Focus Group Discussions

The study has been completed by the way of personal interviews held with Mrs Chetna Sinha, Chairperson Mann Deshi Bank and Mann Deshi

Foundation, Mrs Sushma, CFO, Mann Deshi Bank, Mrs Rekha Kulkarni, CEO Mann Deshi Foundation and key functionaries at the main office. Secondly, focus group discussions were made with rural women micro entrepreneurs promoted by the foundation and bank representatives serving the BoP clientele in the weekly markets. The data for Shri Mahila Griha Udyog Lijjat Papad was collected through questionnaire and interviews held with Atul Javalkar, Sales Officer and Anant Dikshit, Sales Supervisor in Pune district branch. Secondary data sources were used for data collection about MAVIM along with some semi structured interviews of rural women.

Secondary data was collected from

- ☞ Brochures, Notes and academic material shared by the organization
- ☞ Annual Reports
- ☞ Published literature on Website
- ☞ Journals and Publications
- ☞ News Coverage

Major Findings

The study showed that Women Collectives selected for the study have done considerable work towards women empowerment and development of women entrepreneurship. While Man Deshi group and Lijjat Griha Udyog are cooperative based model, MAVIM is supported by the Government of Maharashtra. All the three interventions were completely women centric. It was led by the women and for the women. This has led to enhancement of their confidence and attaining better social status in their families and households and led a dignified life. Other than monetary incentives, these initiatives are providing women with a sense of achievement.

All the three interventions have worked on livelihood development of women. However, it was observed that in all the three WCOs many rural women entrepreneurs faced challenges related to marketing and scalability.

Some of the key findings of this case-based research are as under

- i. Mann Deshi has used a strategic and integrated approach for women entrepreneurs. It started as a women-oriented bank, has now transformed itself into an integrated model of sustainable development. Their overall approach spans across various cross cutting developmental themes like gender empowerment, entrepreneurship development, financial inclusion, community welfare, youth development and climate change, among others. The movement has stabilized in Maharashtra over the past

- 2 decades and has recently replicated in local communities in Gujarat and Karnataka.
- ii. The Mann Deshi Model is an integrated model where they are working not only on creating entrepreneurs but also nurturing them through the business life cycle. Although most of the interventions are funded by donors, more strategic collaborations are required for further scaling up the model
 - iii. Shri Mahila Griha Udyog Lijjat Papad evolved as a papad making business, but it has contributed immensely to the field of women empowerment. Women might become self-reliant and confident as a result of the institution. In the process, Lijjat provides them the platform for improving their status in the society, which is their justified right. Lijjat's basis was built on the Sarvodaya ideology. Lijjat has risen to prominence as a pioneering organisation that welcomes women of all faiths, castes, and social classes.
 - iv. The Lijjat branch management pattern is based on an equal profit and loss sharing principle and the business story of Lijjat, itself proves the righteousness of the concepts it follows. Although some segments of the WCO are doing well, many segments like detergents and soaps, need a better marketing strategy for a greater share in the consumer's rupee. These products need to offer a greater degree of client centricity and position themselves properly in rural and semi urban markets by taking advantage of the umbrella brand "Lijjat".
 - v. The study concludes that MAVIM team has been able to do a good job in promoting and establishing agro-service centres as a concept in Maharashtra. People in the region have realized the importance of agro-service centres. It was interesting to note that the demand for starting such centres came from the community itself.
 - vi. The study concludes that with small changes in the structure of the intervention, the organization can make a long-lasting impact on the big developmental agenda called poverty, unemployment and women empowerment. It is also observed that in the case of rural women, growth-oriented strategies may not be enough and one needs to take a holistic view of women's socio-economic conditions and regional issues.
 - vii. The research did not find any centralized marketing strategy or plan for business expansion. However, the chamber of commerce set up by Mann Deshi is quite impressive and this institution is working hard to provide women with necessary external support with regards to marketing and legal matters.

- viii. The study finally concludes that each of these WCOs is working with large number of rural entrepreneurs (individually and in group). There is a need for a greater access to finance, markets and support networks for the expansion of these ventures. So, there is a need of some centralised society, hybrid models, strategic alliances etc address the concerns on business scalability. Policymakers, especially State Governments should take keen interest in such interventions and support the necessary linkages.

Suggestions & Way Forward

It's not that collectives does not create impact in the lives of women, in fact for many it's a boon, especially independent farmers and entrepreneurs. Similarly, income in the hands of women does have an impact on the confidence of women. But access to income and credit is a step towards realising equality. It alone is not a sufficient condition for empowerment. Nevertheless most of our programmes revolve around these two aspects without hitting the social structures we are in. While women collectives are a great capital to work on issues faced by women, they are also increasingly used as vehicles to route funds and offer government programmes. Given this, such collectives naturally deviate from women's issues to the mandate of the government. All said and done, the path leading to empowerment is still long, as gendered identities exist in our values, beliefs, and action. There needs to be greater partnership among policy makers, funders, academics, practitioners, and media, to help create an environment of dialogue within communities, and within institutions. This kind of partnership must guarantee that there are constitutional arrangements for safeguarding people's right to speak up and engage in public discourse. Mere laws and provisions are far from sufficient.

Based on the study the following recommendations are forwarded:

Although appropriate policies and institutions to women empowerment are in place, existing programs and strategies should be reviewed and new should be designed to make the effort more innovative and effective. Specifically, priority should be given to programs that focus on the following:

1. Establishing women's self-help group is paramount important since it is used as a vehicles for women empowerment in the rural areas. Donors, NGOs and WOs initiatives' would be fruitful to develop these types of groups in rural areas. It will provide rural women a platform to come together to act as a pressure group, at the same time providing the members economic (e.g., credit) and social support (e.g., legal support and counselling).

2. A comparative analysis between or among other nations that operate such sorts of women empowerment businesses is also urgently needed. There is still the possibility of researching the profitability and viability of various goods created by Mann Deshi, SMGULP, and MAVIM, as well as the necessity for a long-term goal is to expand the institution throughout India. Despite these constraints, the present study has a lot of relevance for the progress of these collectives, socio economic development of members and the society at large. Thus this study has social and economic significance from the view point of women empowerment and socio-economic development of women.

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Annexure

- Annexure 1* - MannDeshi Product and Process Innovation – BANK
- Annexure 2* - Skill Development and Education Programmes by Mann Deshi Foundation
- Annexure 3* - Mann Deshi Milestones
- Annexure 4* - Awards and Recognition of Shri Mahila Griha Udyog Lijjat Papad
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- Annexure 6* - Details of Resource Organisations Providing Training for MAVIM

*Annexure 1***Mann Deshi Bank Product and Process Innovation**

In its endeavour to serve low income marginal customers with heavy dependency on moneylenders, the bank launched the weekly cash credit product. The project was commissioned first on a pilot basis and later launched in a commercial mode. The product was positioned around an overdraft facility and effective service delivery through BC mechanisms. The idea was to illustrate that customized products tailored to the specific needs of micro-entrepreneurs had a banking potential and could be served profitably. This was targeted to women with unpredictable income streams and capital needs and was thought to add value to the client by reducing dependency on informal sources. As usual the conceptualization was done through a bottom up approach. The bank studies the financial diaries of the market vendors to identify product design. Accordingly, Mann Deshi designed and launched an innovative Weekly Market Cash Credit Loan (henceforth referred to as CCL or CL Loan) product. This was an overdraft facility for vendors and small farmers selling vegetables, fruits, groceries and confectionery at the weekly markets of Satara and Mashwad districts of Rural Maharashtra. The products have high repayment rates more than 95% and are serviced through a fleet of financial service advisors. The bank has harnessed the true potential of Business Correspondent in the larger context of financial inclusion.

Since the product operated through the BC channel, the bank further leveraged this mechanism to support other banking functionalities with the help of technology. The BC agents would use the micro-ATM/ POS hand held devices and offer all Aadhaar UID-based, as well as RuPay debit card-based, transaction and payment services to the customers. They collected repayments and also savings amount for the client's deposits. They offered

instant payment services (RTGS / NEFT/ mobile based) and clients did not fill a form or write a cheque. It promoted cashless transactions in the village economy and women could have better control on finances and secured their payments through biometrics. Since the customers never wasted their time, going to the bank they simply loved banking with Mann Deshi for small and big capital needs. Everything was driven technologically and biometrics was leveraged to its fullest.

Annexure 2

Skill Development and Education Programmes by Mann Deshi Foundation

Sr no	Programmes	Module
1.	Financial Literacy	Basic Financial Literacy
		Advance Financial Literacy
		Digital Financial Literacy
2.	Desi MBA Program for women	Value Added Services (Includes pamphlet creation, visiting card, banner, story creation, advertisement etc.)
		Workshop I - Intro., Self-Management
		Workshop II - Cash Management/
		Working Capital Management
		Workshop III & IV- Marketing Management/Exposure Visit
		Closing Award Ceremony
3.	Livelihood Workshops	Basic Fashion Designing
		Advance Fashion Designing
		Basic Beauty Parlour
		Advance Beauty Parlour
		Goat Rearing
		Agri-business
4.	Business Development Workshops	Entrepreneurship Development
5.	Income Generative Activities (Hobby Courses)	Mehandi & Rangoli
		Embroidery
		Fruit Processing
		Locally Relevant & Misc. Activities

6.	Young Girls' Programmes - Girls Inspiration Programme	Health, Hygiene & Legal,
		Skill Training Workshop
		Personality Development
		Banking Workshop
7.	Special Courses/ Activities	Marketing Stalls - Exhibitions in Mumbai and District Level- Satara
		Computer Literacy
		Tally. ERP 9
		Catering
8.	Adult Literacy (YCMOU Courses)	YCMOU Courses Preparatory Exam Training
		YCMOU Courses B.A - Part I Training
		YCMOU Courses B.A - Part II Training
		YCMOU Courses B.A - Part III Training
		YCMOU Courses B.Com- Part I Training
		YCMOU Courses B.Com- Part II Training
		YCMOU Courses B.Com- Part III Training

Annexure 3

Mann Deshi Milestones

- 1996** - Spurred by the desire of a goat herder, Kerabai, to learn the use of a cell-phone to keep in touch with her family, Mann Deshi Foundation was established in Mhaswad to teach rural women vocational skills.
- 1997** - Mann Deshi Mahila Sahakari Bank is founded
- Our first decade of work includes veterinary camps, agro-based business workshops, financial literacy training, health camps and panchayat raj awareness.
- 2002** - Mann Deshi Mahila Bachat Gath Federation, Mhaswad was registered.
- 2003** - Mann Deshi launches a bicycle programme to ensure that young girls continue to go to school.
- 2006** - Twenty years completed ! Over 2,00,000 women reached
- 2007** - First business school on wheels is launched in Hubli.
- 2008** - Mann Deshi Community Radio is launched. To train illiterate rural women, Mann Deshi used to often take audiovisual lessons. This led to the idea of an in-house radio, the Mann Deshi Tarang Vahini.

- 2010** - Mann Deshi Champions Programme launched to support talented young girls and boys from the area to develop their athletic potential and excel in sports. As the programme grew, more and more children joined and we developed a curriculum for enabling careers in sports.
- 2012** - Mann DeshiFalPrakriyaSahakariSanstha (Cold Storage) was registered.
- 2012** - Mann Deshi begins work in Water Conservation starting with 3 check dams. The frequent, severe drought and water shortage prompted us to invest in Water Conservation and we began building check dams. During an eighteen-month drought, we set up a Cattle Camp to alleviate the suffering of farming families who lacked the resources to care for their livestock.
- 2014** - A local tea stall owner Sagara Bai got arrested for using domestic gas. She came back and asked for help to obtain a commercial gas connection. The Chambers of Commerce for women entrepreneurs was set up to mentor rural businesswomen to scale their businesses and build a network of female micro-entrepreneurs.
- 2016** - Twenty years completed! Over 2,00,000 women reached.
- 2017** - We started a Farm to Market Programme to help women farmers aggregate and market their goods.
- 2018** - The Mann DeshiKisan Producer Company is set up by and for rural women farmers.
- 2018** - A warehouse was constructed by Mann Deshi Foundation for farmers to store grains.

Annexure 4

Awards and Recognition of Shri Mahila Griha Udyog Lijjat Papad

1. The institution has received an award from Khadi and Village Industries Commission as a “Best Village Industry” for the period 1998-99 to 2000-01.
2. On 6th December 2002 the institution has received the Economic Times award of “Business Women of the year 2001-02 for Corporate Excellence”
3. In January 2003, the institution received the award for “Best Village Industries” at the hand of Hon’ble Prime Minister Shri Atal Bihari Vajapayee at New Delhi.

4. On 21st December 2005, the institution has received “The Brand Equity Award” at the hands of Hon’ble President of India Dr. A.P.J. Abdul Kalam at New Delhi.
5. Lijjat Papad has been chosen as a power brand of 2010-11 by the Indian Consumers and received the award on 4th February 2011 at New Delhi.
6. Khambatta Life Time Award for 2010 was conferred to Smt. Swati Paradkar, President of Shree Mahil Griha Udyog Lijjat Papad by All India Food Processors Association, New Delhi. The award was given by Shree Harish Rawat, Hon’ble Minister of state for Agriculture and food Processing Industries, Government of India on 16th December 2011 at New Delhi.
7. “Outstanding Service Organization Award 2012” was conferred to Smt Swati R. Paradkar, President of Shree Mahila Griha Udyog Lijjat Papad by National Institution for Quality and Reliability (NIQR), Chennai. The award was given by His Excellency, the Government of Tamil Nadu Dr. K.Rossaiah on 21st April 2012.
8. Best Village Industries Institution 2012-13, Lijjat received National Award as 'Best Village Industries Institution for 2012-13' on 1st March 2014 at VigyanBhavan, New Delhi.
9. Pujya Dattanibapa Scholarship - 2014 18 Aug 2014, Pujya Dattanibapa Scholarship given to 449 children of sister -member who achieved success in 10th & 12th Board of Exam of March 2014.

Annexure 5

Contribution in Social Services, Health Care and Education by SMGULP

A. Contribution to social service

On many occasions, the sisters-members have undertaken social service activities such as distributing nutritious food for poor children, donating money for conducting community marriages, instituting prize-money for spread of primary education, undertaking blood donation camps, organising health camps, plantation drives and even making donations to Government bodies.90 In 1999, the Mumbai City felicitated Smt. Rukminiben B. Pawar, Lijjat President, as an outstanding woman in the field of social work.

Lijjat under took the rehabilitation of Chincholi (Jogan), the earthquake affected village in the Latur district of Maharashtra. The institution provided the finance and supervised the work of construction of fifty-eight houses for the

people of the village. Member-sisters donated money from their daily Vanai (wage). After the year 2001 Gujarat earthquake; all the branches of Lijjat gave a total donation of more than Rs 4.8 million, including Rs 1 million from the central office. Lijjat built forty houses for the rehabilitation of the people of Bhujpur (Bhachau) in Kutch District.

As per the principle of trusteeship sister members made a policy of returning a little of their income to the institution for the welfare of the community either in the cash or kind. B.

B. Contribution to Health care

The co-operative efforts of the member sisters at earning a lively hood also translated itself into helping each other in times of need and promoting measures for health care. In the year 1977 the first medical checkup camp of the member sisters and of their families was conducted. In the year 1980, an eye Camp was arranged in Valod in cooperation with the Navsari Rotary Club. A similar camp was arranged in Bhopal in 1980. In 1996 member sisters donated Rs. 10,000 to the TB Hospital for food expenses. In the year 1996, the medical care dispensary was started at the Detergent Division at Dahisar. In 1994 the Ramania branch distributed 5,000 anti malaria drugs. Talks by Doctors on various aspects of health care were organized for member sisters in the urban and rural branches of the institution. When a member sister or her family needed costly medical health like heart surgery or treatment for cancer, the other sister members contribute money towards these expenses.

C. Contribution to Education

Lijjat brought an awareness of the importance of education as a means to advancement in life. Initially the efforts were made for promoting the education of their children, especially daughters. Monetary help and awards were given in recognition of excellence in examinations in schools and colleges. Scholarship is given in the name of Chhaganbapa, who had been a source of moral support to them from the beginning. From the year 1980, the several issues of Lijjat Patrika listed the name of sons and daughters of member sisters who were given Chhaganbabapasmruti scholarship. On major development made by the Lijjat institution was the policy decision to sponsor computer education for the daughters and sons of member sisters from Mumbai and Thane.

A very important milestone was the literacy campaign started by Lijjat for its own member sisters. Literacy classes were started in various branches. When the sisters came to their respective branches to collect kneaded flour at

5.30am were taught for about 30 minutes every day by volunteers or daughters of the member sisters. However Lijjat was very ambitious about this project.

Annexure 6

Details of Resource Organisations Providing Training for MAVIM

Sr.No	Organisation	Districts
1	MITCON	Amrawati, Akola, Yavatmal, Wasim, Buladana and Bhandara
2	MCED	Kolhapur, Ratnagiri, Sindhudurg, Raigad, Nanded and Pune
3	Flight India	Gadchiroli, Gondia, Chandrapur, Wardha and Nagpur
4	BAIF	Thane, Nasik, Satara, Sholapur and Nandurbar
5	DILASA	Aurangabad, Beed, Hingoli, Parbhani, Jalna and Latur
6	Sampada Trust	Dhule, Ahmednagar, Jalgaon, Osmanabad and Sangli



Analysis of Differences Among Regular Agriculture Loan Borrowers of the Gujarat State Co-operative Agricultural & Rural Development Bank Ltd.

V. M. Chaudhari ¹

Mayuri Farmer ²

Abstract

Rural Co-operative banks provide various loans to farmers for the improvement of their livelihood. The banks consider many parameters before sanctioning a loan to the farmers. Land ownership is an important consideration while sanctioning an agriculture loan to a farmer, besides other parameters. Among the regular loan borrowers, it is better to understand how they are in terms of their land ownership. A primary research survey was conducted among 450 regular loan borrowers of The Gujarat State Co-Operative Agricultural & Rural Development Bank Ltd. (GSCARDB), from three different regions of Gujarat State covering six districts. Descriptive analysis, Chi-Square test, Correlation analysis and Analysis of Variance (ANOVA) are carried out to understand the differences among the farmers in terms of their land ownership.

The study findings shows that Medium and Large Farmers segments are better aware of working of GSCARD bank. Majority of marginal farmers have borrowed the agricultural loan multiple times. Good and very good ratings on the loan services of GSCARD bank are more seen from Large Farmers segment. Majority from marginal, small and medium segments are 'satisfied' while majority from Large Farmers are 'high satisfied' with GSCARD bank. There is a significant difference among the four farmer segments in terms of average loan amount taken. Strong relationship exists among Large Farmers on their rating of loan services and satisfaction level.

Keywords : *Loan borrower, Co-operative, Agriculture, Land ownership, ANOVA, Chi-Square, Correlation analysis*

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1. Introduction

This bank was established in the year 1951 with its Head Office at Rajkot in the erstwhile State of Saurashtra as an apex body for providing long-term agricultural loans to the agriculturists in the five districts of the State of Saurashtra. The name of the bank at the time of its inception was The Saurashtra State Central Cooperative Land Mortgage Bank Limited, Rajkot. Consequent upon the bifurcation of the Bombay State and on formation of a separate State of Gujarat in the year 1960, this bank had extended its jurisdiction to the whole of Gujarat State in 1961 and accordingly the name of the bank was changed to The Gujarat State Central Cooperative Land Mortgage Bank, Ahmedabad. To implement the developmental banking from mortgage banking, the bank name was amended in 1965, as Gujarat State Cooperative Land Development Bank Ltd. Subsequently, in the eighties, the bank has started financing for rural non-farm sector activities also. Therefore, the name was restyled appropriately to the present one since 1990.

Peculiar circumstances responsible for the establishment of this bank were the necessity to have banking agency to provide loans to tenant cultivators to enable them to purchase occupancy rights over the land tilled by them under the Saurashtra Land Reforms Act of 1949. In the initial stage of lending, this bank provided loans amounting to Rs. 2640 million to nearly 56000 tenant cultivators, which enabled them to become owners of the land that had been tilled by them for years.

This bank is an apex institution in the cooperative structure in the State of Gujarat for providing investment finance for the development of agriculture and allied activities and also rural non-farm sector activities. The bank adopted the unitary structure and does its business through the network of the branches numbering 176. It has 17 district offices to control the working of branches in their jurisdiction and to ensure the advantages of decentralized administration. The bank's registered office is in the city of Ahmedabad.

The bank is adopting production oriented loaning system and gives loans only for productive purposes which enables the farmers to get sustained rise in his farm output and income. Sanction of loan is subject to technical feasibility and financial viability of the proposed activity. Repayment period of loan is decided on the basis of the economic life of the assets to be created coupled with the repayment capacity of the borrower as per the guidelines of NABARD. Security of the loan is agricultural land and the assets created by the loan amounts, which are taken in to mortgage by the bank.

The Gujarat State Co-Operative Agriculture & Rural Development Bank Ltd. (GSCARDB) provides investment credit for the improvement in rural based farmers across the State of Gujarat. The bank finances medium and long-term agricultural loans to farmers. Land ownership of farmers plays an important role in sanctioning the agricultural loan and the loan amount. The loan borrowers become regular once they start to pay the loan amount regularly and payback completely. It is better to understand the behaviour of these regular loan borrowers by their land ownership, which would help the bank to frame suitable policy and new schemes for the development of rural farmers.

2. Review of Literature

Mr. Tushin Narayan Roy (2017), in his research titled "Study on Access to Farm Credit by the Small and Marginal Farmers in India under the Policy on Priority Sector Lending (PSL)", mentioned that infrastructural facilities are quite inadequate to address the need of farm credit by small and marginal farmers under PSL. He suggested that further plans should be initiated to ensure the reach of targeted farm credit to the small and marginal farmers which ultimately will improve the agricultural production, income and then the quality of their lives.

Ravindran Chavan et.al (2016), in their article 'Utilization pattern of agriculture crop loan by farmers in India (Karnataka)' have mentioned that the average amount utilized for the stated purpose/reasons by large farmers was found 97%, higher compared to small farmers with 77%. Also, they pointed out that in the case of co-operative banks borrowers; the average size of amount borrowed was almost one half of the amount of commercial banks borrowers. It is to note that across loan providing financial institutions, the diversion of agriculture crop loan was more in case of small farmers as compared to large farmers in both commercial and co-operative banks. The size of crop loan amount disbursed by cooperative banks borrowers was almost one half of the amount of commercial banks borrowers.

Tanika Chakraborty and Aarti Gupta from IIT Kanpur, in their article "Loan Repayment Behaviors of Farmers: Analyzing Indian Households", summarized that repayment of loans depends on many factors including purpose for which loan is taken, tenure of the loan, interest rate and source of borrowing. Also they pointed out that utilization of loans plays a major role in the repayment of loans. If a loan is used for income generating purposes then it generates income and increases the overall sustainability of the loan borrowers.

Dr. Yashoda (2017), in her article entitled "Role of Primary Agricultural Co-Operative Society (PACS) in Agricultural Development in India" has mentioned that the PACS supplies short-term credit on the personal security of the borrowers, while medium-term credit is given by charge on their immovable assets.

3. Research Design

3.1 Objectives of the Study

- To understand the differences and commonalities among the regular loan borrowers of GSCARD bank in terms of their land ownership.

3.2 Research Methodology

- A quantitative primary research survey among regular loan borrowers of GSCARD bank using a structured survey questionnaire.
- North Gujarat, Lower Middle & South Gujarat, and Saurashtra are the zones selected for the study area.
- The research was conducted among the 15 loan borrowers from each 30 branches of GSCARD Bank (North Gujarat=10 branches, Lower Middle and South Gujarat=10 branches, 10 branches from Saurashtra). In total, 450 regular loan borrowers are contacted for the survey.

3.3 Hypothesis Framing

Hypothesis 1 : The average agriculture loan amount is same among the different loan ownership of regular loan borrowers.

Hypothesis 2 : Regular loan borrower's rating on loan services of GSCARD bank is independent of their land ownership.

Hypothesis 3 : The loan services rating and overall satisfaction level with GSCARD bank is strongly related across the farmer land ownership segments.

3.4.1 Descriptive Analysis: Profiling comparisons among the land ownership segments

The major findings from the descriptive analysis are the following:

- The land ownership details spread across three regions of Gujarat. The survey coverage includes 42% of Small Farmers having 1 to 2 hectares of land, 31% of Medium Farmers having 2 to 4 hectares of land. Marginal and Large Farmers are comparatively less.

Table 1. Land Ownership Segments

Land ownership segments	No. of farmers	Percent
Marginal Farmers (Up to 1 Ha)	53	12%
Small Farmers (1 to 2 Ha)	190	42%
Medium Farmers (2 to 4 Ha)	138	31%
Large Farmers (More than 4 Ha)	69	15%
Total	450	100%

(Source : Survey Data)

- The experience in agriculture is distributed as below:

Table 2. Experience in Agriculture (Years)

Experience in Agriculture	Marginal Farmers (Base=53)	Small Farmers (Base=190)	Medium Farmers (Base=138)	Large Farmers (Base=69)	Total (450)
Upto 10 years	7.5%	5.3%	2.2%		3.8%
10.1 to 15 years	9.4%	8.9%	2.9%	2.9%	6.2%
15.1 to 20 years	20.8%	20.5%	13.8%	15.9%	17.8%
20.1 to 25 years	13.2%	13.7%	15.2%	14.5%	14.2%
25.1 to 30 years	24.5%	18.4%	16.7%	24.6%	19.6%
30.1 to 35 years	5.7%	6.8%	10.9%	7.2%	8.0%
35.1 to 40 years	5.7%	11.6%	18.8%	21.7%	14.7%
40.1 to 45 years	3.8%	6.8%	9.4%	4.3%	6.9%
45.1 to 50 years	9.4%	4.2%	5.1%	5.8%	5.3%
More than 50 years		3.7%	5.1%	2.9%	3.6%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

(Source: Survey Data)

- Majority (33.8%) of farmers have 20 to 30 years of experience in agriculture. Experience of 35.1 to 40 years is observed more among Large Farmers (21.7%).

Table 3. Education of Farmers

Education	Marginal Farmers (Base=53)	Small Farmers (Base=190)	Medium Farmers (Base=138)	Large Farmers (Base=69)	Total (450)
Illiterate	1.9%	6.3%	6.5%	5.8%	5.8%
Primary	39.6%	41.1%	34.8%	42.0%	39.1%
High School	39.6%	41.1%	44.9%	44.9%	42.7%
Diploma	-	-	0.7%	-	0.2%
Graduate	18.9%	10.0%	12.3%	5.8%	11.1%
Post Graduate	-	1.6%	0.7%	1.4%	1.1%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

(Source: Survey Data)

- Primary and high school qualified loan borrower farmers are found more, (39.1% and 42.7% respectively). Among medium and large farmers, high schools qualified are found more (44.9%). Comparatively more graduates are found in marginal farmers (18.9%).

Table 4. Annual Income of Farmers

Annual Income	Marginal Farmers (Base=53)	Small Farmers (Base=190)	Medium Farmers (Base=138)	Large Farmers (Base=69)	Total (450)
Rs.1,00,001 to Rs. 2,00,000	39.6%	38.4%	22.5%	18.8%	30.7%
Rs. 2,00,001 to Rs.4,00,000	41.5%	48.4%	52.2%	42.0%	47.8%
Rs. 4,00,001 to Rs. 8,00,000	5.7%	8.4%	24.6%	31.9%	16.7%
Rs, 8,00,001 to Rs. 16,00,000	-	0.5%	0.7%	7.2%	1.6%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

(Source : Survey Data)

- Around 48% of farmers have an annual income of Rs. 2,00,001 to Rs. 4,00,000. Small and medium farmers have comparatively higher income than marginal farmers.

Table 5. Cultivation Method Followed

Cultivation method	Marginal Farmers (Base=53)	Small Farmers (Base=190)	Medium Farmers (Base=138)	Large Farmers (Base=69)	Total (450)
Traditional	62.3%	72.6%	66.7%	78.3%	70.4%
Modern	37.7%	27.4%	33.3%	21.7%	29.6%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

(Source : Survey Data)

- Traditional method of agriculture is mainly followed by respondents as stated by 70.4% and the rest 29.6% follow modern method of agriculture.

Table 6. Awareness on working of GSCARD

Working Awareness of GSCARD	Marginal Farmers (Base=53)	Small Farmers (Base=190)	Medium Farmers (Base=138)	Large Farmers (Base=69)	Total (450)
Yes	88.7%	94.7%	97.8%	100.0%	95.8%
No	11.3%	5.3%	2.2%	-	4.2%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

(Source : Survey Data)

- Almost all from medium and large farmers segments are aware of working of GSCARD bank. About 11.3% of marginal farmers are not aware of it.

Loan Purchasing behaviour:

Table 7. Number of times loan borrowed from GSCARD Bank

No. of times loan borrowed	Marginal Farmers (Base=53)	Small Farmers (Base=190)	Medium Farmers (Base=138)	Large Farmers (Base=69)	Total (450)
One	26.4%	37.4%	20.3%	37.7%	30.9%
Two	41.5%	32.1%	27.5%	18.8%	29.8%
Three	20.8%	17.4%	30.4%	24.6%	22.9%
Four	11.3%	8.4%	13.8%	11.6%	10.9%
Five and more		4.7%	8.0%	7.2%	5.6%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

(Source : Survey Data)

- Nearly 42% from marginal farmers have borrowed the agricultural loan twice. Three times loan borrowing is reported by more from Medium Farmers (30.4%).
- More than 90% of farmers in each segment are aware of loan schemes offered by the GSCARD bank. Almost all expect some farmers from medium and Large Farmers are aware of such schemes. Similarly, more than 90% from each segment have visited the bank branch at least once for getting loan. Some farmers from small and medium land ownership segments have reported two times visit to the bank branch for the loan purpose.

Table 8. Loan Period (Years)

Loan Period (years)	Marginal Farmers (Base=53)	Small Farmers (Base=190)	Medium Farmers (Base=138)	Large Farmers (Base=69)	Total (450)
One year	1.9%	5.3%	5.8%	2.9%	4.7%
Two years	-	-	-	1.4%	0.2%
Three years	64.2%	49.5%	48.6%	26.1%	47.3%
Four years	1.9%	0.5%	-	-	0.4%
Five years	28.3%	35.3%	31.9%	43.5%	34.7%
Seven years	1.9%	2.1%	4.3%	15.9%	4.9%
Nine years	1.9%	6.3%	8.7%	7.2%	6.7%
Ten years	-	1.1%	0.7%	2.9%	1.1%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

(Source : Survey Data)

- Three years period loan was commonly borrowed by marginal (64.2%), small (49.5%) and medium farmers (48.6%), while majority of large farmers (43.5%) have reported to taken loan of five years period.
- The time lag for the loan varies among the farmer segments as below:

Table 9. Time Lag for Loan approval

Time lag for loan	Marginal Farmers (Base=53)	Small Farmers (Base=190)	Medium Farmers (Base=138)	Large Farmers (Base=69)	Total (450)
Up to 15 days	56.6%	53.2%	50.0%	47.8%	51.8%
16 days to 30 days	28.3%	33.7%	35.5%	43.5%	35.1%
31 days to 60 days	11.3%	12.1%	13.0%	5.8%	11.3%
More than 60 days	3.8%	1.1%	1.4%	2.9%	1.8%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

(Source : Survey Data)

- More than 50% of farmers from each segment have reported a time lag of up to 15 days. Considerable portions (43.5%) from Large Farmers have reported a time lag of 16 to 30 days as well.

Table 10. Opinion on Repayment Period of Loan

Repayment Period	Marginal Farmers (Base=53)	Small Farmers (Base=190)	Medium Farmers (Base=138)	Large Farmers (Base=69)	Total (450)
Sufficient	96.2%	96.3%	95.7%	97.1%	96.2%
Not sufficient	3.8%	3.7%	4.3%	2.9%	3.8%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

(Source : Survey Data)

- Across all the four farmer segments, more than 95% of respondents have stated that the loan tenure for repayment of loan was sufficient for them.

Table 11. Feedback on Loan Procedure of GSCARD Bank

Loan procedure	Marginal Farmers (Base=53)	Small Farmers (Base=190)	Medium Farmers (Base=138)	Large Farmers (Base=69)	Total (450)
Rigid and complicated	5.7%	5.8%	1.4%	4.3%	4.2%
Moderate	58.5%	51.6%	44.9%	34.8%	47.8%
Simple	35.8%	42.6%	53.6%	60.9%	48.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

(Source : Survey Data)

- Overall, for about 48% of farmers the loan procedure was moderate, and other 48% have found it to be simple. Nearly 61% from large farmers segment have stated that the loan procedure is simple, while 58.5% of marginal farmers have reported it as moderate.

Table 12. Feedback on Loan Recovery Procedure of GSCARD Bank

Recovery procedure	Marginal Farmers (Base=53)	Small Farmers (Base=190)	Medium Farmers (Base=138)	Large Farmers (Base=69)	Total (450)
Liberal	26.4%	20.0%	18.1%	47.8%	24.4%
Moderate actions	45.3%	32.6%	43.5%	36.2%	38.0%
Strict recovery procedure	26.4%	44.7%	37.0%	14.5%	35.6%
Very Strict actions	1.9%	2.6%	1.4%	1.4%	2.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

(Source : Survey Data)

- The loan recovery procedure is found to be moderate for 38% of farmers at overall level. Majority of large farmers (47.8%) have stated it as liberal, 45.3% have mentioned it as moderate, and 44.7% from Small Farmers mentioned it as strict recovery procedure.

Table 13. Feedback Rating of Loan services of GSCARD bank

Rating of loan services of GSCARD bank	Marginal Farmers (Base=53)	Small Farmers (Base=190)	Medium Farmers (Base=138)	Large Farmers (Base=69)	Total (450)
Moderate	7.5%	9.5%	6.5%	1.4%	7.1%
Good	45.3%	53.7%	46.4%	31.9%	47.1%
Very good	47.2%	36.8%	47.1%	66.7%	45.8%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

(Source : Survey Data)

- About 93% of farmers have rated the bank's loan services as good and very good. Good and very good ratings are more seen from large (66.7%) farmer segment.

Table 14. Overall Satisfaction with GSCARD bank

Overall Satisfaction with GSCARD bank	Marginal Farmers (Base=53)	Small Farmers (Base=190)	Medium Farmers (Base=138)	Large Farmers (Base=69)	Total (450)
Highly dissatisfied	1.9%	-	-	-	2%
Neutral	-	1.6%	2.2%	1.4%	1.6%
Satisfied	52.8%	50.0%	51.4%	29.0%	47.6%
Highly satisfied	45.3%	48.4%	46.4%	69.6%	50.7%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

(Source : Survey Data)

- Similarly, more than 95% have expressed higher level of satisfaction with the GSCARD bank. Majority from marginal, small and medium segments are 'Satisfied' while majority (69.6%) from large farmers are 'Highly satisfied' with GSCARD bank.

3.4.2 Hypothesis Testing

These tests was performed with 95% Confidence Interval and 5% error margin ($\alpha=0.05$).

Hypothesis 1 : The average agriculture loan amount is same among the different loan ownership of regular loan borrowers.

Ho : There is no significant difference among the land ownership in terms of the average loan amount taken from the bank.

H1 : There is a significant difference among the land ownership in terms of the average loan amount taken from the bank.

Analysis of variance test (ANOVA) is used here. The results are presented here.

Table 15. ANOVA : Average Loan Amount by Farmer Segments

Farmer segment	N	Average Loan amount (Rs. 000')	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
Marginal Farmers	53	161.62	92.05	12.64	136.25	186.99
Small Farmers	190	235.75	106.38	7.72	220.53	250.98
Medium Farmers	138	306.65	162.39	13.82	279.31	333.98
Large Farmers	69	386.97	229.70	27.65	331.79	442.15
Total	450	271.95	161.79	7.63	256.96	286.94

(Source : Survey Data)

The lowest mean value here is Rs. 161.62 (000') from marginal farmers, and the highest mean value is Rs. 386.97 (000') is from large farmers. This shows that the average loan amount taken by these farmers segments varies. However, it needs to be proved statistically.

The Homogeneity of Variance Assumption is further checked.

Variable	Levene Statistic	df1	df2	Sig.
Loan amount (Rs.)	13.917	3	446	0.001

Here the p-value is 0.001, which is lesser than 0.05. Hence it is concluded that the variances of loan amount taken are significantly different.

Table 16. ANOVA Table (Using Tukey HSD)

		Sum of Squares	Degree of freedom	Mean Square	F	Sig.
Loan amount (Rs.000)	Between Groups	1973056.2	3	657685.4	29.992	0.001
	Within Groups	9780172.6	446	21928.7		
Total		11753228.7	449			

(Source : Survey Data)

Here, the mean square is arrived by dividing the sum of square by its degrees of freedom. F ratio is calculated by dividing mean square between-groups by mean square within-groups. The final column gives the significance of the F ratio, the p value. If the p value is less than or equal to a level, then we can reject H_0 that all the means are equal.

It is observed here that the p-value =0.001 is lesser than 0.05, Hence the null hypothesis is rejected. There is a significant difference among the four farmer segments in terms of average loan amount taken. The loan size directly related with the land ownership that is Small Farmers are given lesser amount while larger farmers are given higher loan amount.

Hypothesis 2 : Regular loan borrower's rating on Loan Services of GSCARD bank is independent of their land ownership.

Chi-Square test of independence of attributes is used to examine this hypothesis,

H₀ : There is no significant difference among the farmers' category in terms on their response on rating of loan services of GSCARD bank.

H₁ : There is a significant difference among the farmers' category in terms on their response on rating of loan services of GSCARD bank.

Table 17. Chi-Square Analysis: Observed and Expected Frequencies

Rating of bank loan services		Farmers Category - Land Holding				Total
		Marginal Farmers	Small Farmers	Medium Farmers	Large Farmers	
Moderate	Count	4	18	9	1	32
	Expected Count	3.8	13.5	9.8	4.9	32.0
Good	Count	24	102	64	22	212
	Expected Count	25.0	89.5	65.0	32.5	212.0
Very good	Count	25	70	65	46	206
	Expected Count	24.3	87.0	63.2	31.6	206.0
	Count	53	190	138	69	450
	Expected Count	53.0	190.0	138.0	69.0	450.0

(Source : Survey Data)

	Value	Degree of freedom	Asymptotic Significance (2-sided)
Pearson Chi-Square	19.841	6	0.003
a. 2 cells (16.7%) have expected count less than 5.			

The chi-square value as per Chi-square test is 19.84 (6 degrees of freedom, 5% significance level). The significant value $p=0.003$ is lesser than 0.05. The null hypothesis has to be rejected. It is concluded that there is a significant difference among the four farmer categories on their response on ratings of bank loan services. More of very good ratings are seen from large farmers.

Hypothesis 3 : The loan services rating on the bank and overall satisfaction level with the bank are strongly related across the farmer land ownership segments.

Correlation analysis is used to examine this hypothesis statement.

Table 18. Correlation Analysis: Rating on loan services vs. Overall satisfaction with the bank branch

Correlation analysis	Correlation with satisfaction level with the bank branch				
	All farmers	Marginal Farmers	Small Farmers	Medium Farmers	Large Farmers
No. of farmers	450	53	190	138	69
Rating of loan services of GSCARD bank	0.519**	0.207	0.536**	0.579**	0.655**

(Source : Survey Data)

At overall level, the correlation analysis shows that there is a moderate level relationship between loan services rating and satisfaction level with the bank branch and it is significant at 0.01 level. Among marginal farmers, there is no strong relationship exists. Comparatively strong relationship exists among Large Farmers on their rating of loan services and satisfaction level, and it is significant at 0.01 level. Moderate level relationship between rating of loan services and satisfaction level is shown in Small Farmers and Medium Farmers, and they are significant at 0.01 level.

4.0 Conclusions and Suggestions

The farmers are classified based on the area of land they own. Majority of respondent loan borrower farmers have long years of experience (20 to 30 years) in agricultural activities. Very high education (graduate and more) are found to be less among the farmers. The annual income is pretty low (Rs. 2,00,001 to Rs.4,00,000) for many farmers as compared to other occupations. As these farmers have taken loan from GSCARD bank, almost all from medium and large farmers segments are aware of working of GSCARD bank. Majority of marginal farmers have borrowed the agricultural loan twice. More than 90% of farmers in each segment are aware of loan schemes offered by the GSCARD bank. The loan procedure was moderate for nearly half portion of farmers covered, while rest of them said it is simple. The loan recovery procedure is found to be moderate for 38% of farmers. Good and very good ratings are more seen from large farmers segment. Majority from marginal, small and medium segments are 'Satisfied' while majority from large farmers are 'Highly satisfied' with GSCARD bank.

There is a significant difference among the four farmer segments in terms of average loan amount taken. Lesser land owners have got less amount of loan and larger land owners have got high amount of loan.

More of very good ratings on the bank are seen from large farmers. Comparatively strong relationship exists among Large Farmers on their rating of loan services and satisfaction level. Land ownership is directly related to the loan amount, as the bank considers land ownership as an important parameter for loan sanctioning.

Suggestions :

All the borrower farmers should be given awareness about different loan schemes, processing of loan and repayment schedules, providing trainings to the borrower farmers. Short term loan products should be introduced by GSCARD Bank to facilitate borrowers. This will further increase the portfolio, reputation and trust on GSCARD across all levels of borrower farmers.

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Corporate Governance & Member's Satisfaction : A Case of District Central Cooperative Banks in Uttarakhand

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Abstract

Cooperation is an emerging sector for the development of farmers based rural economy. The cooperative movement has widely been spread across all the countries. Cooperative institutions are different from the other corporate and organizations. The unique features of these cooperative organizations are basically delivering their services to its members or customers by implementation of cooperative principles. These institutions are democratically controlled and having economic member participation for the socio-economic development of the members. The entire growth and success of these cooperative institutions are based on the member involvement and participation in the governance, policy formation, administration, communication and business expansion. Thus the main purpose of this study is to explore the various factors involved in the member's satisfaction and governance of DCCBs (District Central Cooperative Bank) in Uttarakhand. The present study is based on cross-sectional survey and a sample size of two hundred twenty (220) respondents is selected to collecting the response these respondents were drawn from the target population (members and customers of DCCBs) by implementing the random and convenient sampling. Structured interviews of officers' and cooperative leaders of DCCBs were conducted. Descriptive statistical methods are used to interpret analysis results. Six major factors for successful DCCB governance were identified in the empirical study: member knowledge, member engagement,

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member details, managerial factor, infrastructure factor, and satisfaction factor. The results showed that co-operators' collaboration expertise is crucial and timely. According to the results, cooperative authorities, cooperative promoters, states, and prospective members should concentrate on these factors that have a major effect on cooperative governance in the cooperative banking sector and cooperative future prospects.

Keywords : *Cooperation, DCCBs, Cooperative Governance, Members Satisfaction, Rural Economy*

I. Introduction :

A cooperative is defined as an autonomous association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly owned and democratically controlled enterprise (Definition given by International Cooperative Alliance in the Statement on the Cooperative Identity). Cooperatives are non-profit organizations that work to meet the financial needs of their members. Cooperative credit institutions, a collective of cooperative institutions, constitute a vital section of the organized sector of the agriculture system. They are so named because they must be structured in accordance with the rules of the law of the co-operative society. Cooperative institutions play an important role in the socio-economic growth of farmers and growers. Traditionally, their primary purpose was to provide agriculture credit to their members for agricultural and allied sector events, but the new competitive climate and banking rules have forced these institutions to provide almost all financial services to their members. In a nutshell, cooperative institutions offer financial aid to individuals with minimal resources in order to prevent them from falling into the debt pit of moneylenders. In India, this is a large and strong network of co-operative institutions involved in manufacturing, refining, marketing, distribution, servicing, and banking. As a result, cooperative institutions are a financial body that belongs to its members, who are both the shareholders and, as a result, the consumers. Co-operatives are often established by people who share a mutual interest or belong to a similar local or professional group.

II. Cooperative Banking Scenario in Uttarakhand

There is a 3 tier cooperative system is operated and administered the event in rural economy by the government in Uttarkhand State:

1. State Cooperative Bank (Apex Bank)
2. District Central Cooperative Bank (DCCB)
3. Primary Agriculture Cooperative Society (PACS)

Basically the first objectives of those cooperative institutions are to supply agriculture credit assistance to the tiny and marginal farmers. Within the year 2004, NABARD issued new guidelines for these cooperative institutions to lending non-agriculture sector. Apex Bank is working at state level and DCCB's function at District Level and PACS are working at primary level for lending the agriculture credit and retail banking. These institutions also are helping the state and central government for implementing the varied schemes for the welfare of the society. The DCCB's in Uttarakhand are registered under the Cooperative Societies Act, 1912. And governed by the banking regulation act 1949 and banking Law Act, (Cooperative Societies) 1965. The District Central Cooperative Banks are generally lending agriculture loans (MT & LT) to their members and other financial services to the purchasers like other banks. These are the subsequent DCCB's affiliated under State Cooperative Bank and therefore the Cooperative Societies Act, 1912. And governed by the banking regulation act 1949 and banking Law Act, (Cooperative Societies) 1965.

- 1) Dehradun District Cooperative Bank
- 2) Almora District Cooperative Bank
- 3) Chamoli District Cooperative Bank
- 4) Udham Singh Nagar District Cooperative Bank
- 5) Nainital District Cooperative Bank
- 6) Kotdwar District Cooperative Bank
- 7) Haridwar District Cooperative Bank
- 8) Pithoragarh District Cooperative Bank
- 9) TehriGarhwal District Cooperative Bank
- 10) Uttarkashi District Cooperative Bank

Because of numerous changes in cooperative movement in India, liberalization, privatization, and globalization (LPG) and deregulation developments implemented within the United States (US) in the early 1990s, cooperative banks were forced to carry out their functions competitively like other nationalized and private banks in India. Cooperative credit institutions are a collective of cooperative institutions that serve the agriculture credit system. They are so named because they were established under the provisions of the states'

co-operative society law. Co-operative societies may be formed for credit or for other (non-credit) purposes, according to the law. Cooperative institutions play an important role in the socio-economic growth of farmers and growers. Traditionally, their primary purpose was to provide agriculture credit to their members for the development of agriculture and allied enterprises, but the new competitive climate and banking rules have forced these institutions to provide all financial services to their members. In a nutshell, cooperative institutions offer financial aid to individuals with minimal resources in order to prevent them from falling into the debt pit of moneylenders. It is a part of India's large and strong co-operative system, which is involved in development, manufacturing, marketing, distribution, servicing, and banking. As a result, co-operative organizations are financial companies that belong to their members, who are both shareholders and clients. Co-operatives are often established by people who share a mutual interest or belong to the same local or professional association. These institutions provide a wide variety of agricultural and related credit and other financial services (loans, deposits, banking accounts, etc.) to their members. The Cooperative Societies Act of 1912 regulates these organizations. The Banking Regulation Act of 1949 and the Banking Law Act (Cooperative Societies) of 1965 regulate the industry. Cooperative credit institutes vary from stockholder banks in terms of their structure, aims, principles, and governance. In India, the cooperative sector focuses primarily on the local community and micro-banking among the society's middle and low-income classes. These organisations primarily serve rural areas, especially the agricultural sector. Cooperative societies are unique in their structure, capital support, and mission to meet the credit needs of small and marginal farmers and rural artisans. In order to increase / sustain the flow of agricultural credit; these institutions have access to refinance facilities from NABARD and interest subvention for agricultural loans from the respective State Governments. Several social welfare systems of state governments are channeled through these institutions in the pursuit of public policy.

III. Review of the Literature

The reserve bank of India constituted various committee to look in to effective banking services to the retail and small customer and various researchers has conducted studies on the different aspect of customer perception, satisfaction and service quality in cooperative banks and numerous suggestions were sought to bring effectiveness in the working and operations of cooperative retail banking. **Narsimham Committee (1991)** emphasized on capital adequacy and liquidity, **Goiporia Committee (1994)** emphasized on the banking sector for constantly upgrading the quality of customer satisfaction

and also identifying more avenues for customer service. **Tarapore Committee (1997)** talked about Non-performing assets and asset quality, **Kannan Committee (1998)** opined about working capital and lending methods, **Basel committee (1998 and revised in 2001)** recommended capital adequacy norms and risk management measures. **Kapoor Committee (1998)** recommended for credit delivery system and credit guarantee and **Verma Committee (1999)** recommended seven parameters (ratios) to judge financial performance and several other committees constituted by Reserve Bank of India to bring reforms in the banking sector by emphasizing on the improvement in the financial health of the banking sector in India. **M. Damodaran Committee (2011)** has made its recommendation on the various sector i.e. Customer Service, Customer redressal system, Customer service and technology, Role of boards of banks in customer services. **Singh and Singh (2006)** studied the funds management in the District Central Co- operative Banks (DCCBs) of Bilaspur with specific reference to the analysis of financial margin. It noted that a higher proportion of own funds and the recovery concerns have resulted in the increased margin of the Central Co-operative Banks and thus had a larger provision for non-performing assets. Mavaluri, **Boppana and Nagarjuna (2006)** suggested that performance of banking in terms of profitability, productivity, asset quality and financial management has become important to stable the economy. They found that public sector banks have been more efficient than other banks operating in India. **Pal and Malik (2007)** investigated the differences in the financial characteristics of 74 (public, private and foreign) banks in India based on factors, such as profitability, liquidity, risk and efficiency. It is suggested that foreign banks were better performers, as compared to other two categories of banks, in general and in terms of utilization of resources in particular. **Campbell (2007)** focused on the relationship between nonperforming loans (NPLs) and bank failure and argued for an effective bank insolvency law for the prevention and control of NPLs for developing and transitional economies as these have been suffering severe problems due to NPLs. **Singla (2008)** emphasized on financial management and examined the financial position of sixteen banks by considering profitability, capital adequacy, debt-equity and NPA. **Dutta and Basak (2008)** suggested that Co-operative banks should improve their recovery performance, adopt new system of computerized monitoring of loans, implement proper prudential norms and organize regular workshops to sustain in the competitive banking environment. **Chander and Chandel (2010)** analyzed the financial efficiency and viability of HARCO Bank and found poor performance of the bank on capital adequacy, liquidity, earning

quality and the management efficiency parameters. **Kumar. G and Ravindran (2010)** analysed customer perception towards service quality dimensions among cooperative banks in Kerala. This study revealed that perceived service quality is low in cooperative banks and these banks need to develop the standards to satisfy its customer to avoid possible drain of its customer base. Cooperative banks are suggested to improve infrastructure, re-orientation to customer centric service parameters, differentiation of service offers, training to bank employees, need for adherence to principles of cooperation etc. **Babu and Selkhar (2012)** identify that the urban cooperative banks has important role in the Indian financial system. The UCB's strengthen their uniqueness in terms of good corporate governance, technology absorption and careful adherence to regulatory framework. In future urban cooperative banks are ready to face many challenges in the competitive environment of both public and private sector banks. **Thimmaiah, Maroor and Shainy (2013)** explained that Indian banking industry is facing two problems i.e. inefficiency and competition from the competitors. These problems can be short out with training and development, motivation of employees. Banking industry must care about target market, services, segmentation, customer need, integrated marketing, customer satisfaction, profitability through customer retention and bank service marketing mix. They focused on impact of correlation between satisfied employee and satisfied customer through the quality services. **Usha L. (2013)** Cooperative financial institution facing severe problems which have restricted their ability to ensure smooth flow of credit i.e. limited ability to mobilize resource, higher NPA, higher cost of transaction. Due to cooperative legislation and administration government interference is more in the day to day administration of the cooperative institutions some problems area arises out of the applicability of the cooperative legislation i.e. deliberate control of cooperatives by the government, nomination of BODs by the government deputation of govt. officials to cooperative institutions etc. She also mentioned that cooperative bank should also come up with latest banking services like internet banking, credit cards, ATM, mobile banking etc. These banks should introduce new scheme for new customers and satisfaction of existing customer, strong branch network and improvement in customer service is required to maximise market share and profitability of these banks. **Fathima Adeela Beevi (2014)** studied on the positive opinion towards the services and the behaviour of employee of cooperative banks for rendering services are little poor in comparison to the private and public sector banks. The cooperative banks are slow in the adoption of technology and modern way of rendering banking services. Gradually the cooperative banks will have to be technologically advance for facing the

competition and satisfying the customer with more effective services. **Sankar and Reddy (2014)** examined that the cooperative banks are the main banks in India for supporting the agricultural and rural development. The key role is to lending credit financing to rural based entrepreneurship. In the developing state like Chhattisgarh with huge deficits in terms of quality and quantity, the state has to shoulders the primary responsibility for providing cooperative credit. **Chavda (2015)** mentioned that cooperative banks are important pillar for the rural development. Khusro committee mentioned that cooperative banks should work as a total system and develop self reliance. The higher authorities of the cooperative banking should help the lower authorities in the way of mother cooperatives. They should provide authority, leadership, guidance supervision and control to the lower authority. There should be a mutual support, help accountability and responsibility in the system so that there should be good and effective relationship between their tiers. The mobilisation of small savings from large no. of people as possible is the key of success for cooperative banks. The computerization and improper leadership should be abolished. They should improve themselves through the principle of cooperation for its development. **Gandhi (2015)** Cooperative banks are unique in terms of their structure, clientele and credit delivery. The resilience and stability shown by these banks during the recent global financial crisis has underscored their importance in the financial system of both developed and emerging market economies. Despite their inherent weaknesses in terms of low capital, poor management and intrusive policies of State, cooperative banks in India have successfully weathered several challenges during their century old existence and continued to grow in the competitive environment which emerged following the Economic and Financial Sector Reforms initiated in 1991. RBI has initiated several policy measures to strengthen the cooperative banking sector by gradually introducing the prudential norms and regulatory prescriptions on par with commercial banks. It is heartening to see that cooperative banks are showing keen interest in diversifying their business and broad-basing their clientele. One can hope that changes in the existing legal framework, supportive regulatory environment, adoption of technology and re-orientation of business strategy can act as enablers for cooperative banks to contribute more meaningfully in the equitable economic growth across regions through their delivery model. **Vidyashree and Rathod (2015)** discovered that earlier the provision of interest on TDS was applicable only to the nationalised banks but now it has become applicable to cooperative banks too. Many taxpayers, for saving income tax were making deposits in cooperative banks under different names. But now this will not be possible, due to this provisions customer will

have to justify for the source of income of such deposits. Rural depositors and taxpayers may be affected due to these provisions. Due to the responsibility of filing the returns of cooperative banks there is a chance to decrease in the customer base of cooperative banks and more rural customer are affected due to less interest on FD & RD accounts. **Mundra S.S. (2016)** mentioned that competition intensifies with the licensing of more new banks, only those entities which provide better customer services and experience would survive. Various research studies have shown that customer are willing to pay for quality service and would transact with the institution which provide better services. Customers are moving from one bank to another due to dissatisfaction with the service received at the present. He mentioned that with unified KYC account number portability would come in to the realms of possibility. Banks must therefore build structure and processes that aim at providing quality and efficient services or else face the prospects of a customer silently walking away without causing any inconvenience. **Arora and Bodhanwala, (2018)** The goal of corporate governance is to make it easier to oversee and regulate business operations. Its essence is based on operational fairness and transparency, as well as increased disclosures to defend the interests of many stakeholders. Corporate governance structures are intended to boost a company's performance by allowing for better decision-making **Shivani et al. (2017)**. The function of directors and auditors in relation to shareholders and other stakeholders is defined by corporate governance. Corporate governance is important for shareholders because it boosts trust in the organisation, resulting in a higher return on investment. Corporate governance ensures that the corporation behaves responsibly towards society and the environment for other stakeholders such as workers, customers, suppliers, the community, and the environment (**Kolk and Pinkse, 2010**).

IV. Corporate Governance of DCCB

In recent years, the Rural Cooperative Banks have greatly increased their business operations. Aside from traditional short-term loans, the credit portfolio has grown to include long-term loans in agriculture, retail banking, investment activities, and technology-based goods and services. The increased spectrum of financial and non-financial services necessitates greater adherence to RBI/NABARD regulatory prescriptions as well as state cooperative acts. Banks should follow sound Corporate Governance standards that contribute to timely and proper decision making in order to achieve business goals and comply with regulatory requirements. The mechanism by which corporate organisations are guided, governed, and held accountable is referred to as corporate governance. The authority, responsibility, stewardship, direction, and power exercised in companies are all part of corporate governance. It's worth noting that a good

corporate governance structure aids in decision-making, transparency, and responsibility within and outside the corporation. Strong corporate governance ensures that stakeholders' diverse interests are balanced, that decisions are taken in a fair, informed, and open manner, and that decisions contribute to the organization's overall efficiency and effectiveness. Cooperatives are, by definition, an independent group of people who have come together voluntarily to meet their shared economic, social, and cultural needs and desires through a collectively managed and democratically regulated enterprise. The primary aim of the cooperative is to boost the economic well-being of the common man. Cooperatives must function similarly to other companies. They must efficiently and effectively serve a market. They must be well-managed and financially self-sufficient. Cooperatives, on the other hand, have essential distinctions that set them apart from other organizations. There are three groups of people in every organization: (i) those who own it (owners/investors/shareholders), (ii) those who work for it (employees) and (iii) those who use them (the Customer). These three are separate and distinct classes in corporate, especially large enterprises or multinationals. The first two components of a small retail company, for example, are often similar. Users and clients, on the other hand, are two different entities. In cooperatives, however, all three elements come together to form a single entity: those who own, manage, and use are all one. The ideals as well as a goals and ideas of the cooperative movement are symbolised by co-operative principles. The cooperative ideals are expressed in the seven-colored flag. Co-operatives aim to correct the past and establish a new economic structure in which capital acts as a worker rather than a boss, driven by a sense of fraternity, fairness, and love for social justice. Instead of profit, the object of development is structured self-help. For creating a more equitable and productive economy, social reforms, and a more equitable political structure, human dignity is given pride of place. The co-operatives' ethical standards and principles, which are hallmarks of good governance, are very solid. Corporate governance concepts are not foreign to co-operatives; in fact, they are inherent in them. Corporate Governance, on the other hand, is a modern management concept, while Cooperative Governance, on the other hand, is a cooperative management concept.

V. Objectives of the Study

- 1) To examine the various factors that influence member satisfaction in Uttarakhand District Central Cooperative Banks.
- 2) To investigate the numerous factors that influence cooperative governance and member's involvement in DCCB's governance.

- 3) To look at the numerous issues that lead to member discontent and idleness in cooperative banks.
- 4) To make recommendations for good governance and management of DCCB's.

VI. Significance of the Study

The aim of this study on the factors affecting member satisfaction and governance of District Central Cooperative Banks in Uttarakhand is to provide information and data on the various factors affecting governance, member involvement in governance, and service quality of these banks in Uttarakhand. This study offers knowledge and strategic support to numerous researchers, students, cooperators, academicians, and academics in the field of cooperative banking and governance. The study's results would assist in the monitoring of District Central Cooperative Banks' service effectiveness. The results and outcomes will serve as a basis for framing service and governance policies regarding member satisfaction and participation. Since cooperative bank areas are plagued with numerous secret causes, the study is useful in deciding steps to boost the productivity of these banks.

VII. Research Methodology

- 1) **Research Design :** The latest research is both exploratory and descriptive. As a consequence, both secondary and primary data are used. Secondary data is predominantly gathered from a number of newspapers, magazines, blogs, reports, and journals. The primary data is obtained using a closed-ended questionnaire. Interviews and informal visits to the different District Central Cooperative Banks of Uttarakhand has used to gather data and answers. On the basis of the data gathered, the member satisfaction and various factors related to governance and managerial function of District Central Cooperative Banks are evaluated, and efforts are made to propose a theoretical, long-term model for member satisfaction and successful governance in cooperative banks.
- 2) **Sample Design :** The responses of 220 respondents from different District Central Cooperative Banks were obtained using a convenient and random sampling process.
- 3) **Sampling Elements and Population :** Current members of various District Central Cooperative Banks will be studied as the basic elements.
- 4) **Research Questions :** Factors influencing member satisfaction and cooperative banking governance in Uttarakhand, and how they can be

strengthened, as well as effective steps to improve the performance and governance of District Central Cooperative Banks.

5. **Statistical Tools :** The primary data will be obtained from various prospective and current members of Uttarakhand's District Central Cooperative Banks, and will be sorted, categorised, edited, and tabulated in a proper format before being analysed using relevant statistical tools such as percentages, mean, and standard deviation.

VIII. Data Analysis

The current study analyses the results obtained from the variables: Knowledge, Involvement, Connectivity, Managerial, and Satisfaction as influential governance factors of DCCBs in Uttarakhand, India.

1. Members Awareness Factors for the effective Governance in DCCBs

Table - 1

	Factors	Mean	Std. Deviation
i.	Cooperative Principle	3.89	1.030
ii.	Democracy in cooperative Leadership	3.73	1.177
iii.	Financial Position of your Bank	3.33	1.160
iv.	Voting right in general meeting of DCCB	4.05	.880
v.	Financial Product and Services	3.24	1.178

Source : Primary Data.

Table -1: Shows that the highest factors which are effective in the strong governance of District Central cooperative banks are the voting right to each member in the selection of board of the banks. The data represents the value of standard deviation is .880 and the mean value is 4.05 which represents the significance of the factors affecting governance and member roles to govern the banks. The role of members in designing financial services and products of the bank are minimal and least important factor in terms of the strong corporate governance as the value of the factor financial products and services shows the mean value of 3.24 and the standard deviation is 1.12.

2. Members Participation factors for the effective governance of DCCBs

Member engagement in cooperative education and training, policy decisions, governance, participating in cooperative elections, and attendance at meetings are among the activities. Respondents were asked to indicate the

degree of impact of these factors on governance in this analysis, and the findings are summarized in the table below:

Table - 2

	Factors	Mean	Std. Deviation
i.	Cooperative Training and Education	3.94	.947
ii.	Cooperative Governance (DCCBs)	4.10	.840
iii.	Vote in election (DCCBs)	3.02	1.143
iv.	Members general and other meeting (DCCBs)	3.12	.826

Source : Primary Data.

Table - 2 : The mean score and standard deviation of the member participation factors are clearly seen in the above table, with participation in District Central Cooperative Banks governance affecting bank decisions and member participation in cooperative training and education being almost highly influential factors in DCCB governance. These results are confirmed by the findings of many studies, which indicate that member engagement is a critical component of achieving cooperative governance.

3. Information and Communication factors for the effective governance of DCCBs

Table - 3

	Factors	Mean	Std. Deviation
i.	Timely, Regular and useful information	4.08	.790
ii.	Accuracy of information (DCCBs)	3.86	.984
iii.	Information of financial viability (DCCBs)	3.72	1.044
iv.	General and other meeting Information (DCCBs)	4.33	.760
v.	Information related to responsibilities and benefits (member-owner)	2.45	1.450

Source : Primary Data.

Table-3 : Represents the effectiveness of the factors related to information and the communication in the banks relevant to governance. Timely regular and useful information are the most significant factors for the corporate governance and member's involvement in the banking governance through timely supply of information in the general assembly of the members. The data shows that the mean value of the factors analysis consisting the value as 4.08 & the std. deviation of the significant factors is .8 which represents the highest significance

value in the selected variables and the least value of significance to the information related to responsibilities and benefits as mean value is 2.45 and std deviation is 1.4, for the factors of information and communication in DCCBs governance.

4. Managerial Factors affecting governance in District Central Cooperative Banks

Table - 4

	Factors	Mean	Std. Deviation
i.	Interpersonal Skills of Managerial Authority	4.11	.935
ii.	Clarity of Cooperative Concepts in Managerial Authority of DCCB	4.08	.940
iii.	Motivation among Cooperative Management Authorities of DCCB	3.83	.954
iv.	Cooperative Banking and Competencies	3.92	1.078
v.	Conflict solving capabilities	3.95	.961

Source : Primary Data.

Table- 4: Shows the managerial factors affecting governance of DCCB's in Uttarakhand. The data Analysis shows that the significance of interpersonal skills of managerial authority in District central cooperative banks has more importance as the data reflected in the table represents that the mean value of the factor is 4.1 & the std. deviation is .9 which is highest among the all variable under managerial factor whereas the motivation factor of the management of DCCB has least significant as the value shows mean 3.83 and std deviation is .95.

5. Infrastructural Factors affecting member's satisfaction and governance in District Central Cooperative Banks.

Table - 5

	Infrastructural Factors	Mean	Std. Deviation
i.	DCCB Branch Network and Location	4.25	.739
ii.	Image and Goodwill of DCCBs	2.73	1.231
iii.	DCCBs Branches are well equipped	4.16	.804
iv.	Effective Bank Advertisement and Promotion Strategies	3.95	.900
v.	Visually Appealing Layout of DCCB	3.92	.838

Source : Primary Data.

Table-5: Represents the data analysis and outcome of the infrastructural factors of governance which affects member participation and satisfaction in the governance of DCCBs. Data shows the variable DCCBs Branch network as infrastructural factor represents highest significant value whereas the goodwill and image has least significance in the governance of DCCBs.

6. Member Satisfaction Factors in District Central Cooperative Banks.

Table - 6

	Level of Satisfaction	Frequency	Percentage
i.	Strongly Dissatisfied	20	9.1
ii.	Dissatisfied	41	18.6
iii.	Neutral	85	38.6
iv.	Satisfied	50	22.7
v.	Strongly Satisfied	24	10.9
	Total	220	100
	Mean	3.88	
	Standard Deviation	1.101	

Source : Primary Data.

Table-6: Using the three criteria of neutral, pleased, and highly satisfied, about 73 percent of members are satisfied with District Central Cooperative Banks. The mean value 3.88 indicates a high level of member satisfaction with cooperative banks. As a result, all DCCB participants in the study area felt their organization was successful in delivering services to member in several activities and enhance member's satisfaction.

IX. Conclusion & Recommendation

The current study analyzed members' satisfaction with the governance and management of District Central Cooperative Banks, as well as members' involvement in the governance of these banks in Uttarakhand, using six key variables: Member Knowledge, Member Participation, Member Communication, Cooperative Managerial Capabilities, and Cooperative Bank Infrastructural Capabilities. The most influential factors for good cooperative governance, members influencing cooperative bank decisions, and member involvement in training and education are found to be member knowledge and participation, quality of information and good individual motivation, infrastructural factors, and service delivery to satisfy cooperative bank members. Furthermore, timely and useful information related to general and other meetings, information

about the banks' financial status, accuracy of information about banks to members, interpersonal skills authorities, and bank competencies have been described as significantly contributing to DCCBs' successful governance.

The researchers make the following recommendations based on the empirical findings of this study with regard to member satisfaction and successful governance of District Central Cooperative Banks in Uttarakhand, India.

- Since it has been identified that member participation is an essential contributor to successful cooperative bank governance, cooperative authorities, representatives, promoters, and other stakeholders should seek out and facilitate member participation in cooperative relations decision-making. This will ultimately gain for good governance and member satisfaction. Cooperative Awareness Programme, Cooperative Leaders Development Programmes and Cooperative Education and Training Programmes should be a continuing process through structured and professional training agency.
- The study recommends that current and potential cooperative promoters, governments, prospective participants, and other stakeholders recognize the established influential successful governance and member satisfaction factors when planning and framing cooperative banking policies and strategies. The cooperative banking authorities, promoter, government, prospective members and other stakeholders should focus on competitive banking services with latest attractive infrastructure.
- Cooperative banks should provide timely, appropriate, and reliable information about themselves to improve members' self-esteem and promote involvement in annual general meetings, other member meetings, and voting in order to ensure successful governance and democratic control of the bank.

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PERSPECTIVE

New India Mission-Housing for all by 2022

N.S. Mehara ¹

PM Vision for New India-2022

In 2017, to commemorate 75 years of the Quit India Movement the Government of India led the nation to a pledge to create a New India. The Pledge is to build a New India by 2022; an India that is devoid of corruption, is clean, has no poverty, is free of terrorism, has no distinction on the basis of caste and religion. To take forward the pledge of creating a new India that is strong, prosperous and all-encompassing, the Prime Minister launched 'Sankalp se Siddhi' (Attainment through Resolve) scheme, which aims at good governance, is a five-year plan under which the New India Movement/ Mission would take place.

The success of the New India Mission 2017-22 which envisages India free from poverty, corruption, terrorism, communalism, casteism and uncleanliness and unite the entire country by adopting good governance and using technology will depend on effective implementation of the flagship schemes such as Direct Benefit Transfer, Pradhan Mantri Ujjawala Yojana, Pradhan Mantri Jan Dhan Yojana, Jan Suraksha Yojana, Pradhan Mantri Jeevan Jyoti Yojana, Atal Pension Yojana, Food security for poor, Deendayal Antyodaya Yojana, Mission Indradhanush, Swachh Bharat Mission, Pradhan Mantri Fasal Bima Yojana, Pradhan Mantri Kaushal Vikas Yojana, Start UP India, Stand UP India, Pradhan Mantri Mudra Yojana, Make in India and Housing for Poor, etc. There is also a greater role of public representatives to take forward Prime Minister's vision through good governance and adopting modern technology towards ensuring public health. Besides this public representatives have to play a catalytic role in taking forward the schemes.

National Strategy for New India

The NITI Aayog in December, 2018 unveiled its comprehensive national Strategy for New India, which defines clear objectives for 2022-23. It is a detailed exposition across forty-one crucial areas, that recognizes the progress already made, identifies binding constraints, and suggests the way forward for achieving the clearly stated objectives. Drawing inspiration and direction from the Prime Minister's clarion call for establishing a New India by 2022, NITI Aayog embarked on a journey of formulating the Strategy document over a period of one year and followed an extremely participative approach in preparing the strategy. Each area vertical in NITI Aayog had

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in-depth consultations with all three groups of stakeholders, namely business persons, academics including scientists, and government officials. This was followed by consultations at the level of the Vice Chairman of NITI Aayog with a diverse group of eminent persons from seven sets of stakeholders that included scientists and innovators, farmers, civil society organizations, think-tanks, labour representatives & trade unions, and industry representatives. Central Ministries were brought on board for inputs, suggestions and comments. Simultaneously, the draft document was also circulated to all the States and Union Territories from whom valuable suggestions were received and incorporated.

In his foreword the Prime Minister says, “The Strategy for New India @75 put together by NITI Aayog is an attempt to bring innovation, technology, enterprise and efficient management together, at the core of policy formulation and implementation. It will encourage discussion and debate, and invite feedback for further refining our policy approach. We believe that economic transformation cannot happen without public participation. Development must become a Jan Andolan.”

The overarching focus of the Strategy document is to further improve the policy environment in which private investors and other stakeholders can contribute their fullest towards achieving the goals set out for New India 2022 and propel the nation towards a USD 5 trillion economy by 2030. The forty-one chapters in the document have been disaggregated under four sections: Drivers, Infrastructure, Inclusion and Governance.

The first section on Drivers focuses on the engines of economic performance with chapters on growth and employment, doubling of farmers’ incomes; upgrading the science, technology and innovation eco-system; and promoting sunrise sectors like fintech and tourism. Some of the key recommendations in this section include:

- Steadily accelerate the economy to achieve a GDP growth rate of about 8% on average during 2018-23. This will raise the economy’s size in real terms from USD 2.7 trillion in 2017-18 to early USD 4 trillion by 2022-23. Increase the investment rate as measured by Gross Fixed Capital Formation (GFCF) from the present 29% to 36% of GDP by 2022.
- In agriculture, shift the emphasis to converting farmers to ‘agripreneurs’ by further expanding e-National Agriculture Markets and replacing the Agricultural Produce Marketing Committee Act with the Agricultural Produce and Livestock Marketing Act.
- Give a strong push to ‘Zero Budget Natural Farming’ techniques that reduce costs, improve land quality and increase farmers’ incomes. This

has emerged as a tested method for putting environment carbon back into the land.

- To ensure maximum employment creation, complete codification of labour laws and a massive effort must be made to upscale and expand apprenticeships.
- Launch a mission “Explore in India” by revamping minerals exploration and licensing policy.

The second sections on Infrastructure deals with the physical foundations of growth which are crucial to enhancing the competitiveness of Indian business as also ensuring the citizens’ ease of living. Some of the key recommendations in the section on infrastructure include:

- Expedite the establishment of the Rail Development Authority (RDA), which is already approved. RDA will advise or make informed decisions on an integrated, transparent and dynamic pricing mechanism for the railways.
- Double the share of freight transported by coastal shipping and inland waterways. Initially, viability gap funding will be provided until the infrastructure is fully developed. Develop an IT-enabled platform for integrating different modes of transport and promoting multi-modal and digitized mobility.
- With the completion of the Bharat Net programme in 2019, all 2.5 lakh Gram Panchayats will be digitally connected. Aim to deliver all Government services at the State, District, and Gram Panchayat level digitally by 2022-23.

The section on Inclusion deals with the urgent task of investing in the capabilities of all of India’s citizens. The three themes in this section revolve around the dimensions of health, education and mainstreaming of traditionally marginalized sections of the population. Some of the key recommendations under ‘inclusion’ include:

- Successfully implementing the Ayushman Bharat programme including the establishment of 150,000 health and wellness centres across the country, and rolling out the Pradhan Mantri Jan Arogya Abhiyaan (PM-JAY).
- Create a focal point for public health at the central level with state counterparts. Promote integrative medicine curriculum.
- Upgrade the quality of the school education system and skills, including the creation of a new innovation ecosystem at the ground level by establishing at least 10,000 Atal Tinkering Labs by 2020.

- Conceptualize an electronic national educational registry for tracking each child's learning outcomes.
- As already done in rural areas, give a huge push to affordable housing in urban areas to improve workers' living conditions and ensure equity while providing a strong impetus to economic growth.

The final section on Governance delves deep into how the governance structures can be streamlined and processes optimized to achieve better developmental outcomes. Some of the key recommendations under 'governance' include:

- Implement the recommendations of the Second Administrative Reforms Commission as a prelude to appointing a successor for designing reforms in the changing context of emerging technologies and growing complexity of the economy.
- Set up a new autonomous body, viz., the Arbitration Council of India to grade arbitral institutions and accredit arbitrators to make the arbitration process cost effective and speedy, and to pre-empt the need for court intervention.
- Address the backlog of pending cases - shift part of workload out of regular court system.
- Expand the scope of Swachh Bharat Mission to cover initiatives for landfills, plastic waste and municipal waste and generating wealth from waste.

Role of Cooperatives in Realising the New India Mission

Cooperative enterprises, being values-based organizations, provide livelihoods for millions of people across the globe, and are by nature sustainable and participatory form of business. Having presence in all sectors of the economy, they place emphasis on job security and improved working conditions, pay competitive wages, promote additional income through sharing of surpluses and distribution of dividends, and support community facilities and services. In addition, cooperatives foster democratic knowledge & practices and social inclusion, making them well-placed to support the achievement of sustainable economic development.

An important dimension of the contribution of cooperative enterprises to sustainable development has been acknowledged in the global consultations on growth and employment: The role of cooperatives in expanding social protection to the informal sector. Promoting cooperatives could empower farmers to

negotiate for better agricultural inputs and prices of their produce. Indeed, cooperatives have all along delivered towards sustainable economic development, and this contribution should be further emphasised and acknowledged. The importance of cooperatives in achieving the objectives of New India Mission could be broadly underlined as:

- ☞ **Poverty Eradication and Zero Hunger** : Cooperatives allow people to help themselves by creating their own economic opportunities and turning individual risk into collective risk.
- ☞ **Food Security** : Agriculture cooperatives help their smallholder producer-members access inputs, infrastructure, markets, better prices, training and technologies, through the power of the collective wisdom.
- ☞ **Gender Equality** : With open and voluntary membership as one of their founding principles, cooperatives help women access resources and opportunities by expanding their participation in local and national economies.
- ☞ **Decent Work and Economic Growth** : Being focused on human needs, cooperatives have proven to be resilient, and even recorded growth, in times of crisis. They are also a source of decent employment for many people around the world and increase inclusion of marginalized groups, such as youth and indigenous people, in the global workforce.
- ☞ **Combating Climate Change** : Cooperative enterprises have a unique member-owned model that allows them to make long-term commitments to fighting against climate change and its impacts. Cooperatives put people at the heart of their action, which fosters the buy-in for the personal sacrifices that climate change will require. This results in sustainable natural resource management and active engagement in sustainable energy options.

Although cooperatives are central to the realization of the strategy for New India, with their focus on members and local needs, they have not always been proactive in national debates. With little visibility at national level, the potential and importance of the contribution that cooperatives can make towards realization of the New India Mission seems to have been missed by policy makers. This explains the relatively limited visibility and attention that cooperatives have received in the debate on the post-2014 national development agenda. The voices of the cooperative movement should be accommodated in the implementation process. This is important because the realization of the New India Mission will most likely require the active participation of cooperatives. There is a widely held consensus among many stakeholders that cooperative

enterprise is the type of organization that best meets all dimensions of reducing poverty and exclusion. This is because the way cooperatives help to reduce poverty is important. They identify economic opportunities for their members, empower the disadvantaged to protect their interests, provide security to the poor by allowing them to convert individual risks into collective risks, and mediate member access to assets that they utilize to earn a living.

Cooperatives are contributing towards gender equality, not just by increasing female membership, but by expanding opportunities for women in local economies and societies. They support access to quality education and learning opportunities by providing the means for financing education; supporting schools; establishing their own schools to provide quality education to both the youth and adults; and by serving as centres for life-long learning. Cooperatives ensure healthy lives by creating the infrastructure for delivering, financing and providing healthcare services.

Cooperatives contribute to food security by helping small farmers, fishermen, livestock keepers, forest holders and other producers to solve numerous challenges that confront them in their endeavours to produce food. They are increasingly becoming major actors in facilitating access to clean water and sanitation services to make up for the failures of both the public and private sectors. Energy cooperatives are contributing to the achievement of the sustainable energy goals of energy access, energy efficiency and reduced emissions. Housing cooperatives help ensure safe and affordable dwellings for their members. Environmental cooperatives are spearheading the sustainable management of natural resources for posterity. Cooperative governance model can provide the framework for equitable participatory processes that guarantee transparency and accountability, in cooperation with civil society, governments, businesses and other stakeholders to realize sustainable economic development.

Cooperatives have often emerged as sources of positive social capital in the aftermath of violent conflicts in many parts of the world thereby fostering a strong sense of community, participation, empowerment and inclusion among members and restoring interpersonal relationships and peace. Women's cooperatives have been especially active as brokers of peace and development. Cooperatives also contribute to the creation of a global enabling environment for sustainable development by closing the trade gap between the developed and developing nations; stabilizing financial systems during crises; and providing the base for financial deepening across the globe.

Housing for All by 2022

The vision of the Government is to ensure long term inclusive development through good governance and transformative reforms to boost real estate, housing

and infrastructure-the vital sectors that hold key to economic development. It is a far cry from early years after independence (1947-64), when not much attention was paid towards housing, urban infrastructure, etc. due to lack of resources and staff capacity to design and deliver. But, it was during this period that the Government introduced State Housing Boards, mandated to construct houses for public and laid the ground for planned cities. The period in pre-liberalisation era (1965-1990) was marked with regulatory restrictions. But it was in this period that the policy boost was given to the growth in housing finance sector, with the formation of Housing and Urban Development Corporation (HUDCO), National Housing Bank (NHB) and Housing Development Finance Corporation (HDFC). The Urban Land Ceiling Act was passed in 1976 with a purpose to curb speculative land pricing, but was later repealed as it failed to serve its purpose. Significantly, during this period (1988), National Housing Policy came into being and a rural housing scheme for downtrodden was launched.

The role of Government in the post-liberalisation period (1991-2000) as enabler, away from direct provider of housing, as proposed in National Housing Policy, was further reinforced with the creation of efficient legislative, legal and financial frameworks for private sector for the development of real estate and housing. Further, to give a boost to urban development and housing, ULBs were empowered and housing finance market was deepened. The National Housing and Habitat Policy unveiled in 1998 aimed at ensuring 'shelter for all' and better quality of life to all citizens by using the unused potential in public, private and household sectors. The key objective of the policy was on creating strong public-private partnership (PPP) for tackling the housing problems and the Government proposed to offer fiscal concessions, carry out legal and regulatory reforms and create an enabling environment for the development of housing sector. The Policy emphasised the role of the private sector, as the other partner, to be encouraged to take up the land assembly, housing construction and investment in infrastructure facilities.

In the post-2000 period of economic globalization, Jawaharlal Nehru National Urban Renewal Mission (JNNURM), an urban-focused programme to encourage cities to go for phased improvements in the civic service levels was launched in 2005. The National Urban Housing and Habitat Policy-2007 formulated by the Government of India spells out the following goals for sectoral development in the housing sector to: (i) recognise that shelter is a basic human need next to food and clothing; (ii) put emphasis on 'Affordable housing for all'; (iii) promote sustainable Habitat; (iv) focuses the spotlight on multiple stakeholders including cooperatives; (v) forge strong partnership among private, public and

cooperative sectors to participate in every sphere of housing and habitat; (vi) cooperatives to develop land and to get land from local authorities at affordable rates; (vii) provide proper legal framework for housing cooperatives; (viii) encourage multi-purpose cooperatives for urban poor; (viii) tackle the problems of housing in urban settlements, including improvement of slum and squatter areas; and (ix) to emphasize appropriate fiscal concessions for housing and infrastructure.

In June 2015, at the launch of the Pradhan Mantri Awas Yojana-Urban (PMAY-U), Prime Minister Shri Narendra Modi said that a house is not just four walls and a physical structure but is also a means for social transformation as it provides aspirations for a better life. He added that by 2022, when the nation celebrates its 75th year of Independence, the Government will provide every houseless family with the means to own a house. Amidst these promises, the PMAY-U was launched as a unique scheme to solve India's 'housing shortage' by offering four different housing options (components) for those belonging to the Economically Weaker Section (EWS) and Low Income Groups (LIG). The scheme guidelines were amended in 2017 to include the Middle Income Groups (MIG) as well. The four components include:

- i. In-Situ Slum Redevelopment (ISSR) which means rehabilitation of slums by building houses through private participation for the eligible slum dwellers on the land under the slums.
 - ii. Affordable Housing in Partnership (AHP) with the extension of central assistance of Rs. 1,50,000 for affordable housing projects done by States, either through its agencies or in partnership with the private sector for the EWS.
 - iii. Beneficiary-led Individual House Construction/Enhancement (BLC) with the extension of direct central assistance of Rs. 1,50,000 to families belonging to EWS categories to either construct a new house or enhance the existing house on their own.
 - iv. Credit-Linked Subsidy Scheme (CLSS), the provision of loans ranging from Rs. 6-12 lakh at lower rates of interest, to weaker and mid-income sections for the construction of new homes or renovation of existing homes.
- ☞ **Credit Linked Subsidy Scheme (CLSS)** : Under the Mission, credit linked subsidy component is being implemented as a demand side intervention in order to expand institutional credit flow to the housing needs of urban poor. Interest subsidy is credited upfront to the loan

account of beneficiaries through Primary Lending Institutions resulting in reduced effective housing loan and Equated Monthly Instalment (EMI). The Net Present Value (NPV) of the interest subsidy is calculated at a discount rate of 9 %.

☞ **Credit Linked Subsidy Scheme for EWS/LIG :** Beneficiaries of EWS and LIG seeking housing loans from Banks, Housing Finance Companies and other such institutions would be eligible for an interest subsidy at the rate of 6.5% for tenure of 20 years or during tenure of loan whichever is lower. The credit linked subsidy will be available only for loan amounts upto Rs. 6 lakhs and additional loans beyond Rs. 6 lakhs, if any, will be at non-subsidized rate. Credit linked subsidy would be available for housing loans availed for new construction and addition of rooms, kitchen, toilet etc. to existing dwellings as incremental housing. The carpet area of houses being constructed under this component should be upto 30 square metres and 60 square metres for EWS and LIG, respectively in order to avail of this credit linked subsidy. The beneficiary, at his/her discretion, can build a house of larger area but interest subvention would be limited to first Rs. 6 lakh only.

☞ **Credit Linked Subsidy Scheme for MIG :** The CLSS for MIG launched in 2017 covers two income segments in the MIG viz. Rs.6,00,001 to Rs.12,00,000 (MIG-I) and Rs.12,00,001 to Rs.18,00,000 (MIG-II) per annum. In the MIG-I, an interest subsidy of 4% has been provided for loan amounts up to Rs.9 lakh while in MIG-II, an interest subsidy of 3% has been provided for loan amount of Rs.12 lakh. The interest subsidy will be calculated at 9% NPV over maximum loan tenure of 20 years or the actual tenure, whichever is lesser. Housing loans above Rs. 9 lakh and Rs. 12 lakh will be at non-subsidized rates. It supports acquisition/ construction of houses (including re-purchase) of 160 square meters and 200 square meters carpet area for MIG-I and II respectively as per income eligibility

Houses Sanctioned and Completed

The Technical Group on Urban Housing Shortage (TG-12), constituted by the Ministry of Housing and Urban Poverty Alleviation (MoHUPA) in 2012 stated that there was a shortage of 1.88 crore housing units over the period 2012-2017. Of these, the EWS alone accounts for 1.06 crore units or 56% of the total shortage. The LIGs require 74.1 lakh housing units or 39.4% whereas Middle and Higher Income Groups have a deficit of 8.2 lakh or 4.4% of the total shortage. The gap is mostly in the affordable sector, i.e., EWS and LIG segments accounting for about 96% of the total shortage.

The PMAY-U initially set up a target of constructing 2 crore houses by 2022, which was later reduced to 1.2 crore, according to the demand survey conducted in different States. So far 90.73 lakh houses have been sanctioned by the Ministry of Housing and Urban Affairs (MoHUA) by October, 2019. Of the total houses sanctioned, construction work has started in 60.6% (55,00,096) houses till October, 2019. The construction of 28.01 lakh houses has been completed. A total of 25,25,694 houses have been occupied by the beneficiaries of PMAY-U as on 28th October, 2019. The State-wise progress of PMAY-U is depicted in Table-1. This includes the subsumed projects of the erstwhile housing scheme under the Jawaharlal Nehru National Urban Renewal Mission (JNNURM). The data indicates, therefore, that five years into implementation there has been a little over 21% completion rate against the target of building 1.2 crore houses.

Table-1 : Pradhan Mantri Awas Yojana (Urban) – Housing for All (HFA) State-wise Progress (since 2014)

(As on 28.10.2019)

S. No.	Name of the State/UT	Project Proposal Considered	Houses Sanctioned	Houses grounded* for construction	Houses completed*	Houses occupied*
1.	Andhra Pradesh	570	12,50,116	6,88,404	3,12,489	1,58,762
2.	Bihar	413	2,87,552	1,44,789	58,179	61,603
3.	Chhattisgarh	1469	2,53,743	1,68,579	60,058	60,888
4.	Goa	10	722	663	663	663
5.	Gujarat	1027	5,92,832	4,76,546	3,40,242	3,03,328
6.	Haryana	538	2,65,851	42,539	17,864	18,084
7.	Himachal Pradesh	131	9,915	7,018	2,736	2,686
8.	Jammu & Kashmir	287	47,744	25,481	5,606	6,773
9.	Jharkhand	388	1,96,875	1,27,945	67,191	67,145
10.	Karnataka	1854	5,90,689	3,25,072	1,57,279	1,54,719
11.	Kerala	437	1,24,801	94,560	55,358	56,013
12.	Madhya Pradesh	1360	7,32,610	5,36,446	2,92,168	2,96,390
13.	Maharashtra	964	11,38,241	4,35,855	2,43,327	2,64,601
14.	Odisha	533	1,42,310	93,589	54,706	52,576
15.	Punjab	764	78,918	42,369	17,492	20,008
16.	Rajasthan	396	1,95,750	1,05,753	72,299	71,371

17.	Tamil Nadu	2982	7,32,582	5,47,526	2,56,309	2,30,089
18.	Telangana	246	2,14,756	1,81,816	94,856	52,582
19.	Uttar Pradesh	3595	14,01,899	8,54,761	3,49,146	3,49,051
20.	Uttarakhand	178	37,777	19,909	11,277	11,423
21.	West Bengal	418	4,07,801	2,83,365	1,55,630	1,56,006
22.	Arunachal Pradesh	48	7,230	6,870	1,645	1,745
23.	Assam	237	80,952	50,334	15,392	17,073
24.	Manipur	27	42,823	23,692	3,206	3,915
25.	Meghalaya	36	4,670	1,569	1,066	943
26.	Mizoram	32	30,258	9,986	1,990	2,419
27.	Nagaland	50	28,760	20,520	3,846	4,656
28.	Sikkim	11	535	507	242	294
29.	Tripura	63	80,426	50,769	38,760	38,760
30.	A&N Island (UT)	3	612	36	20	20
31.	Chandigarh (UT)	-	287	5,247	5,247	5,620
32.	D&N Haveli (UT)	3	4,758	3,846	2,034	2,034
33.	Daman & Diu (UT)	6	1,027	634	486	486
34.	Delhi (UT)	-	15,651	56,231	39,631	17,360
35.	Lakshadweep (UT)	-	-	-	-	-
36.	Puducherry (UT)	24	11,560	7,950	2,577	2,608
	Grand Total	19,100	90,73,033	55,00,096	28,01,017	25,52,694

*Including incomplete houses of earlier NURM

*Breakup of 60,000 beneficiaries and subsidy of Rs.1988.84 crore awaited from CNAs

Source : Ministry of Housing and Urban Affairs

Funds Sanctioned and Released under PMAY-U

A total of 19100 project proposals involving investment of Rs. 5,54,379.25 crore have been considered up to October, 2019. A sum of Rs 1,42,529.93 crore has been sanctioned as central assistance under the scheme, out of which about 40.6% of the sanctioned amount adding up to Rs. 57,895.76 crore has been released over the last five years.

Big Boost to Housing and Infrastructure

Real estate, housing and infrastructure are at the forefront of the Government's policy to boost economy and push up growth. It has liberalized FDI in construction development, significantly reducing minimum area and capital investment requirements for foreign real estate developers. This eased

foreign investment for the sector, troubled by regulatory bottlenecks and paucity of funds. The second wave of FDI reforms in 2016, allowing 100 % FDI in civil aviation, food processing sectors and easing norms in defence and pharmaceutical sectors, was much to the advantage of real estate. Fully realizing that cities are the engines of growth, the Government, following the global trend of promoting urbanisation, directed its policies towards improving cities productivity. It launched key reform programmes of 'Atal Mission of Rejuvenation & Urban Transformation' (AMRUT) and 'Smart Cities Mission', adopting incentive based approach, directly linking financial incentives to reforms undertaken by urban local bodies for developing urban infrastructure in cities. AMRUT is targeted to rejuvenate 500 cities on PPP model, benefiting 2 crore urban households.

The Government through its reform initiatives is focusing on improving the quality of human life. And for that purpose, a City Livability Index has been launched for major cities on the basis of quality of life they offer. As urban infrastructure holds the key to urban transformation, the Government is putting emphasis on boosting urban infra investment. The policy initiatives on the infrastructure front are clearly showing results. The cost overruns in central sector infrastructure projects has come down sharply in recent years, reflecting increased efficiency in project implementation and faster clearances.

As part of its urban reforms agenda, the Government's mission of 'Housing for All by 2022' assumes great significance. And to ensure the success of its ambitious programme, the Government has taken enabling policy decisions like according infrastructure status to affordable housing, tax incentives for affordable housing to builders and home buyers and credit linked interest subsidy under PMAY to home seekers. Now the interest deduction has gone up to Rs. 3.5 lakh on purchase of self-occupied house costing up to Rs. 45 lakh.

The setting up of Real Estate Investment Trusts (REITs) and providing for paced up listing; will come handy to fund capital-starved developers. The Benami Property Act, aimed at stamping out black money and other measures to weed out cash transactions, are also going to check artificial & speculative spurt in prices and making homes more affordable. The enactment of the Real Estate Regulation and Development Act (RERA) is going to boost real estate and housing by bringing in transparency and credibility, protecting the interests of property buyers and making the business regulated and more organised. Notwithstanding these path breaking reform initiatives, the immediate challenge before the Government is to ensure smooth and effective implementation of these measures while executing its on-going agenda of reforms like single window clearance, ease of doing business, rental housing, rationalization of land prices

and stamp duty among others. The Government is making all out efforts to see that the cumulative effect of all its reform initiatives ensures transformational changes on ground, bringing in significant improvement in the quality of life of the common man.

Constraints

This is not the first time that an ambitious housing programme like Housing for All is being implemented by the Central Government. Earlier also, attempts were made by successive Governments to improve basic services, provide tenure security, upgrade existing infrastructure and create new housing units with a vision of creating a 'Slum Free India'. Although similar in vision, the PMAY-U: Housing for All by 2022 adopted a much more decentralised system in financing the construction and development of housing. This has generated a hope that PMAY-U would overcome the challenges of previous schemes and would introduce new ways of providing affordable homes. However, in spite of the availability of flexible and low-interest housing loans, people are not coming forward for housing projects due to the high costs of land, particularly in urban areas. Moreover, to access certain components like BLC and CLSS of the PMAY it is essential to possess a host of identity documents. While the Aadhaar card is a document which almost all individuals possess, there is a variance in the possession of other required documents to access housing.

Lack of access to finance from formal financial institutions, limited private sector participation in affordable housing schemes in urban areas, limited access to suitable land banks for affordable housing projects, continued growth of slums, lack of trained masons, etc. are some of the constraints coming on the way of smooth implementation of scheme.

Under the AHP component, especially in the bigger metros, it appears that affordable housing projects can only be built on the outskirts of the city, far away from people's workplaces. If location is not taken into account, there will be very few takers for these houses as some of the biggest factors influencing people's decision to purchase a home are based on travel time to workplace and affordability. For instance, in dense metropolises such as Mumbai and Delhi, where real estate is notoriously expensive, affordable housing projects under the scheme seem to be restricted to suburbs and satellite towns far from the city. Affordable housing has been granted infrastructure status, which gives housing developers additional benefits to boost their interest in these projects, but the delivery of house construction has not moved at a fast pace as expected from these reforms. For ordinary people, the timely delivery of the house still remains a distant dream.

Suggestions for the Way Forward

In order to overcome the constraints on the way of providing Affordable Housing for All by 2022, there is need to ensure easy access for the poor to institutional finance, encourage use of alternate and sustainable building materials and construction technologies that offer safer and disaster resistant affordable houses. At the same time, up-gradation of existing slums by providing them with basic amenities and improving physical and social infrastructure like roads, sewage and drainage systems, parks, waste disposal and management, hospitals, schools, etc. is critical as it would be the most economically viable option to improve the living conditions of the disadvantaged segment of the population living in slums. This will also avoid their displacement to far-off locations.

People who are safe from eviction, with a sense of long-term stability are much more likely to invest in their housing or community. Thus, the State Governments should promote the provision of land tenure rights. Some of the State Governments have provided or are in the process of providing land tenure rights or pattas to individuals living in slums. The ownership of land in these areas has led to higher human development indices and better quality of life for the poor. Therefore, different types of tenure should be explored so that the beneficiaries can take advantage of the scheme. Most importantly tenure rights should preferably be given in the name of the women in the household to promote women's empowerment.

Under the PMAY-U, the emphasis is given on the construction of houses; other potential housing solutions such as rental housing have not been included. In current situation, with high rates of migration to urban centres for work, the concept of large-scale rental housing equipped with basic amenities can come to the rescue. Additionally, this also suits the income volatility and high-risk profile of low-income households working in the informal sector. As per Census-2011, nearly 1.1 crore houses were lying vacant across the country and making these houses available on rent will complement the vision of Housing for All by 2022. Therefore, the vacant houses need to be unlocked by bringing transparency and accountability in existing system of renting of premises.

Various urban development schemes should work in synergy with each other. Similarly, as there are multiple land-owning agencies in the country, true and complete convergence will be realised when there is effective coordination between State Governments and Central Authorities to use their resources and reach the Housing for All by 2022 goal together. Further, the data available on the scheme at present is limited to the number of constructed and under-

construction projects in different States. The Government must ensure the monitoring of qualitative indicators of housing such as material quality assessment, adequacy, accessibility, etc. In addition, there is a need for real-time data on location, component of the scheme, targeted population and funding, which will enable transparency & accountability and also ensure cooperation and participation from the wider civil society.

The land which is lying idle with various sick or loss making public sector undertakings of the Government should be used for affordable housing projects under the PMAY-U. Simultaneously, the land locked under slums as an unused asset needs to be utilised by the Government to provide affordable housing, otherwise the real beneficiaries will be builders who buy land at concessional prices under the scheme and use a major chunk of the land to build houses for Middle and High Income Groups and make huge profits under the garb of these schemes. We must find more viable and creative solutions that address specific local needs to reduce the scale of housing shortage in the country, strengthen monitoring mechanisms and encourage the participation of citizens in decision making to realise the dream of Housing for All.

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GUIDELINES TO CONTRIBUTIONS

1. Two copies of the manuscript typed in double space and soft copy along with an abstract of 100 words should be sent to the Managing Editor, Co-operative Perspective, VAMNICOM, University Road, Pune 411 007.
2. The articles are sent for review to the Referees.
3. Name (s) and affiliation (s) of author (s) should be provided in a separate page along with title of the article.
4. Papers sent for publication should not have been published or sent for publication elsewhere.
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6. All remittances may be sent to Director, Vaikunth Mehta National Institute of Co-operative Management, University Road, Pune 411 007 or it can be transferred at Saraswat Cooperative Bank Ltd., VAMNICOM Branch, Pune 411007 A/c. No. 110200100001763 / IFSC Code SRCB0000110 and details sent by email.

