



Transforming Cooperatives (with Sustainable Development Goals: Retrospective and Prospective)

**(Proceedings and Papers of
38th Annual National Research Conference)**



Indian Society for Studies in Cooperation

VAMNICOM , Campus, University Road, Pune 411 007

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(with Sustainable Development Goals: Retrospective and Prospective)

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**38TH ANNUAL NATIONAL
RESEARCH CONFERENCE
TAMILNADU**

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The views expressed in papers are of the Authors and not necessarily of ISSC, Pune

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Preface

Indian Society for Studies in Cooperation (ISSC) completed its 38th Annual National Research Conference in collaboration with The Gandhigram Rural Institute, Dindigul, Tamil Nadu, and Vaikunth Mehta National Institute of Cooperative Management, Pune at Silver Jubilee Hall on 6th and 7th October 2023. The theme of Annual National Research Conference was **“Transforming Cooperatives (with Sustainable Developmental Goals: Retrospective and Prospective)”**.

The theme of the Conference was **“Transforming Cooperatives (with Sustainable Developmental Goals: Retrospective and Prospective)”**. This conference explored the intricate relationship between cooperatives and the SDGs, both retrospectively and prospectively. It examined how cooperatives with their unique principles and structures, have historically contributed to sustainable development goals and how they continue to evolve as crucial agents of change in the pursuit of the SDGs.

The inaugural function began with lamp lighted by Shri. R.Shankar Narayan, Chief General Manager, NABARD, Chennai, Dr. Raama Srinivasan, Director, NABARD, Madurai, Shri Ramakrishnan, Joint Registrar of Cooperatives Society/Managing Director, District Central Cooperative Bank, Dindigul, Dr. M. Soundarapandian, Professor and Board of Member in GRI, Dr. N. Narayanaswamy, Retired Professor, former Registrar, GRI, Dr. P. Sivaprakasam, Retired Professor, GRI, and Prof Anil Karanjkar, Hon. Secretary, ISSC, Dr. C. Pitchai, Professor & Head of Department of Cooperation GRI were present on dais at the occasion. The inaugural function was attended by participants comprising of Cooperators, Members of the Society, Academicians, Officials, Faculty, Staff and Students of GRI.

I also thank, Dr. Raama Srinivasan, Director, NABARD, Madurai for delivering Key Note address. Valedictory Address by Shri O. V. Ramachandran, Director, IFFCO. We congratulate the paper presenters and delegates for participating in the Technical Sessions by Online and Offline Chairman of various Technical Sessions for moderating.

I am thankful to Dr. C. Pitchai and their team for their hospitality and support to make this conference successful. I am also thankful to all the delegates who came from such a long distance and participated in the conference. I am sure that without untiring efforts of Shri Anil Karanjkar and his team, this conference would not have been a grand success.

I acknowledge the financial assistance provided by all the sponsors - especially NABARD, Chennai, Karnataka State Souhadra Federal Co-operative Ltd., Bangalore, Gujarat State Coop. Union, Ahmedabad. The Aslali Sewa Sahkari Mandli Limited, Aslali, Ahmedabad (Gujarat), Gujarat State Coop Credit Societies Federation Ltd., Ahmedabad, and Pune Peoples Co-operative Bank Ltd., Pune, Apex Urban Co-op. Bank of Maharashtra and Goa, Mumbai.

I would also like to thank the Office Bearers of ISSC for taking keen interest to make the Conference a success and members of the Editorial Board for bringing out this publication.

Ghanshyambhai Amin

Chairman
ISSC, Pune



Indian Society for Studies in Cooperation
38th Annual National Research Conference, Tamil Nadu
(6th -7th October 2023)

PROGRAM

Day-I	6 th October 2023
09.15-10.15AM	Registration
10.30 - 11.30 AM	<p>About ISSC & Conference Dr. Anil Karanjkar Hon. Secretary, ISSC</p> <p>Inaugural Function At the hands of Shri R. Shankar Narayan Chief General Manager NABARD, Chennai</p> <p>Key Note Speaker Dr. Raama Srinivasan Director NABARD, Madurai</p> <p>Chief Guest Shri Ramakrishnan Joint Registrar of Cooperatives Society</p> <p>In Presence of: Dr. M. Soundarapandian Board of Member, GRI</p> <p>Vote of Thanks Dr. C. Pitchai Prof. & Head, Gandhigram Rural Institute, Tamil Nadu</p>
11.45 - 01.00 PM	Plenary Session I & II (Research paper presentation and discussion) (Parallel Sessions)
02.00-02.30PM	Plenary Session I & II (Research paper presentation and discussion) (Parallel Sessions)
02.30PM	Annual General Meeting of ISSC
03.15 - 05.00 PM	Plenary Session III & IV (Research paper presentation and discussion)

Day - II

7th October 2023

09.30-11.00AM

Plenary Session V & VI
(Research paper presentation and discussion)
(Parallel Sessions)

11.15-01.30PM

Plenary Session VII & VIII
(Research paper presentation and discussion)

02.00-03.00PM

Valedictory Function:
Shri O. V. Ramachandran
Director, IFFCO, Palladam

In Presence of:
Dr. L. Rathakrishnan
Registrar I/C
GRI, Tamil Nadu

Vote of Thanks
Dr. Anil Karanjkar
Hon. Secretary, ISSC

Indian Society for Studies in Cooperation

**C/o. VAMNICOM, University Road,
Pune 411 007**

Proceedings of 38th Annual National Research Conference, Tamil Nadu (October 6th-7th, 2023)

Indian Society for Studies in Cooperation (ISSC) completed its 38th Annual National Research Conference in collaboration with The Gandhigram Rural Institute (DTBU), Gandhigram and Vaikunth Mehta National Institute of Cooperative Management, Pune at Silver Jubilee Hall on 6th and 7th October 2023. The theme of Annual National Research Conference was **“Transforming Cooperatives with Sustainable Developmental Goals: Retrospective and Prospective”**. The society received 48 research papers for the Conference. The papers were presented online and offline mode. The details and overall impact of the entire event are described below:

DAY – 16th October 2023 (Silver Jubilee Hall)

Inaugural Function:

The Inaugural function began with a prayer song, followed by the traditional lamp lighted by the dignitaries. Shri. R. Shankar Narayan, Chief General Manager, NABARD, Chennai, Dr. Raama Srinivasan, Director, NABARD, Mumbai, Shri Ramakrishnan, Joint Registrar of Cooperatives Society / Managing Director, District Central Cooperative Bank, Dindigul, Dr. M. Soundarapandian, Professor and Board of Member in GRI, Dr.N.Narayanaswamy, Retired Professor, former Registrar, GRI, Dr. P. Sivaprakasam, Retired Professor, GRI, and Prof Anil Karanjkar, Hon. Secretary, ISSC, Dr. C. Pitchai, Professor & Head of Department of Cooperation GRI were present on dias at the occasion. The inaugural function was attended by participants comprising of Cooperators, Members of the Society, Academicians, Officials, Faculty and Students of GRI.

During the inaugural ceremony senior professors of Gandhigram Rural Institute honoured by the chief guests were: Dr. M. Soundara Pandian honoured Dr. Shri Ramakrishnan with a shawl and a memento, Dr. B. Tamilmani honoured Dr. N. Narayana Swamy with a shawl and a memento, Dr. Ravichandran honoured Dr. P. Siva Prakasham with a shawl and a memento.

Shri Anil Karanjkar, Secretary, ISSC welcomed the dignitaries, guests, and delegates and briefed the gathering about the objectives, functions, and progress of ISSC's activities. He also briefed about the relevance of the theme “Transforming Cooperatives with Sustainable Developmental Goals: Retrospective and Prospective)” in today’s scenario.

Shri Ramakrishnan, Joint Registrar of Cooperatives Society/Managing Director, District Central Cooperative Bank, Dindigul. He initiated by felicitating the conference with a wonderful quote “Cooperation has failed, but Cooperation must succeed”. He explained the role of an individual in a society stating ‘Indiscipline is a selfish act and self-discipline is public welfare’. He indicated the resemblance of such conducts of public welfare in Cooperation and its functions.

Dr. N. Narayanaswamy, Retired Professor, former Registrar, Veteran Cooperation Academia and the 1st PhD scholar of GRI. He explained the contemporary paradigms of cooperatives in economy. He based the idea on the principles of sustainability, equity and concern for the community as a wellbeing and responsibility. He insisted cooperative enterprises are by nature a sustainable and participatory form of business.

Dr. P. Sivaprakasam, Retired Professor of the Gandhigram Rural Institute – DTBU, shared life experiences. With an academic background in cooperation, having completed his M.A in the cooperation field, he embarked on a career as a trainer at the training center in Bangalore, amassing several years of valuable experience. During his discourse, he recounted his noteworthy journey to China, where he explored and elucidated upon the Malthusian Theory of Population. Dr. Sivaprakasam also delved into the intricacies of the food crisis commodity, highlighting that despite India’s escalating population, it has not experienced a crisis.

Shri. R. Shankar Narayan, Chief General Manager, NABARD, Chennai, proposed the special address. Firstly he shared the importance of NABARD for aiding Cooperation in developing rural areas. He pointed out the programs organized by NABARD such as watershed events. He highlighted it as a turning point for all sectors of cooperation and academia. Also, he gave a note about the digitalization of banks which had become more active and vibrant. Further, he mentioned the cooperatives of different areas that are subjected to the new policy of cooperation implementing the computerization of the entire banking system. NABARD financially aids DCCB, SCB, and PACS which helps to resolve problems of Farmers. He also referred to the storage systems in cooperation.

Dr. Raama Srinivasan, Director, NABARD, Madurai, delivered the key note address. He detailed about the capitalist model, Communist model, and the Indian model. He then briefed about the eradication of poverty and detailed GDP with the data which is 60% of GDP come from general people, 1-12% from corporate, 3-4% from share market. He suggested that to decrease this percentage from normal people, the Hon'ble Prime Minister Narendra Modi, established the Ministry of cooperation under the governance of Minister Shri Amit Shah. Further he highlighted the states of Rajasthan and Gujarat as highest milk producers of India. He also mentioned about the yield obtained in India which is 330 million tonnes. He further envisioned the rise of Indian Economy and the role of cooperation in it.

Dr. C. Pitchai, Professor & Head of Department of Cooperation GRI proposed the vote of thanks. He extended his gratitude to all the dignitaries, Veteran Cooperation Academia, delegates, and participants of the conference.

Technical Session - I

(6th October 2023)

The Technical session was conducted in the Silver Jubilee Hall, in the forenoon. The session was presided over by Session Chairman. Researchers were given 25 minutes to present their paper and 15 minutes for discussion. This technical session was chaired by Mr. Sanjeev Khadke, Ex Joint Registrar, Cooperative Election, M.S.

Rapporteur: Mrs. B. Krupa Shree, GRI G. Gokul & Ch. Prasanna Kumar, M.Com. - I, Department of Cooperation, GRI.

The following papers were presented during technical session I.

1. Transformational Role of Employees Credit Cooperatives in achieving SDGs - A case study of “The Ratnagiri District Postal Employees Cooperative Credit Society Ltd. Ratnagiri, Maharashtra State, India by Sukdeo Bhikaji Patil, (Rtd.) Additional commissioner and joint secretary (Cooperation), Cooperation Marketing & Textile Department, Government of Maharashtra, Mumbai.
2. Leadership Framework for Sustainability of Women SHGs Movement / Informal Cooperative Institutions by S. Ammaiyappan, Research Scholar, Department of Cooperation and Dr. S. Manivel, Professor, Department of Cooperation, GRI.
3. Role of Cooperatives in Rural Development by Gulnawaz Usmani, Assistant Professor, Department of Economics and Anwar Shaikh, Principal AKI’s Poona College of Arts, Science and Commerce Campus, Pune.
4. Socio-Economic Conditions of Member Workers in Primary Coir Cooperatives by Neeraj S. Nair, College of Cooperation, Banking and Management, Kerala Agricultural University, Thrissur.
5. A Study on the Financial Performance of Venginissery Service Cooperative Bank (VSCB) Ltd. No. R. 528 by Devika J, Research scholar (Cooperative Management), Department of Cooperative Management, CCBM, Kerala Agricultural University, Kerala and Naila, Research Scholar (Cooperative Management), CCBM, Kerala Agricultural University, Kerala.
6. Role of Women in Primary Agricultural Cooperative Credit Society: Opportunities and Challenges in the Union Territory of Puducherry by B. Kanimozhi, Research Scholar, Department of Cooperation; Dr. S. V. Akilandeewari, Asst. Prof & Head, Athoor Cooperative Arts and Science College, Dindigul and Dr. C. Pitchai, Prof. & Head, Department of Cooperation, GRI.

7. Health Cooperatives towards Achieving Good Health and Well-being under SDGs by B.Krupa Shree, Research Scholar, Department of Cooperation and Dr. S. Manivel, Professor, Department of Cooperation, GRI.
8. Role of Consumer Cooperative in Attaining the Sustainable Development Goals by Dr.M.Jansirani, Guest Lecturer, Department of Cooperation, GRI
9. Sustainable Livelihoods and Economic Growth: The Impact of Dairy Cooperatives on Members in Dindigul District, Tamil Nadu by V.Durga, Research Scholar, Department of Cooperation and Dr.C.Pitchai, Professor & Head, Department of Cooperation, GRI.

Technical Session 2

(06-10-2023)

The Technical session was conducted in the Silver Jubilee Hall, in the forenoon. The session was presided over by Session Chairman. Researchers were given 25 minutes to present their paper and 15 minutes for discussion. This technical session was chaired by Dr. B. Manivel, Professor, Cooperation, GRI Rapporteur: Ms. V. Durga, Research Scholar, Department of Cooperation, GRI and M. Maheshwara & B. Rishikesavan, IM.Com Department of Cooperation, GRI.

The following paper were presented during the session.

1. Hegemonic Masculinity and Violence against Rural Women in Kerala by Gopika Sivan, Research Scholar and Dr. A. Balakrishnan, Director/Professor, Centre for Applied Research, GRI.
2. A Study on perception of Handloom weavers' Housing schemes with special reference to Madurai district by Thirupathi Raja, Research Scholar, Department of Cooperation and Dr. K. Devan, Assistant Professor, Department of Cooperation, GRI.
3. Realizing SDGs by Enabling Cooperative Model on Chain to Enhance the Edible Oil Production by G. Kathiravan & Dr. S. Dharma Raj, Faculty, Institute of Cooperation Management, Madurai.

4. Farmer Producer Organisation (FPOs): Innovative Business Model for Farmers Collective by M. Ragubalan, Research Scholar, Department of Cooperation; Dr. S. V. Akilandeewari, Assistant Prof & Head, Athoor Cooperative Arts and Science College, Dindigul and Dr. C. Pitchai, Professor & Head, Department of Cooperation, GRI.
5. A Study on Sustainable Development Goals and Primary Agricultural Cooperative Credit Societies in Dindigul District, Tamil Nadu by B. Punniyan, Assistant Professor, Athoor Cooperative Arts and Science College and Dr. C. Pitchai, Prof. & Head, Department of Cooperation, GRI
6. A study on the RIDF and Cooperative Sector Projects in Dindigul District by K. Hariprasath, Research Scholar, Department of Cooperation and Dr. S. Manivel, Professor, Department of Cooperation, GRI.
7. Role of Dairy Cooperatives in the Union Territory of Puducherry in Fulfilling the Gender Equality by V. Dhanalakshmi, Research Scholar, Department of Cooperation; Dr. S. V. Akilandeewari, Asst. Prof & Head, Athoor Cooperative Arts and Science College, Dindigul, and Dr. C. Pitchai, Prof. & Head, Department of Cooperation, GRI

The Department of Cooperation has arranged a cultural programme to refresh the minds of the dignitaries and the student participants. The cultural events were started at 5.00 p.m. The cultural program has various events such as mime on child abuse and anti-ragging, traditional folk dance and other dances by the students of cultural cell and department of cooperation, GRI. All the students participated enthusiastically and presented their events with great zeal. The dignitaries were overwhelmed by the performance of the students and as a token of appreciation, they gave cash prizes to the cultural cell of GRI.

Second Day

Technical Session 1

(07-10-2023)

The Technical session was conducted in the Silver Jubilee Hall, in the forenoon. The session was presided over by Session Chairman. Researchers

were given 25 minutes to present their paper and 15 minutes for discussion. This technical session was chaired Dr. B. Tamilmani, Professor, Department of Cooperation, GRI Rapporteur: Ms. S. M. Surya, Research Scholar, Department of Cooperation, GRI and C. Hari Prasad & A. Caroline, M.Com. - I, Department of Cooperation, GRI

1. Leapfrogging of Multistate Cooperative Societies in India – An Exploratory Study Conducted by Dr. E.Vinaikumar presented by Dr. G. Veerakumaran, Professor (Rtd.), College for Cooperation, Banking and Management, Kerala Agricultural University, Thrissur.
2. Sustainable Development Goals: Retrospective and Prospective by Sharangouda G. Patil, Managing Director, Karnataka state Souharda Federal Cooperative Ltd., Bengaluru.
3. Social Media and Sustainable Development Goals - A Study of National Cooperative Union of India by Dr. Sanjaykumar Verma, & Dr. Anuradha, National Cooperative Union of India.
4. Cooperative Finance and Economic Wellbeing of the Members: An Empirical Study on the Member's Perspective by Dr. Dipak Y. Chacharkar, Professor & Head P.G.T Department of Business Administration and Management, Sant Gadge Baba Amaravati University, Amaravati.
5. Governance, Risk and Compliance (GRC) in Indian Cooperatives - Leveraging Technology for Good Governance by Dr. V. Mariappan, Professor and Head, Department of Banking Technology, Pondicherry University, Pondicherry
6. Substituting Banking Needs through Cooperative Society: An Assessment of Governance and Performance by Dr. Ankita R. Ojha, Faculty P.G.T Department of Commerce, Sant Gadge Baba Amaravati University, Amaravati.
7. Sustainable Development of PACS Retrospective and Prospective by Shrikant Mahadev Chougule, Cooperative auditor, Kolhapur
8. Role of Co-operatives in Rural Economy of India by Dr. K. Manikandan, Assistant Professor, Department of Economics, GRI and Muhammad Rishad K. P, Research Scholar, Department of Economics, GRI.

Technical Session 2

(07-10-2023)

The Technical session was conducted in the Silver Jubilee Hall, in the forenoon. The session was presided over by Session Chairman. Researchers were given 25 minutes to present their paper and 15 minutes for discussion. This technical session was chaired Dr. K. Ravichandran, Department of Cooperation, GRI Rapporteur: Mr. K. Hariprasath, Research Scholar, Department of Cooperation, GRI and S. Safana Asmath & S. Arun Kumar, M.Com. - II, Department of Cooperation, GRI

1. Farmer Producer Organisations – New Avatar of Cooperatives by V. Manjula, Research Scholar, Department of Applied Research, GRI.
2. SWOT analysis of Marine Primary Fisheries Cooperative Societies in Kanyakumari, Tamil Nadu by Rujan, J., Shivaji Argade, Ananthan P. S. and Janarthanan G., ICAR- Central Institute of Fisheries, Education, Mumbai.
3. An Analysis of the Contribution of the Central Cooperative Bank towards the Growth and Empowerment of Self-Help Groups in the Periyanaicken Palayam Block, Coimbatore District by Dr. P. Velusamy, Assistant Professor, Department of Cooperation, SRMV, Coimbatore; B.GoplalaKrishnan, Assistant professor, Department of Business Administration, Muthayammal College of Arts and Science, Rasipuram and S. Arunkumar, Research Scholar, Department of Cooperation, SRMV, Coimbatore
4. Innovation and Best Practices in Cooperatives – A Case Study on IFFCO by Dr. P. Velusamy, Assistant Professor and Muthukumaran D., M.Com. - I (Cooperative Management), Department of Cooperation, Sri Ramakrishna Mission Vidyalaya college of Arts and science, Coimbatore.
5. Role of APEDA in sustainable Agricultural Marketing in India by R. Vignesh, Research Scholar and Dr. M. Soundarapandian, Professor, Department of Rural Industries and Management, GRI.
6. Barriers to Gender Equality for Women Laborers in Advancing their Careers in the Construction Sector by Seema William Xalxo, Research Scholar, Centre for Applied Research, GRI and Dr. A. Balakrishnan, Professor and Dean, Centre for Applied Research, GRI.

7. Achieving Sustainable Development of Rural Women Fibre Craft Workers: Intersectionality Paradigm of Handicrafts Cooperatives in Kerala by Ganga. P. Sreenivasan, Research Scholar and Dr. M. Hilaria Soundari, Associate Professor, Centre for Applied Research, GRI.

Technical Session 3

(07-10-2023)

The Technical session was conducted in the Silver Jubilee Hall, in the forenoon. The session was presided over by Session Chairman. Researchers were given 25 minutes to present their paper and 15 minutes for discussion. This technical session was chaired Dr.G.Veerakumaran, Retired Professor, Kerala Agricultural University Rapporteur: Miss. V. Dhanalakshmi, Research Scholar, Department of Cooperation, GRI and Swetha & Surya, M.Com. - III, Department of Cooperation, GRI

1. Role of PACS in Promoting Sustainable Agriculture in Rural Areas: A Case Study of TUCAS in Coimbatore District by N. Neelapraha, M.Com. - I, (Cooperative Management), GRI and Dr. B. Tamilmani, Professor, Department of Cooperation, GRI.
2. Ensuring Sustainable Livelihoods to the Farming Community through Erode Agricultural Producers Cooperative Marketing Society by V. Sneha, M.Com. - I (Cooperative Management), GRI and Dr. B. Tamilmani, Professor, Department of Cooperation, GRI.
3. Role of Weavers' Cooperatives in Providing Decent Work and Promoting Economic Development: An Empirical Study by R. Gopika Shriand M. Swetha, III B.Com (Cooperation), GRI.
4. Cooperatives and Decent Work: A Case Study on the Functions of Pallapatti Primary Milk Producers Cooperative Society Ltd., by S. Sassitha, III B.Com (Cooperation), GRI
5. The Role of Somanur Primary Agricultural Cooperative Credit Society in Empowerment of Women by R. Kaniha, D. Aakash Varthan, M.Com. - I (Cooperative Management), GRI, and Dr. K. Ravichandran, Professor, Department of Cooperation, GRI

6. A Study of Patients Satisfaction in Cooperative Hospital in Palakkad Kerala by K. Athulya, and M. Balamurugan, M.Com. - I (Cooperative Management), GRI.
7. Role of Palangarai PACS in Ensuring Sustainable Agriculture in Tirupur District by S. Suguna, M.Com - II (Cooperative Management), GRI, and Dr. K. Ravichandran, Professor, Department of Cooperation, GRI.
8. A Study on Primary Milk Producers Cooperative Society on Promoting Women Empowerment by S. Arun Kumar, M.Com. - I (Cooperative Management), GRI and Dr. S. Manivel, Professor, Department of Cooperation, GRI
9. A Role of Ramarajapuram PACCS Ensuring Sustainable Agriculture in Dindigul District by M.Nagendran, S. Shridher, M.Com. - I (Cooperative Management), GRI and Dr.C.Pitchai, Professor & Head, Department of Cooperation, GRI
10. A Study on Dividend Utilization among the Members in Gandhigram Rural Institute Employees Cooperative Thrift and Credit Society Ltd., by S. Babydeepika, Mahalakshmi, M.Com. - I (Cooperative Management), GRI and Dr. B. Basker, Assistant Professor, Department of Cooperation, GRI
11. A Study on Sustainable Agriculture and Food Security through Koovanuthu Primary Agriculture Cooperative Credit Society by S. Safana Asmath, M.Com. - I (Cooperative Management), GRI and Dr. K. Dhevan, Assistant Professor, Department of Cooperation, GRI
12. A study on Vanam India Foundation by V. Shalini Saranya, M.Com. - I (Cooperative Management), GRI.

Online Session
Technical Session 4
(07-10-2023)

The Technical session was conducted in the Silver Jubilee Hall, in the forenoon. The session was presided over by Session Chairman. Researchers

were given 25 minutes to present their paper and 15 minutes for discussion. This technical session was chaired Dr. S. V. Akilandeewari, Assistant Professor & Head, Athoor Cooperative Arts and Science College, Dindigul
Rapporteur: Miss.B. Kanimozhi, Research Scholar, Department of Cooperation, GRI and R. Kaniha & D. AakashVarthan, M.Com. - II Department of Cooperation, GRI

- 1 Emotional Intelligence among the Cooperative Bank Employees by Shahana K. S., Research Scholar; Dr. Ushadevi K. N. (Dean), Professor and Head, Department of Rural Marketing Management, College of Cooperation, Banking & Management, Kerala Agricultural University and Dr. S. Helen, Professor, Communication Centre, Kerala Agricultural University.
- 2 Assessing the Financial Sustainability of District Central Cooperative Banks on India: A Regional Analysis by Ananya Khajuria, Research Scholar, Department of Economics, Central University of Jammu, J&K; Ritu, Research Scholar, Department of Economics, Central University of Jammu, J&K and Dr. Shaveta Kohli, Associate Professor, Department of Economics, Central University of Jammu, J&K
- 3 Measuring Governance Quality in Inland Primary Fisheries Cooperative Societies of Tamil Nadu by Dinesh R, Shivaji Argade, Ankush Kamble and Ananthan P.S. ICAR – Central Institute of Fisheries Education
- 4 Role of Cooperative Hospitals in Providing Sustainable Health Care Services to the Community: A Study by S. M. Surya, Research Scholar, Department of Cooperation, GRI; Dr. B. Tamilmani, Professor, Department of Cooperation, GRI and Dr. M. Mahendran, MOT (Pediatrics), Department of Occupational Therapy, Consultant Pediatrics Occupational Therapist, Kauvery Hospital, Trichy.
- 5 Empowering Women: A Case Study of Swawlambi Sakhi Producer Company (FPO) by Dr. Pallavi Ingale, Associate Professor, Vaikunth Mehta National Institute of Cooperative Management, Pune, Maharashtra and Sonal Kadam, Research Officer, VAMNICOM, Pune.

Valedictory Function:

The Valedictory Session started at 1:45-3:00 p.m. on 07th October 2023 Dr. B. Tamilmani, Professor, Department of Cooperation, GRI has delivered the welcome address. He welcomed the dignitaries of the dias, Dr. B. Subburaj, Former Vice Chancellor (incharge); Shri. O. V. Ramachandran, Director, IFFCO; Dr. C. Pitchai Professor and Head, Department of Cooperation, GRI and Dr. Anil Karanjkar, Hon. Secretary, ISSC, Pune.

Shri O. V. Ramachandran, Director, IFFCO delivered the valedictory address. He highlighted Gender Equality stating ‘Treat women as equal. If you treat them equally, you will get exponential rewards from them’. Then, he quoted some national leaders and their remarkable contributions towards the nation including Dr. M. S. Swaminathan, Shri. G. Nammalwaar, and our Father of the Nation Mahatma Gandhi. Adding on, he strongly suggested that cooperatives are the real voting democracies.

Dr. Anil Karanjkar, Hon. Secretary, ISSC, Pune proposed the vote of thanks. He has thanked The Gandhigram Rural Institute, authorities of The Gandhigram Rural Institute, Department of Cooperation, faculties from various departments of GRI, and Dignitaries, Delegates, staff and volunteer students who made it possible to manage the entire event. He thanked O. V. Ramachandran, Director, IFFCO who delivered the valedictory address. He expressed heartfelt gratitude to all the dignitaries for sparing valuable time to address the delegates.

On behalf of ISSC, he expressed gratitude to all the sponsors – especially NABARD, Chennai, NCUI, New Delhi, Pune Peoples Co-operative Bank Ltd., Pune, Gujarat State Coop. Union, Ahmedabad., The Aslali Sewa Sahkari Mandli Limited, Aslali, Ahmedabad (Gujarat), Gujarat State Coop Credit Societies Federation Ltd., Ahmedabad Karnataka State Souhadra Federal Co-operative Ltd, Bengaluru.

PART 2



Farmer Producer Organizations (FPOs): Innovative Business Model for Farmers Collective

M. Ragubalan* Dr.S.V.Akilandeeswari Dr.C.Pitchai*****

Abstract:

Farmer Producer Organizations (FPOs) are the hybrid of cooperative organizations to improve the economies of scale of the farmers, especially the small and marginal farmers by providing the services like procurement, processing, input supply, linkage of markets, consultation, training, technological aid, etc. The concept of FPO is an innovative business model in cooperative sector; the Government also focuses more to develop the performance of the FPOs. The ninth Sustainable Development Goal (SDG) deals with Industry, Innovation and Infrastructure. In this connection, the present study focus on the question of FPOs are really a innovative business model to the farmers collective or not.

The study cover a FPO functioning in Tamil Nadu and its activities will be analysed by both primary and secondary data. The main objective of the study is analyse the business and management aspects of the FPO.

Keywords:

FPO, New Generation Cooperatives, and Innovative Business Model

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1. Introduction:

In India, around 85 per cent of the land belongs to small and marginal farmers and the farming sector provides 56 per cent of employment to Indian labour force. Being unorganized, these farmers are unable to realize right and reasonable value for their agricultural produce. The agricultural extension system struggles to address the emerging broad based needs of farmers at the backdrop of globalized agriculture trade situation and the agricultural platform largely influenced by number of factors and many concepts are being tried and one of the extension models is cooperative. Though many cooperatives are established on agricultural and other commodities, very few successes could be realized owing to corruption, political intervention, lack of 'business model' approach, lack of finance, lack of professionalism, lack of member participation and low government care on cooperatives. The aim of organizing a cooperative is to fulfill the social, economical and cultural needs of the members. From the beginning more number of cooperatives are commenced in the field of agriculture and agricultural allied sector like agricultural credit cooperatives, agricultural and rural development banks, agricultural producers marketing societies and dairy cooperatives. These cooperatives are organized for the socio-economic development of the farming community of India. But the cooperatives are not able to succeed wholly. So the success also not made in eliminating the problems faced by the farmers. A agricultural country like India should be clarify the above mentioned problems of the agricultural sector to save the farmers of India and the agriculture economy of the country.

Hence, in 2002, in order to revamp the cooperative structure, with the amendment of Companies Act 1956, by introducing part IX A and thereby paved the way for incorporation of Producer Companies. The purpose of the FPOs is to collectivize farmers, especially small producers to foster technology penetration, improve productivity, enable improved access to inputs and services and increase farmer incomes, thereby increase the livelihood of the farmers.

Objectives of the study:

- To study the services rendered by the sample FPOs their member farmers.
- To study the innovative business activities of sample Farmer Producer Organization.

Methodology:

The study was conducted based on both primary and secondary sources of data collected from annual and audit report of the FPOs, published journals, e-books, magazines and, other internet sources. It is an attempt to study the innovative business activities of the sample FPO.

Agriculture in India:

Agriculture is the primary source of livelihood for about 58 per cent of India's population. Gross Value Added by agriculture, forestry and fishing is estimated at Rs 18.55 lakh crore (US\$ 265.51 billion) in the financial year of 2018-19.

The Indian food industry is poised for huge growth, increasing its contribution to world food trade every year due to its immense potential for value addition, particularly within the food processing industry. The Indian food and grocery market are the world's sixth largest, with retail contributing 70 per cent of the sales. The Indian food processing industry accounts for 32 per cent of the country's total food market, one of the largest industries in India and is ranked fifth in terms of production, consumption, export and expected growth. It contributes around 8.80 and 8.39 per cent of Gross Value Added (GVA) in Manufacturing and Agriculture respectively, 13 per cent of India's exports and six per cent of total industrial investment.

Agricultural Market Size:

During 2018-19, food grain production is estimated at record 283.37 million tones. In 2019-20, Government of India is targeting food grain production of 291.1 million tones. Milk production was estimated at 176.3 million tones during the financial year 2017-18, while meat production was 7.4 million tones. As of August 2019, total area sown with kharif crops in India reached 92.6 million hectares.

India is the second largest fruit producer in the world. Production of horticulture crops is estimated at record 313.9 million metric tones in 2018-19 as per third advance estimates. Total agricultural exports from India grew at a CAGR of 16.45 per cent over FY10-18 to reach US\$ 38.21 billion in 2017-18. In 2018-19, agriculture exports were US\$ 38.54 billion. India is also the largest producer, consumer and exporter of spices and spice products.

Agriculture in Tamil Nadu:

Agriculture continues to be the most predominant sector of the State economy, as 70 percent of the population is engaged in Agriculture and allied activities for their livelihood. The State has as an area of 1.3 Lakh sq.km with a gross cropped area of around 63 L.Ha.. The Government policy and objectives have been to ensure stability in agricultural production and to increase the agricultural production in a sustainable manner to meet the food requirement of growing population and also to meet the raw material needs of agro based industries, thereby providing employment opportunities to the rural population.

Intensive Integrated farming system, massive Wasteland Development Programme, comprehensive watershed development activities, water management through Micro irrigation systems, Organic farming, Soil health improvement through Bio-fertilizer including Green Manuring, adoption of Integrated Nutrient Management (INM) and Integrated Pest Management (IPM) technologies are given priority through various programmes, besides crop diversification to fetch better return and value addition to agricultural produce are also given priority to improve the economic status of the farming community.

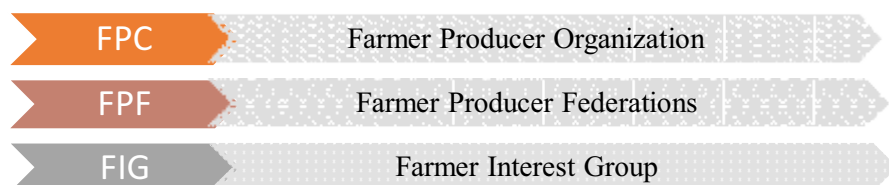
Theoretical Background of FPOs:

Farmer Producer Organization is a cooperative model of platform for small and marginal farmers to create and provide quality input supply, procurement of farm produces, processing, storage, credit, technology, transportation, linkage of market and export facilities through collective farming activities, there by strengthening the sustainable agricultural based livelihood of the farmers.

Chart 1

Structure of FPOs :

Structure of FPOs



As per the guidelines of FPOs, three tier structure is followed for the correct functioning of FPOs. Around, 50-70 FIGs can together form a FPO. Between the processes of forming a FPO a significant number of FIGs will together form a Farmer Producer Federations.

Management Pattern of FPOs:

The management pattern is structure with the compilation of elected representatives and paid employees. The model of FPOs is derived from the cooperative model. Both cooperatives and FPOs General Body is the supreme authority. Apart from Board Executive Body is functioning with the membership of 2 representatives from each FIGs. The chairman is a head for the administration and supervision of business activities of the FPOs. The elected Board members are decision makers and executors of the FPOs.

Functions of FPOs:

Functioning of Producer Organization is similar to that of cooperatives in terms of managing day-to-day activities and whole entity is solely run by the farmer members themselves. The functional activities of the FPOs are to provide needed input supply to the members of the FPO. The second stage is to procure the agricultural produce of the members for sales and the next function of processing and value addition process. The main function is to market the produces and the value added products of the organization and also provide training and orientation programmes to the member farmers of the FPO for their productivity increment.

Benefits to the members:

- Cost of production can be reduced by procuring all necessary inputs in bulk at wholesale rates
- Aggregation of produce and bulk transport reduces marketing cost, thus, enhancing net income of the producer
- Building the scale through produce aggregation enables to take advantage of economies of scale and attracts traders to collect produce at farm gate
- Access to modern technologies, facilitation of capacity building, extension and training on production technologies and ensuring traceability of agriculture produce. Post-harvest losses can be minimized through value addition and efficient management of value chain

- Regular supply of produce and quality control is possible through proper planning and management
- Price fluctuation can be managed; if there are practices like contract farming, agreements, etc.
- Easy in communication for dissemination of information about price, volume and other farming related advisories
- Access to financial resources against the stock, without collaterals
- Easy access of funds and other support services by the government / donors / service providers, and
- Improved bargaining power and social capital building.

Business operations of the sample FPO:

Valwill Sudeasi Farmer Producer Company Limited (VSFPCL) was registered and started functioning from 11th May 2016 by the initiatives taken by the farmers groups around the Rasipuram taluka of Namakkal District. The business of the FPC covering entire Namakkal district. The FPC concentrate on Millets and Pulses cultivated in the coverage of the FPC.

Membership and share capital position:

Table 1: Membership and share capital position of the FPC

Year	Member	Share Capital (Rs.)	Equity Grant from POPI (Rs.)
2017-2018	1000	10,00,000	5,00,000
2018-2019	1000	10,00,000	5,00,000
2019-2020	1500	15,00,000	5,00,000
2020-2021	1500	15,00,000	-
2021-2022	1500	15,00,000	-

Source: Audit Reports of the FPC

The VSFPCL functioning with 1500 farmer members with Rs.15,00,000 paidup share capital and Rs.15,00,000 Equity Grant Fund from the Producer Organization Promotion Agency (POPI) namely Tamil Nadu Small Farmers Agribusiness Consortium (TNSFAC). The Equity grant is a fund will be given equal to the paid up share capital of the company. Under this scheme a FPC can get maximum of Rs. 15 lakh.

Procurement and Marketing:

The main role of the FPCs is to provide reasonable price to the agricultural produces of the members. The VSPCL procuring the Foxtail Millet, Little Millet, Kodo Millet, Barnyard Millet, Pearl Millet and Finger Millet.

Table 2: Procurement and marketing details

Year	Procurement (Mtr Tons)	Marketed (Mtr Tons)	Value Marketed (Rs.)
2017-20	122	87	5,40,000
2018-20	156	106	8,25,000
2019-20	187	120	9,90,000
2020-20	201	128	11,00,000
2021-20	221	135	13,20,000

Source: Audit Reports of the FPC

From the total procurement some per cent of produces are stored as raw materials for value addition, balance produces are marketed to the traders. During the study period, the procurement and marketing shows the increasing trend and the revenue also increased. The VSPCL providing one to three per cent higher price to their members than the non-members. Transportation facility also provided to carry the produces from the field without charges.

Value Addition:

The VSPCL is a model FPC to other FPCs in value addition practices. The FPC selling processed millets and millet based products like snacks, oil, honey, millet powders and etc.

Table 3: Value addition details

Year	Produces used (Mtr Tons)	Value Marketed (Rs.)
2017-2018	35	10,25,000
2018-2019	50	17,12,486
2019-2020	67	21,55,264
2020-2021	73	24,04,255
2021-2022	86	33,25,000

Source: Audit Reports of the FPC

From the total procurement the FPC using around 30 to 40 per cent for value addition. There are 120 value added products are produced and marketed by the FPC. The demand for the products also good, need infrastructure also created by the FPC with the help of POPI in the form of grant and subsidy.

Training Programmes:

The VSFPCCL continuously organizing training programmes and exposure visits to their farmer members. Till March, 2022 there are 520 farmers were participated in the training programmes and 97 farmers were taken to the exposure visits. The farmers felt that, the training programmes and visits are helpful in increase the productivity and income from agriculture.

Business Results:

The VSFPCCL continuously making profit by doing effective business activities especially value addition process. The business result of the FPC is given below

Table 4: Business Results of the FPC

Year	Turnover (Rs.)	Profit (Rs.)
2017-2018	36,83,000	28,000
2018-2019	66,13,000	53,000
2019-2020	96,54,361	62,291
2020-2021	1,03,43,762	67,780
2021-2022	1,30,00,000	1,50,000

Source: Audit Reports of the FPC

Though the FPC making good amount of turnover, the maximum amount of amount is spent for expenditure. The major expenses are audit fee and salary to the accountant. According to the Companies Act they have to appoint a accountant and conduct audit by the chartered accountant. The FPC should concentrate to reduce the expenditures to increase the profit.

Conclusion:

The FPOs are derived from the concept of Cooperation and functioning with the ideology of cooperation as it had a mandate of serving the public in general and members particular. While doing the business the principles and values of cooperation need to be kept in mind by the FPOs. When compared to the

cooperatives, the concept of FPO having minimum challenges and maximum opportunities in business operations.

The choice of registering under different Acts is not a tool to confirm it is cooperative or others. The Acts are created by the human to regulate the business activities, it will not consider as a tool for justification. Apart from the Acts, all kinds of FPOs such as cooperatives, companies, trusts and NGOs are functioning with the ideologies of cooperatives, not deviated. The FPOs are the New Generation Cooperatives, if it is registered under companies Act it has to be called as cooperative company, if it is registered under trust act it has to be called as cooperative trust or if it is registered under societies act it has to be called as cooperative NGO.

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A Study on the RIDF and Cooperative Sector Projects in Dindigul Districts

K Hariprasath*, Dr. S. Manivel**

Introduction:

A cooperative, often referred to as a co-op, is a type of organization that is owned and operated by a group of people for their mutual benefit. The key characteristics of cooperatives include democratic control, member ownership, and a focus on meeting the common needs and aspirations of the members.

Members of a cooperative its owners, each member has an equal say in the decision-making process, following the principle of "one member, one vote." This democratic character ensures that no single member or group dominates the functioning of the cooperatives. The primary purpose of a cooperative is to serve the common interests of all its members. The purposes include various economic, social, and cultural goals, such as improving economic conditions, accessing services, or achieving specific social objectives. Membership in a cooperative is open and voluntary, as such individuals choose to join the cooperatives based on the shared needs or objectives. Members usually contribute a minimum share capital to the cooperative, and this shared investment forms the capital base of the co-operative societies.

Cooperatives are open to all individuals who meet the specific criteria, without any discrimination on the grounds of race, gender, religion, or socio-economic status. The principle of open and voluntary membership promotes inclusivity. While cooperatives may collaborate with other entities, they maintain their autonomy and cooperatives are sponsored; poor men organization; state partnership and aid are available to co-ops from the beginning work

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independently. They operate independently, making decisions that align with the interests and needs of their members. Cooperatives often emphasize education and training for their members, fostering a culture of informed participation. This helps members in understanding the operations and encourages them to actively engage themselves in the business and the activities of their cooperatives.

The return on capital in a cooperative is limited. Any surplus income generated is reinvested in the business or distributed among members as dividend based on their business participation or patronage. The cooperative movement in India span various industries and sectors, contributing significantly to the economic development, poverty alleviation, and social empowerment.

Genesis of Rural Infrastructure Development Fund:

The Rural Infrastructure Development Fund (RIDF) was instituted in the year 1995-96 by NABARD. In the 1995–96 budget speech, the then Honorable Union Finance Minister made a statement that "Inadequacy of public investment in agriculture has been a matter of general concern. This is an area which is the responsibility of States.

However, many states have neglected investment in infrastructure for agriculture. Many rural infrastructure projects have been started but are lying incomplete for want of Physical and financial resources. They represent a major loss of potential income and employment to rural population". On the other hand, there had been the problem of continuous shortfall in agricultural lending mainly due to bottlenecks in infrastructure or due to the conservative lending policy and practices of commercial banks. So, the Government announced in the 1995–96 Union budget that a Rural Infrastructure Development Fund (RIDF) would be created with funding from the Scheduled Commercial Banks which would contribute to the extent of shortfall in their agricultural lending subject to a maximum of 1.5 percent of the Net Bank Credit. It was, thus, strategic engagement of objectives of funding the rural infrastructural gap and the lending gap of the Commercial Banks.

The fund was initially created with a corpus of ₹2000 Crore to extend support to State Governments for the quick completion of ongoing projects relating to medium and minor irrigation, soil conservation, watershed management, and other forms of rural infrastructure. Even though the RIDF was set up with the

immediate objective of leading, the existing incomplete projects to completion, in subsequent years it was appreciated that there has been a large void to be filled in terms of unmet demands of rural infrastructure. Hence, subsequently, coverage of RIDF was broad-based in different tranches and at present 39 activities is covered under three broad sectors viz.: (i) Agriculture and Related Sector, (ii) Connectivity Sector and (iii) Social Sector.

RBI makes bank-wise allocation to the annual corpus based on the shortfall in the priority sector lending by each bank. Under RIDF - I, the fund was allocated from the lending in sub-target (18%) for agriculture under the priority sector lending. From RIDF- II to XIV, the funds were allocated from the shortfall in priority sector lending (40%) and/or agriculture (18%). From RIDF -XV onwards, the allocation to RIDF is being met out of shortfall from priority sector and/or agriculture and/or weaker sections (10%). From an initial allocation of ₹2,000 Crore under RIDF Tranche- I for the year 1995-96, the allocation has reached the level of ₹40,491 Crore under RIDF XXVIII (2022-23) With total allocation of ₹ 40,001.98 Crore for about 7.09 lakh projects in 2022-23 the cumulative sanctions reached ₹4,58,410.71 Crore (including ₹18,500 Crore under Bharat Nirman Scheme) in 2022-23.

Table -1

Cumulative Sanctions & Disbursements as on May 31, 2023

Particulars	No. of Projects Sanctioned (Rs.)	RIDF Amount Sanctioned (Rs.)	RIDF Loan Disbursed (Rs.)	Utilization
RIDF	765866	483535	377424	78%
Bharat Nirman	-	18500	18500	100%
Total	765866	502035	395924	79%

Source : NABARD

Objectives of the Study:

- To evaluate the utilization of RIDF funds by cooperative societies in Dindigul District of Tamil Nadu.
- To assess the impact of RIDF investments on various Projects relevant to cooperatives, such as agriculture, rural connectivity, and social infrastructure.

Eligible Institutions:

- State Governments / Union Territories
- State Owned Corporations / State Govt. Undertakings
- State Govt. Sponsored / Supported Organisations
- Panchayat Raj Institutions/Self Help Groups (SHGs)/ NGOs

The projects are submitted through the nodal department of State Government (Finance Department)

RIDF-list of eligible activities:

Financial support under RIDF is extended to the state government institutions for the following. activities. They are classified under major categories.

A. Agriculture and related sectors (RIDF loan: 95%):

1. Minor Irrigation Projects/ Micro Irrigation
2. Soil Conservation
3. Flood Protection
4. Watershed Development/ Reclamation of waterlogged areas
5. Drainage
6. Forest Development
7. Market Yard, Godown, Mandi, Rural Haat, Marketing Infrastructure
8. Cold storage, Public/ Joint sector cold storage at various exit Points
9. Seed/ Agriculture/ Horticulture Farms
10. Plantation and Horticulture
11. Grading/ certifying mechanisms; testing/ certifying laboratories
12. Community irrigation wells for the village as a whole
13. Fishing harbour/ jetties
14. Riverine Fisheries
15. Animal Husbandry

16. Modern Abattoir
17. Medium Irrigation Projects
18. Mini Hydel Projects/ Small Hydel Projects (upto 25 MW)
19. Major Irrigation Projects (already sanctioned and under Execution)
20. Village Knowledge Centres
21. Desalination plants in coastal areas
22. Infrastructure for Information Technology in rural areas
23. Infrastructure works related with alternate sources of energy viz. Solar, wind etc. & energy conservation
24. 5/10, MW Solar photo voltaic Power Plants
25. Separate Feeder Lines
26. Establishment of dedicated Rural Industrial Estates
27. Mechanisation of Farm Operations and Related Services

B. Social Sectors (RIDF loan: 85% / Hill & NE States 90%):

1. Drinking Water
2. Infrastructure for Rural Education Institutions
3. Public Health Institutions
4. Construction of toilet blocks in existing schools, specially for girls
5. "Pay & use" toilets in rural areas
6. Construction of Anganwadi Centres
7. Setting up of KVIC industrial estates/ centers
8. Solid Waste Management and Infrastructure works related with sanitation in rural areas

C. Rural Connectivity (RIDF loan: 80% / Hill & NE States 90%):

1. Rural Roads
2. Rural Bridges
3. Ropeway
4. Road Over Bridge (ROB) on Railways Crossings

Table -2
Sector-wise Share of Cumulative Sanctions RIDF loans
as on May 31, 2023
(Rs. 4,83,535 Crore)

Sectors	Percentage
Agriculture, irrigation and allied sectors	43
Social sector	21
Rural roads and bridges	36

Table -3
The estimated cumulative economic and social benefits under RIDF
as on 31 May 2023

Rural Infrastructure	Additional benefits created
Irrigation potential	375.96 lakh hectare
Rural Bridges	13.34 lakh meter
Rural Roads	5.35 lakh km.
Non-recurring employment	
Irrigation	1,46,013 lakh man days
Rural Roads & Rural Bridges	67,994 lakh man days
Others	88,912 lakh man days

Source : NABARD

Mode of Finance:

NABARD releases the sanctioned amount on reimbursement basis to the state government except for the initial mobilization advance @30% to North Eastern & Hilly States and 20% for other States.

Quantum of Loan and Margin/Borrower Contribution:

The project for rural connectivity, social and agricultural -related sectors are eligible for loans from 80 to 95 percent of project cost. Cost escalation proposals for certain genuine reasons are considered within two years of sanction of the project.

Rate of Interest:

Interest rates on RIDF loans had been linked to the Bank Rate prevailing at the time of disbursement till 31st March 2012. The need for reducing the interest rate was felt so much and as a result, the lending rate (irrespective of Tranche) was fixed as Bank Rate minus 1.5 percentage points as at the date of disbursement from 1st April 2012 onwards. Over years the rate has come down drastically and at present it remains around 5.00 per cent.

Repayment Period:

RIDF loans shall be repaid by the State Government in accordance with the repayment schedule prescribed by NABARD. At present, loan is to be repaid in equal annual installments within seven years from the date of drawal, including a grace period of two years. The installments falling due on any date during a month will be payable on the first day of the next month. Interest is payable for the grace period also. The interest shall be paid at the end of each quarter every year.

Penal Interest:

Interest on the overdue amount (including the overdue interest) is to be paid at the same rate as applicable to the principal amount.

Security for Loan:

Loans sanctioned would be secured by the irrevocable letter of authority/mandate registered with Reserve Bank of India/any other Scheduled Commercial Bank, Time promissory Note (TPN), Execution of unconditional Guarantee from the State Governments (Additionally required for support to State Government sponsored organizations, etc.) and acceptance of terms and conditions of sanction in the duplicate copy of the sanction letter.

Phasing of RIDF projects:

The implementation phase for projects sanctioned is spread over 2-5 years. However, it varies bases on the type of the projects and also based on the area and location namely hill area and north east states.

Table - 4
Rural Infrastructure Development Fund in India: At a glance
PROJECTS UNDER RIDF IN INDIA

RIDF	Year	Value of Capital Fund (Rs.)	No. of Projects	Sanctioned (Rs.)	Disbursed (Rs.)	% to Target	No. of Eligible Activities
I	1995-96	2,000	4,168	1,906	1,761	92	4
II	1996 -97	2,500	8,193	2,636	2,398	91	7
III	1997 -98	2,500	14,345	2,733	2,454	90	8
IV	1998 -99	3,000	6,171	2,903	2,477	85	8
V	1999 -2000	3,500	12,106	3,435	3,055	89	15
VI	2000 -01	4,500	43,168	4,489	4,071	91	16
VII	2001 -02	5,000	24,598	4,582	4,053	88	16
VIII	2002 – 03	5,500	20,887	5,950	5,149	87	18
IX	2003 -04	5,500	19,544	5,638	4,916	87	18
X	2004- 05	8,000	16,482	7,651	6,569	86	25
XI	2005 -06	8,000	29,670	8,262	7,374	89	30
XII	2006 -07	10,000	41,536	10,020	9,022	90	30
XIII	2007 – 08	12,000	36,694	12,538	11,254	90	31
XIV	2008 -09	14,000	85,287	14,568	12,723	87	31
XV	2009 – 10	14,000	37,754	15,339	13,019	85	31
XVI	2010 -11	16,000	41,706	18,256	15,626	86	31
XVII	2011 -12	18,000	17,767	20,189	17,035	84	31
XVIII	2012 -13	20,000	45,950	20,121	17,991	89	31
XIX	2013 -14	20,000	28,641	22,407	20,000	89	31
XX	2014 -15	25,000	33,274	28,389	24,583	87	34
XXI	2015 – 16	25,000	13,328	28,808	25,411	88	34
XXII	2016 -17	25,000	17,128	26,980	23,422	87	36
XXIII	2017 -18	25,000	27,900	27,156	23,010	85	36
XXIV	2018 -19	28,000	26,739	30,505	24,752	81	37
XXV	2019 -20	28,000	23,403	30,337	21,753	72	37
XXVI	2020 -21	30,000	32,828	34,830	20,435	59	39
XVII	2021 -22 on going	40,000	36,593	46,073	14,744	32	39
Bharat Nirman (RIDF XII to XV) 2006-07 to 2009-2010		18,408.73					
Cumulative Crore Value		418,408.73	745,860.0	436,701.0	339,057.0	2,265.92	

Source : NABARD

Table -5
Progress Rural Infrastructure Development Fund in Tamil Nadu:
At a glance

RIDF	RIDF Year of Establishment	No. of Projects	Total Outlay	RIDF Loan	Govt. Contribution	Disbursement	% to Target
II	1996 – 97	1541	284	246	25	219	89
III	1997 -98	560	233	209	43	186	89
IV	1998 -99	470	199	179	20	143	80
V	1999 -2000	609	274	246	27	216	88
VI	2000 -01	708	283	253	29	229	90
VII	2001 -02	767	412	353	41	327	93
VIII	2002 – 03	975	468	388	71	358	92
IX	2003 -04	1279	651	548	90	494	90
X	2004- 05	4437	783	658	104	563	86
XI	2005 -06	1840	849	559	118	510	91
XII	2006 -07	2664	1269	779	158	739	95
XIII	2007 - 08	2906	1128	957	161	888	93
XIV	2008 - 09	2972	1109	905	192	808	89
XV	2009 - 10	1757	1020	850	170	787	93
XVI	2010 - 11	983	1239	1033	205	964	93
XVII	2011 - 12	2057	2295	1598	697	1388	87
XVIII	2012 - 13	3058	1676	1445	231	1396	97
XIX	2013 - 14	2752	1706	1441	265	1434	99
XX	2014 - 15	1951	1835	1651	183	1626	98
XXI	2015 - 16	1379	2615	1944	671	1934	99
XXII	2016 - 17	1314	2318	1923	395	1857	97
XXIII	2017 - 18	1478	2268	1826	442	1752	96
XXIV	2018 - 19	1184	2546	2185	361	2005	92
XXV	2019 - 20	1183	2567	2243	324	1702	76
XXVI	2020 - 21	3301	2656	2413	243	1363	56
XVII	2021 -22 on going	1939	4352	3111	1241	710	23
Total		46064	37035	29943	6507	24598	

Source : NABARD State wise data

The Rural Infrastructure Development Fund (RIDF) is found to have played a significant role in Tamil Nadu, with 46,064 projects contributing to the holistic development of the state. These projects implemented over years have covered diverse sectors, prominently addressing crucial needs in irrigation, bridge construction, and road development.

RIDF has also significantly bolstered irrigation infrastructure across Tamil Nadu, covering vast expanses of land totaling 1,867,978 hectares. This has led to improved status in water management, increased agricultural productivity, and enhanced livelihoods for millions of farmers. The sufficient allocation of funds to irrigation projects underscores the commitment of the state government to sustainable agricultural development.

The construction of 125,853 meters of bridges has been a cornerstone of RIDF initiatives in Tamil Nadu. These bridges are found to have played a pivotal role in physical connectivity to previously isolated regions, fostering accessibility, and fortifying transportation networks. The impact extends beyond mere connectivity, contributing to the economic growth and social cohesion across the state.

RIDF's extensive contribution to road development is evidenced by the laying and black topping of 48,091 kilometers of roads. This comprehensive road network has not only improved the rural connectivity but has also catalyzed the economic activities by facilitating the seamless movement of goods and people. The focus on road infrastructure aligns with broader developmental goals, enhancing accessibility and fostering inclusive growth in order to ensure both equity and equality.

In a nutshell, it can be stated that, RIDF projects in Tamil Nadu reveals the commitment of the state government to the comprehensive rural development. The irrigation development initiatives underscore the sustainable agriculture. while the construction of bridge and road development projects have been helping in the transformation of the state's rural landscape, fostering economic resilience and social integration. As RIDF continues to be a key driver of infrastructure development, its impact on Tamil Nadu's rural economy and on the rural communities have been substantial and enduring.

Table -6
Progress of Rural Infrastructure Development Fund in Dindigul :
Completed projects in Dindigul District

RIDF	RIDF Year of Establishment	No. of Projects	Total Outlay	RIDF loan	Disbursement	% to Target
II	1996 - 97	50	1714	1546	1339.7	87
III	1997 - 98	11	295.9	266.3	253.21	95
IV	1998 - 99	21	612.9	553.8	331.75	60
V	1999 -2000	21	924.3	831.9	744.71	90
VI	2000 - 01	18	667.9	601.1	508.1	85
VII	2001 - 02	13	947.8	850.8	781.35	92
VIII	2002 - 03	25	1738	1531	1411	92
IX	2003 - 04	42	1606	1321	1266.4	96
X	2004- 05	138	2938	2413	2314	96
XI	2005 - 06	72	1464	1231	1157.7	94
XII	2006 - 07	92	3203	2584	2518.4	97
XIII	2007 - 08	147	4865	3897	3682.7	95
XIV	2008 - 09	124	5041	4189	3904.8	93
XV	2009 – 10	94	3994	3309	3195.4	97
XVI	2010 – 11	36	2772	2345	2217.2	95
XVII	2011 - 12	140	5881	4898	4713.5	96
XVII	2012 - 13	228	7925	6766	6460.4	95
XIX	2013 - 14	104	4514	3878	4354.8	112
XX	2014 - 15	105	8564	7402	6699.5	91
XXI	2015 - 16	46	3917	3264	3244.9	99
XXII	2016 - 17	44	2274	1897	1805.3	95
XXIII	2017 - 18	63	4420	3763	3824.8	102
XXIV	2018 - 19	60	3897	3319	3141.1	95
XXV	2019 - 20	37	2846	2308	2328.5	101
XXVI	2020 - 21	6	500	423.2	375.38	89
XVII	2021 -22 on going	5	19	16.15	14.974	93
Total		1742	77540	65404	62590	

Source : NABARD State wise data

Table -7
Purpose wise Distribution of RIDF Project in Dindigul district

PURPOSE	NO.OF PROJECT
Check dam	28
Drinking water supply	62
Forestry	13
Ground water recharge	14
Habitation	4
Health	7
Hostels	5
Irrigation	38
Bridge	120
Rural road	893
Sanitary complex	29
School	244
Seed farm	9
Shandies	4
Support services for agriculture	2
Veterinary	146
Rural Education Institutions	7
Rural godown	117
Total	1742

Source : NABARD State wise data

In Dindigul district of Tamil Nadu, project implemented with the financial support of the RIDF are found to have played a crucial role in rural development. About 1742 projects spanning various sectors have been implementing. These projects exhibited multifaceted approach, addressing the major issues of rural development. These RIDF projects are representing a diverse portfolio of development activities. These projects reflect a concerted effort to enhance the live hood opportunities, living standards, infrastructure and economic prospects of the rural communities. and sustainability of Dindigul's rural communities.

Table -8
RIDF supported projects Implemented in the Cooperative sector
Institutions

Type of project	Construction of Godowns
No. of projects	1044
Capacity	1.241 LMT
Total Financial Outlay.	Rs.14094.00 Lakh
Loan	Rs.13394.00 Lakh
Amount to be contributed by the State Government	Rs. 700.00 Lakh
Year of completion of project	31.3.2016

Source: Co-operation, Food and Consumer Protection Department

It is also seen that Construction of 1044 godowns [1019 Godowns for Primary Agricultural Co-operative Credit Societies and 25 godowns for Agricultural Producers Co-operative Marketing Societies] were constructed with the financial support from the RIDF with a total storage capacity of 1.241 LMTs at a total estimated cost of Rs.14094.00 Lakh, The loan portion of the estimated cost was extended by the National Bank for Agriculture and Rural Development.

Table -9
RIDF Assisted Cooperative sector projects implemented in Dindigul district of Tamil Nadu

Name of Block	No of Agricultural Godowns	No.of Non Agri. Godowns			No.of Cold Storage Godowns
		Cooperative	Civil supply	Panchay at union	
Dindigul	13	24	2	2	1
Athoor	17	11	0	3	0
Reddiarchatram	28	20	0	4	0
Shanarpatti	13	16	0	4	1
Nilakottai	12	3	0	1	0
Batlagundu	8	8	1	2	1
Natham	7	12	1	3	0
Palani	1	12	1	1	2
Oddanchatram	2	29	1	2	2
Thoppampatty	0	30	0	2	0
Vedasandur	0	13	1	3	0
Vadamadurai	0	12	0	2	0
Guziliamparai	0	13	0	4	0
Kodaikanal	0	2	1	1	0
Total	101	205	8	34	7

Source : District Statistical Handbook 2020-21 Dindigul District

RIDF Contribution to Infrastructure Development of Cooperative Institutions:

Cooperatives do require infrastructure to function effectively and to contribute to the economic and social development of their members. The type of infrastructure needed may vary depending on the nature of business of the cooperatives RIDF financial support is available for various rural

infrastructure projects, namely, Water and Irrigation Infrastructure, Storage and Processing Facilities, Transportation Infrastructure, Technology and Information Systems, Financial Infrastructure, Market Linkages, Training and Education Facilities, and Social Infrastructure. Cooperative societies benefit from these investments, as improved infrastructure enhances the efficiency of the cooperative institutions too.

Agriculture and Related Sector:

Water and Irrigation Infrastructure: RIDF supports projects related to irrigation and water management, essential for enhancing agricultural productivity.

Storage and Processing Facilities: Funding helps in the development of storage facilities and agricultural processing units, benefiting agricultural cooperatives. **Agricultural Equipment:** Infrastructure related to agricultural equipments is essential for the efficiency of agricultural cooperatives.

Social Sectors:

Veterinary Services: RIDF contributes to the establishment and strengthening of veterinary hospitals, clinics, and dispensaries, promoting animal health and economic well-being.

Livelihood Enhancement: Investments in rural infrastructure create employment opportunities, benefiting through member of skilled and semi-skilled members of cooperative societies involved in handicrafts and small-scale industries.

Capacity Building: Community spaces and training initiatives taken by the state government marking use of the RIDF funds contribute to building a sense of community and collaboration among cooperative members.

Rural Connectivity:

Market Linkages: Physical connectivity through roads, bridges, and transportation infrastructure facilitates easier access to markets for the members of cooperative societies.

Technology Adoption: RIDF supports the introduction or up gradation of technology, including computer systems and communication networks, enhancing the efficiency of economic and social operations in rural areas.

Reduced Dependency: Financial support from RIDF is used to reduce the dependency on traditional infrastructure, fostering sustainability in rural cooperative ecosystems.

Employment Generation: Rural infrastructure projects create job opportunities, addressing issues of unemployment and underemployment in rural areas.

Conclusion:

The Rural Infrastructure Development Fund (RIDF) is a fund created by the Government of India to finance various rural infrastructure projects. It is primarily administered by the National Bank for Agriculture and Rural Development (NABARD). While RIDF does not specifically target cooperative societies, these societies can benefit either directly or indirectly from RIDF funding,

While RIDF projects can have positive direct effects on cooperative societies, the indirect impact may vary based on the nature of the cooperative societies and its specific activities. Cooperatives interested in leveraging RIDF-funded projects should stay informed about the types of projects being implemented in their region and explore opportunities for collaboration or participation. The extent of benefits from the projects depends on how well the infrastructure projects align with the needs and activities of the cooperative societies. Infrastructure is fundamental to the success and sustainability of cooperatives. It supports their operational efficiency, enables them to add value to their products, and enhances the overall well-being of their members. The state governments, development agencies, and cooperative management need to collaborate to ensure that the necessary infrastructure is in place to foster the growth of cooperatives in various sectors. In conclusion, RIDF, through allocation and utilization of funds, significantly impacts the cooperative societies by enhancing rural infrastructure. As India continues to advance in its rural development agenda, RIDF remains a crucial player in fostering cooperative growth, aligning its objectives with the broader goals of sustainable rural development.

Technology evolution through Industry 4.0 in Cooperatives

Ms. Saba Sayed*

Abstract:

Industry 4.0 has received much interest globally over the past few years. Industry 4.0 aims to reach more improved levels of internal efficiency and sustainability and also a greater degree of automation. Big Data, Cyber-Physical Networks (CPS), the Internet of Things (IoT), the industrial Internet, artificial intelligence, cloud computing, and others are major themes in Industry 4.0. All these elements are specifications that are elements of the visionary framework of Industry 4.0.

Cooperatives, as economic institutions founded on the ideals of the society, also have a significant need to enhance human welfare. With time, however, the presence of cooperatives has decreased. There are several reasons that have prompted the number of operational Indian cooperatives to decrease: both internally and externally. Owing to the shortage of funding and other business problems, technology implementation is often a challenging job for cooperatives. Cooperatives' sustainable business efficiency is negatively impacted by many technological problems. The implementation of Industry 4.0 will, however, solve different problems with technology. Aspects of Industry 4.0, such as big data, the Internet of Things, and the smart factory, play a positive role in encouraging the adoption of information technology (IT), which leads to sustainable business efficiency. In addition, the framework and method of the business reinforce the constructive partnership between Industry 4.0 and the application of IT.

Researchers carried out an extensive literature review of published research studies, case studies, govt. reports, proceedings of workshops, seminars, etc to analyze the collective action efforts undertaken by Cooperatives in India and

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in international countries with regard to Industry 4.0. An attempt has been made in this study to analyze various efforts undertaken to understand how features of Industry 4.0 can be effectively used in cooperatives. It explores the logic in Industry 4.0 for the members of cooperatives for their development. This paper also suggests the ways and means of areas in which cooperatives may take up the technology in Industry 4.0.

Keywords:

Digitalization, Cooperatives, Innovations, IoT, Big Data, Digital Technologies

1. Introduction:

Ever since the early evolution at the beginning of the industrial revolution in the 18th century, the new industry has seen significant progress. Most of the items, including weapons, equipment, food, clothes and shelter, have been produced by hand or by working animals for centuries. This improved with the adoption of industrial methods at the end of the 18th century. Industry 1.0's development had been a quick enormous challenge leading up to fourth revolution of industry, the future modern age.

The term Industry 4.0 stands for the fourth industrial revolution, the next step of a manufacturing technology's life cycle in the enterprise and management of the whole value chain. We present the summary of this transition here.

1.1 Industry 1.0 to 4.0: The History of the Modern Ages:

Industry 1.0 The late 18th century opened the industry of mechanical manufacturing plants. Machines powered by water and steam were built to assist workers in the mass processing of products (Chaitanya, 2020). In 1784, the first weaving loom was introduced. With the growth of manufacturing productivity and size, small companies have evolved from servicing a smaller range of clients to vast organizations providing a greater number of owners, administrators and workers. Industry 1.0 can also be considered to be the emergence of an industry community that emphasizes on consistency, productivity and scale in equal measure. (Nardo et al,2020,Thangaraj et al.,2018)

INDUSTRY1.0 to 4.0

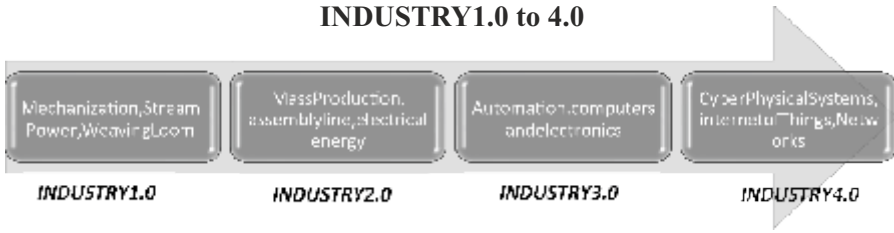


Figure1: Evolution of Industrial Revolution

Industry 2.0 The second revolution, Industry 2.0, began at the start of the twentieth century. The invention of computers operating on thermal power was the principal contributor to this revolution. As a main fuel source, electrical power has always been used. In terms of expense and skill, electrical devices were more effective to run and sustain, versus water and steam-based machines that were comparatively slow and starving for energy. During this period, the first assembly line was also constructed, further streamlining the mass manufacturing process. A common practice was the mass manufacturing of products using the assembly line (Yinet al., 2018).

Industry 3.0 Over the last few decade of the twentieth century, the second technological revolution leading to Industry 3.0 was driven and motivated by developments in the consumer electronics. The innovation and development of a range of electronic components, including transistors and integrated circuits, automatically mated the machines, resulting in reduced effort, improved speed, better precision and even complete elimination of the human agent. One of the landmark developments that created automation through electronics was the Programmable Logic Controller (PLC), first developed in the 1960s.

Industry 4.0 In the 1990's, the Internet and telecommunications industry boomed, which transformed the way we interacted and shared data. This also resulted in technological breakthroughs in the automotive sector and conventional development practices that combined the real and virtual world boundaries. This frontier has been further disrupted by Cyber Physical Systems (CPSs), resulting in several recent technical disruptions in the sector (Saldivar et al., 2015). With virtually minimal physical or spatial boundaries, CPSs empower devices to interact more smartly with one another. Industry 4.0 uses cyber physical networks to exchange, evaluate and direct intelligent behaviour for different industry operations. CPP soften allow an industry from

a remote location to be digitally visualized, tracked and controlled, thereby bringing a new dimension to the development process (Wang et al, 2016). It brings computers, individuals, systems and processes into a common interconnected framework that made it extremely effective for smooth functioning.

Industry 4.0 is still at an early stage and the companies are still in the transitional state of the new systems' implementation. To remain competitive in the market, industries must implement the new technologies as soon as possible. Industry 4.0, at least for the next decade, is here and it is here to remain.

1.2 Objectives:

This paper reviews various collective action efforts undertaken to understand how features of Industry 4.0 can be effectively used in cooperatives. The specific objectives are as follows:

1. To understand the extend of digitalization through Industry4.0.
2. To explore the logics in Industry 4.0 for the members of cooperatives for their development.
3. To suggest the ways and means of areas in which cooperatives may take up technology in Industry 4.0.

2. Review of Literature:

2.1 Industry 4.0:

This part of literature presents the paper which includes what exactly is Industry 4.0 and how it aims at creating a transparent, smart manufacturing infrastructure for the implementation of technologies. It also focuses on issues and challenges in various sector.

Chaitanya Vijay Bidnur (2020) in his paper “A Study on Industry 4.0 Concept” explored the origin as well as evolution of the Industry 4.0 model. The definition of Industry 4.0encompasses not only direct production in the sector, but also the whole supply chain from suppliers to consumers, as well as all business operations. Industry 4.0 is a 21st-centurytechnological innovation

that allows industries to produce intelligent goods and services while cutting prices and rising performance. The human aspect is critical for the process, and the research is focused on current study in the field. The paper introduces the smart factory concept for automated services, thus increasing the efficiency of operations

Haseeb et al., (2019) in their research paper concluded that the aim of Industry 4.0 is not only to reach a better degree of organizational efficiency and competitiveness, but also greater automation. This study has attempted to address the various issues and challenges pertaining technology advancement in the area of Industry 4.0. Based on the findings the paper reveal that, industry 4.0 aspects such as big data, the Internet of Things, and the smart factory play a constructive role in supporting IT adoption, which leads to long-term market success.

Aulbur and Singh (2014) in their research paper discussed about the reasons by which India is reportedly lagging behind its global counterparts where Industry 4.0 implementation is considered in manufacturing industries. A substantial portion of the manufacturing sector is still in the development process, with technologies restricted to devices that run independently of one another. The fundamental concept of Industry 4.0 is still in its infancy, with the incorporation of physical networks on a cyber-network.

2.2 Technology and Industry 4.0:

The literature in this section describes the various aspects of Industry 4.0, such as big data, the Internet of Things, and the smart factory and how they play a positive role in encouraging the adoption of information technology(IT), which leads to sustainable business efficiency.

Vaidya, Ambad, Bhosle (2018) explored the nine pillars on Industry 4.0 including Big data and analytics, Industrial of Things, cloud computing, artificial Intelligence, autonomous robots etc. These pillars will change independent and improved operations to a highly integrated, automatic, and optimized method. As a result, conventional manufacturing relationships among suppliers, users, and consumers, as well as between human and computer, become more productive and improve. The nine pillars will help to identify the issues and challenges faced in the implementation of Industry 4.0..

Lee et al. (2014) in his paper ‘Service innovation and smart analytics for Industry 4.0 and big data environment’ described that in order to boost operating performance and maintenance control, conventional equipment is being turned into self-aware and self-learning devices by Industry 4.0 with the communication around them. The paper examine show big data had changed the services of manufacturing industry.

Bahrinet al. (2016) in their research paper reviewed new inventions in the field of automation technologies. They emphasized that with the introduction of Information and communication Technologies (ICT), the industries have got opportunities to compete in international markets. On the lines of such developments, the automation industries are playing a vital role in introduction of technologies pertaining to industry 4.0.

2.3 Industry4.0 and cooperatives:

This part of literature describes the implementation of Industry 4.0 in cooperatives. It discusses how cooperatives' sustainable business efficiency is negatively impacted by many technological problems. The implementation of Industry 4.0 will, however, solve different problems with technology.

Setianingsiha et al. (2020) in his paper emphasized how crucial it is for the cooperatives to catch up with the significant efforts put up by the Industrial Revolution4.0. The question that cooperatives encounter in this fourth industrial revolution age is to find a way to emerge as a vital player in developing the economic growth of the country. While cooperatives today have experienced setbacks in their progress, in order to strive, it seems important for them to survive and put tremendous efforts.

Griepentrog et al. (2016) in his paper carried out a study on precision farming. In their study they stated that new innovations give agricultural cooperatives the ability to introduce other unique activities, such as precision farming, in addition to opportunities for optimisation. The culture of cooperatives promotes the development of supply chains or the formation of societies through a broadly rich and diverse market ecosystem (members, staff, consumers, vendors, associates, etc.). Hence, this transition influences the cooperative value chain, optimize some practices and revolutionizes others.

Setyawati (2017) concluded in her paper that, since cooperatives do not have trained human resources, it is normal for cooperatives to become inactive. The failure of cooperative HR to change to technology innovations is another aspect that leads many cooperatives to halt operation. Poor management and HR factors are one of the reasons.

3. Research Methodology:

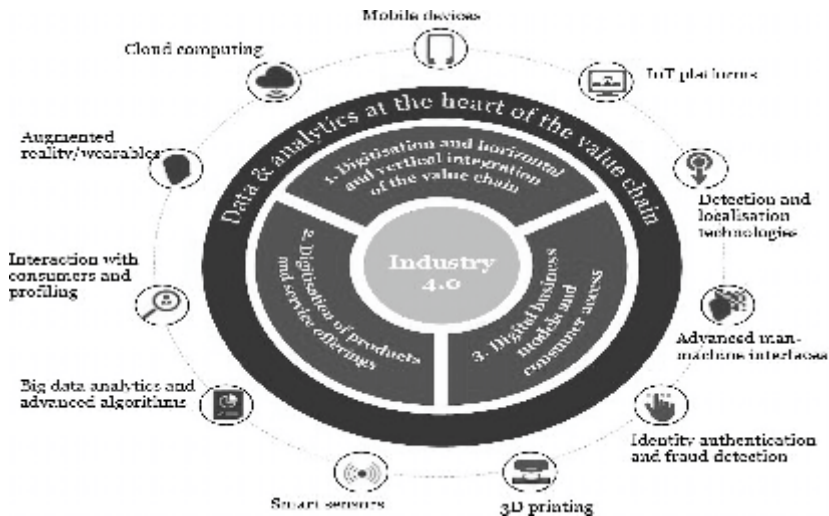
The author has carried out an extensive literature review of published research studies, case studies, govt. reports, proceedings of workshop, seminars, etc to analyze the collective action efforts undertaken by Cooperatives in India and in international countries with regard to Industry 4.0. Given the research objectives formulated, the methodology of this paper is based on secondary data.

Section 1 provides the introduction and context of the paper, Section 2 gives briefly narrates the purpose of usage and features in Industry 4.0. Section 3 describes how Industry 4.0 evolved across the globe; Section 4 describes about the readiness of Section 5 describes the application of Industry 4.0 in Cooperatives.

4. Why Industry 4.0?

To boost operating performance and maintenance control, conventional equipment is being turned into self-aware and self-learning devices by Industry 4.0 with the communication around them (Lee et al., 2014). Industry 4.0 aims at creating a transparent, smart manufacturing infrastructure for the implementation of industrial knowledge networks (Bahrinet al., 2016). The key criteria of Industry 4.0 are real-time data management, recording of inventory status and locations, as well as maintaining guidelines for managing manufacturing processes. (F. Almada-Lobo, 2015)

Figure2: Industry 4.0 technology features and contributions towards digitalization



Source: Industry 4.0: Building the digital enterprise, 2016 global industry 4.0 survey, PwC engineering, & construction

4.1 Big Data and Analytics:

In order to facilitate real-time decision-making, the analysis and systematic examination of information from several multiple sources would become essential for manufacturing equipment and applications, as well as business and consumer management systems (Rüßmann et al., 2015). Big Data consists of four aspects, according to Forrester's definition: amount of data, data variety, the rate at which new data is generated and analysed, as well as the importance of the data (K.Witkowski,2017). Previous evidence were statistically analysed to classify the threats that occur earlier in the industry in different industrial methods, as well as to identify existing problems and potential solutions to eliminate them from arising in the future.(Bagheri et al.,2015).

4.2 Autonomous Robots:

In industries, automated robots have recently been developed and used to perform risky tasks for individuals, to accomplish quicker and more efficient

manufacturing procedures and to minimize the price of goods. Since competition is growing in today's market climate, manufacturers want smarter systems to make smarter decisions (Bahrinet al, 2016).

**Table1: Autonomous robots used in different industries
(Sipsaset al., 2016)**

Sr.no.	Name of Robot	Company	Function of Robot
1	Kuka LBR iiwa	Kuka	Lightweight robot for manufacturing activities that are critical
2	Baxter	Rethink Robotics	Intelligent robot for the purpose of packaging
3	Bio Rob Arm	Bionic robotics	Usage for humans in near vicinity
4	Roberta	Gomtec	6-Axis industrial robot used to automate flexibly and efficiently.

4.3 Simulations:

In operation, simulations can be used quite widely to exploit real-time data in a computer environment that can involve computers, goods, and humans to replicate the physical environment, thereby minimizing system startup times and boosting quality (Rüßmann et al.,2015). For virtual designing and for visualization of cycle times, energy usage or durable factors of a production facility, 2D and 3D simulations can be developed.

4.4 The Internet of Things:

Industry 4.0 integrates the Internet of Things (IoT) with industrial strategies in the 21st century to allow devices to exchange, interpret and use knowledge to direct human intelligence. The Internet of Things (IoT) is a new concept that is getting momentum in the emerging wireless communication scenario. The central principle of this theory is the ubiquitous existence of a number of items or artifacts around us, such as Radio-Frequency Identification (RFID) tags, sensors, actuators, smart phones, etc., which are able to communicate with special addressing schemes (E. Hozdić, 2015).

4.5 The Cloud:

The cloud-based IT interface acts as the technological pillar for linking and communicating the various components of the Industry 4.0 Technology Centre (M.Landherr,2016). Organizations require improved information sharing for business 4.0 i.e. attainment of response times in milliseconds or much faster across platforms and businesses (Rüßmann et al., 2015).

5. Status of Industry 4.0 in India:

Based on strong emphasis on Industry 4.0 through the “Make in India” strategy for future growth, India is the sixth largest manufacturing country. By 2022, the government plans to increase the share of manufacturing in GDP from the existing 16-17 per cent to 25 percent. Many regulatory changes, such as GST adoption and FDI policy liberalisation, have been implemented by the government.

India is reportedly lagging behind its global counterparts where Industry4.0 implementation is considered. A substantial portion of the manufacturing sector is still in the development process, with technologies restricted to devices that run independently of one another. The fundamental concept of Industry 4.0 is still in its infancy, with the incorporation of physical networks on a cyber network (Aulbur and Singh, 2014).

India appears to be building the right model to establish its "small factories" on, as shown by its success in two crucial supporting Industry 4.0 innovations, namely IoT and Big Data. In the manufacturing sector, the use of IoT in the industry accounts for 60% of the IoT market of India.

Make in India accounts for 32% of the total global market share (Nishimura, T, 2018).About \$2 billion market has emerged in India for big data analytics. This number is increasing at a faster pace making it around \$1.6billion by the year 2025.

The Indian automobile industry is at the forefront of introducing Industry 4.0's main elements. Automotive industries have been compelled to implement key components of Industry 4.0, such as robotics, due to emerging technologies, an increasing number of parts, growing innovation, and rising labour costs. In India's automotive sector, there are 58 robots per 10,000 workers (Roehrich, K. 2016).

Table 2: 2019 Robot Count in Manufacturing Industries (Count of Installed Industrial Robots per 10,000 employees)

Name of Countries	Count	Name of Countries	Count
South Korea	855	China	187
Japan	364	UK	71
Germany	346	Brazil	10
United States	200	India	4
Canada	165		

Source: International Federation of Robotics, Industrial Robots.

The Indian automobile sector has started to adopt Industry 4.0. Bajaj Auto, for example, started automating its activities in 2010. It currently employs 100–120 "Co-bots"(collaborative robots) in its manufacturing processes. Maruti Suzuki hires approximately 1700 robots to operate seven process shops and five assembly lines. With the aid of 437 robots, Ford is able to run its assembly lines and body shop at its Sanand factory. Hyundai has taken action to reduce labour costs by implementing 400 robots. Tata Motors has over 100 robots on its Tata Nano production lines. Renault is trying to avoid accidents by automation. An intelligent system is used by a multinational corporation headquartered in Mumbai to link all devices and analyse the pace of work and performance. The system facilitates waste avoidance and production flow organisation. Another packaging company in Bengaluru has linked machines across a network that offers a monthly dash board of machine status.

Healthcare has benefited from emerging technologies in a variety of aspects. The growing utilization of electronic health records, telemedicine, system for health management and online health resources has enhanced the usage of patient data and facilitated visualization of health information and electronic medical records digitization trends. At Fortis and Max hospitals, robot-assisted surgery is practiced.

Although nation quickly changing, industries in India tend to be optimistic about their growth prospects. According to the eighth Digital IQ Survey conducted by PwC, 71 percent of Indian respondents are optimistic about digital development in the near future. In India, as in the rest of the world, there is a heavy emphasis on technology for increasing sales, improving consumer

service, and reducing costs. The survey revealed that while industries are extremely focused on organic growth and cost reduction initiatives, many industries in India tend to be solely focused on growth.

This indicates that businesses are progressing to digitalization but have yet to incorporate technology to enhance their growth. As per the recent Global Digital IQ Survey, challenge now is how to work effectively in a digital environment.

Table3:Technologies that are making substantial investments in India

Technologies	Percent
Internet of Things	64 %
Robotics	27 %
Artificial Intelligence	42 %
Virtual reality	16 %
Blockchain	7 %
3-D printing	10 %
Augmented reality	10 %
Drones	3 %

Source: PwC, Global Digital IQ® Surveys

As shown in the figure, in India, businesses started to be investing heavily in artificial intelligence (AI), the Internet - of - things (IOT), and robotic systems; but, in the next 3 years, the emphasis would undoubtedly turn to virtual reality and block chain. The growing emphasis on IoT and robotics also suggests a shift of attention toward cost reduction.

6. Application of Industry 4.0 in Cooperatives:

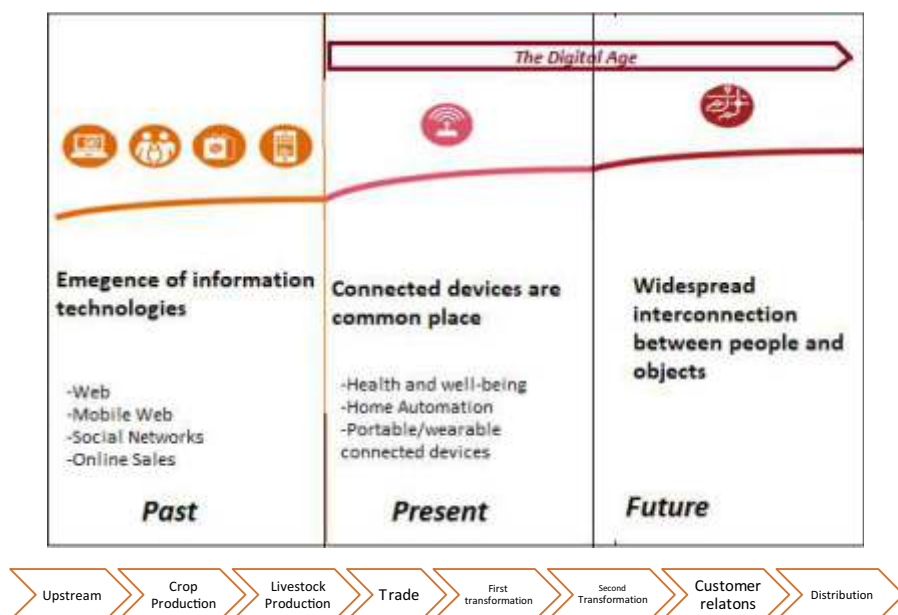
Cooperatives, as economic institutions founded on the ideals of the society, also have a significant need to enhance human welfare. With time, however, cooperatives are becoming less common. The number of functioning Indian cooperatives has decreased for a variety of reasons, both internally and externally. Parallel to this, action must be taken to investigate Cooperatives that, until recently, were still deeply involved in society, in order to recognize

trends and methods helping the cooperatives to increase their operations so that they can be used to enhance the sustainability of other Cooperative enterprises.

The question that cooperatives encounter in this fourth industrial revolution age is find a way to emerge as a vital player in developing the economic growth of the country. The technological changes in the developing markets have put a pressure on the cooperatives to react to the fast moving changed environment. While cooperatives today have experienced setbacks in their progress, in order to strive, it seems crucial for cooperatives to catch up with the significant efforts put about by the Industrial Revolution 4.0 (Setianingsihaet al,2020).

We reached a modern digital phase in 2008, with transition growing due to improvements in digital technologies and directly influencing society. As a result, new smart devices are becoming popular and in the future, users will be gradually connected, between each other and with their devices, with the automation of the connectivity between people and objects.

Figure 3: Industry 4.0 – Building the digital enterprise



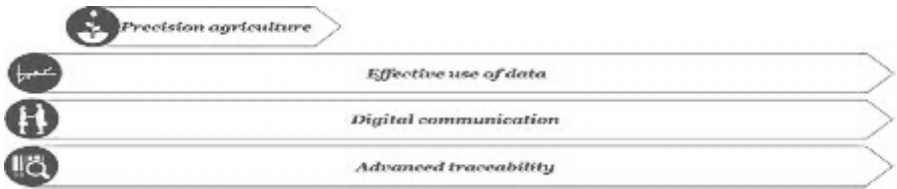
Source: PwC Report

Digital technology is enabled by developments that allow these tools to operate, such as the Internet of Things, the cloud, and systems for storing data.

The pervasive use of information and communication technology (ICT) by the industrial sector and conventional production practices is rapidly redrawing the borders between the real world and the virtual world through what are defined as cyber-physical production systems (CPPSs). CPPSs are a virtual network of social machines structured in a fashion close to that of social networks. To put it plainly, they connect IT to mechanical and electronic components that then interact through a network with each other. A very early version of this technology was the Radio Frequency Identification (RFID) technology that had been in since around 1999 (Deloitte AG, 2015).

New innovations give agricultural Cooperatives the ability to introduce other unique activities, such as precision farming, in addition to opportunities for optimization (Griepentrog et al., 2016). The culture of cooperatives promotes the development of supply chains or the formation of societies through a broadly rich and diverse market ecosystem (members, staff, consumers, vendors, associates, etc.). Hence, this transition influences the cooperative value chain, optimizes some practices and revolutionizes others.

Figure 4: Use of Industry 4.0 in Precision Agriculture Source: Gartner, IBM



Precision farming innovations (GPS, drones, sensors and connected devices) are now very popular, and several cooperatives and their members have embraced them. Their acceptance, though, is largely in the form of a "catalogue of services" and the prospects of global convergence seem minimal for the time being. When innovations develop, cooperatives apply to the catalogue.

Cooperatives offer drone tracking and surveillance facilities for their members. To remotely assist and educate farmers on farm management, cooperatives use information from milking machines and automation systems.

Cooperatives are backbone of the economy, so that the welfare of their families and groups is the way for the society to strengthen. With respect to the role of cooperatives for the interests of their members, the advantages of cooperatives have been reported in many researches (Goel, 2019). The presence of cooperatives not only gives services to cooperative members, but also to individuals who are not cooperative members. However, the presence of cooperatives is rare in the Industrial Revolution Age 4.0 that cannot be distinguished from the growing number of market rivals. There is no denying that the concept of cooperative cooperation, founded on the sense of independence and recognition of its members, does not appear in a changing environment of complex and competitive economic systems.

The failure of cooperative HR to change to technology innovations is another aspect that leads many cooperatives to halt operation. Poor management and HR factors are one of the reasons. Setyawati (2017) concluded that, since cooperatives do not have trained human resources, it is normal for cooperatives to become inactive.

Cooperative limitations are also observed in areas of financial management and information systems, along with HR aspects. There have been researches in this respect that explicitly explore ways to improve sustainability and build cooperative enterprises. The technique for sustaining and establishing cooperatives can be based on the collaboration between cooperatives and small businesses that have proved this interaction to offer benefits to both (Mazzarol, 2013). Loubere and Zhang (2015) clarify that attempts in China to retain cooperatives are performed by the role of the government in developing new cooperative measures. The introduction of new models and management skill and HR was part of each of these findings.

6.1 Industry 4.0 in Agriculture Cooperatives:

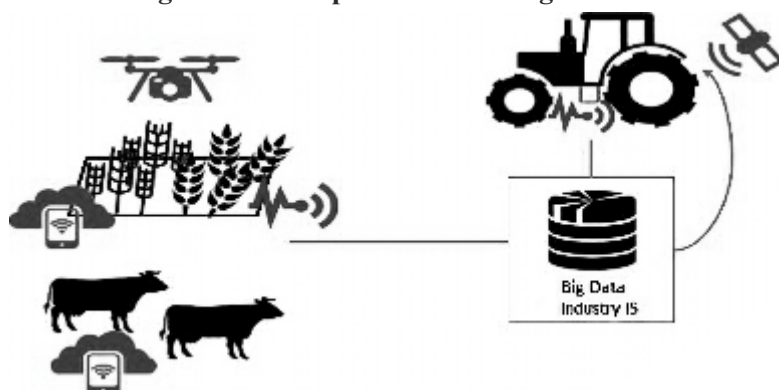
With many of the cooperatives examined, the advancement of digital technology was seen as a core concern amongst these five big developments influencing the modern age (demographics, emerging countries, urbanisation, the environment and technology) (Figure 5) Generally speaking, the agriculture sector is more linked than normal and has traditionally lead the way in the introduction of emerging technology such as GPS. In order to pursue new practices and facilities, the sector has initiated several digital transformation projects.

Figure 5: Developments influencing modern world



The cooperatives demonstrated how difficult it is to truly understand the implications of new technologies when it extends through all operations and changes all operations. Although digital technology is seen as a possible advancement in some areas, such as precision agriculture, it is rather widely shown as a driving force for quality improvement and agricultural growth. They have been motivated by the vast market community of agricultural cooperatives (owners, clients, vendors, other cooperatives, etc.) to be among the first to support the digitalization of information transfers with their numerous members. Most of the cooperatives either have adopted or are proposing mutual work projects. Digital technology is often used by cooperatives to optimize the methods of manufacturing, distribution network, management and quality control, mostly by the efficient usage of information.

Figure 6: Concept of Precision Agriculture



Source: PwC global report on the commercial application of drone technology

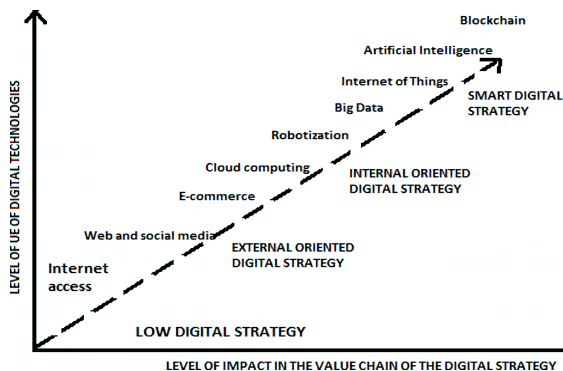
GPS and drones allow farmers to increase production and minimize their impact on climate change. Precision farming innovations (GPS, drones, sensors and connected devices) are now very popular, and several cooperatives and their members have embraced them. Agricultural data helps farms to be scrutinized, while data analysis will help farmers keep one step ahead of them.

Digital technology is a core concern for farmers and cooperatives across all technical breakthroughs; they have already embraced. In adopting emerging technology such as GPS, which they have used on their tractors since the 1990s, farmers have led the way. Today, the number of farmers with tablets and smart phones has been growing since 2013. Technology transformation has quickly accelerated and puts the user at the core of the technology. Digital transition refers to how, with the advent of IT technology, culture has changed:

- 1960: the first machine.
- 1992: creation of the Internet.
- 1994: advent of internet purchases.
- 1995: development of social networks.
- 1999: creation of the mobile Network.

Sensors offer valuable farm-related information to farmers and integrated devices ease very day tasks. These includes land sensors, to monitor markers of the soil (rainfall, humidity, etc.), On board sensors on tractors or drones for crop health tracking, plant identification, sensors on livestock for geo location and surveillance. To ease very day operations, farmers often use a range of connected devices like milking and feeding robots that allow tracking of livestock, linked devices that require the sowing of multiple hybrid seeds in the same row based on the soil conditions and smart farming, with automated solutions. In combination with external data, the efficient need for sensor-generated data ensures that farms can be tracked in real time. Farmers will plan for a variety of circumstances and maximize performance by reviewing the information, allowing them to remain away ahead in making smart choices.

Figure7: Digital transformation process in agri-cooperatives



As shown in figure 7, an incremental digital transformation of the agri-cooperatives is usually followed. The y axis shows the digital extend of new technology adoption and its effect upon the supply chains of cooperatives (Production, distribution, packaging, advertising, and promotions in the field (x axis).

6.2 Digitalization in IFFCO through Industry 4.0:

Agriculture is being recognised as the key part of the 2019-2020 Union budget. In order supply guaranteed income for small and marginal farmers, the Government of India has decided to spend extensively in agriculture sector. It has made Niti Aayog, a national research centre for the design and conduct of programs and research on future technology, including machine learning and artificial intelligence to promote our country's economic growth (Srivastav et al., 2019).

Uzhavanapp, Agmobile, CC Mobile app, IFFCO Kisan are a few of the built applications that take into account the need for hourly farming requirements. Several significant projects, such as e-choupal, Agri sector, Kisan Suvidha and the more recent e-NAM, have long attempted to position agriculture as the catalyst. There was a lack of coordination of accurate knowledge to the farmers as more focus was put on hardware than software. This has led to the formation of an agricultural information cloud with IoT and RFID (radio frequency identification) technology convergence. The farming industry too has recently visualized the incorporation of IoT and agricultural activities in the production and conceptualization of innovation for plant factories.

A lighting sensor and a video sensor, for instance, will display the light intensity distribution in real time and track the size of the plant. This will aid in deciding the stages of growth and development of plants.

Global positioning systems (GPS) data and wireless sensor nodes (WSN) have also acted as important tracking resources to track and compare parameters. It has been found that geo-referencing approaches using unmanned aerial vehicles (UAV) and drones have a beneficial influence on crop production and pesticide monitoring. The information stored in such sensors and agriculture equipment and tools was regularly exchanged with farmers via a GPRS-connected cell phone. On-field sensors such as flipping on/off a pump/valve when water level in the field exceeds a certain specified threshold can be tracked and managed remotely by farmers to making crucial decisions using deep learning techniques concerning crop management.

IFFCO Kisan, a joint venture between IFFCO, the fertilizer major, and Bharti Airtel, the telecoms giant, is all set to ramp up its national high-tech farm project. IFFCO Kisan would rely on a single range of roughly half a dozen crops as part of the scaling up plan.

IFFCO uses sophisticated technologies such as the Internet of Things (IoT), Artificial Intelligence (AI) and precision farming to set up high-tech farms, as reported by Morup Namgail, Head (Agtech), IFFCO Kisan. IFFCO currently has around 10 big projects underway in various locations around the nation, affecting about 15,000 farmers. The organization is enthusiastic about the early outcomes of certain big ventures and has developed a crop-specific approach to extend the activities of high-tech farms. These ventures have been launched by IFFCO Kisan in cooperation with major product and agro-based entities.

Another big initiative is to manufacture pure organic Ashwagandha in Madhya Pradesh's Ratlam district in collaboration with The Himalaya Drug Company. As part of this mission, IFFCO Kisan agtech has encouraged the usage of IoT soil monitoring equipment, vegetation index satellite imagery analysis, and soil moisture stress reverse image mapping to automatically identify pests and diseases, and to prepare for optimum irrigation.

According to a latest Nasscom survey, the agritech sector received close to \$248 million in funding during June 2019, up from about \$73 million in 2018. This represents a 300 percent increase in less than a year. The industry seems

to have been expanding rapidly, but the business still has a good time to go before it reaches the last mile farmers.

7 Conclusion & the Way Forward:

In a number of ways, the innovation movement built on intelligent technology is changing cooperatives and fostering development. From the stand point of achieving growth, technological advancements will aid in increasing efficiency in operations and opening exciting opportunities for consistent engagement of customers. Owing to the shortage of funding and other business problems, technology implementation is often a challenging job for cooperatives. Cooperatives' sustainable business efficiency is negatively impacted by many technological problems. The implementation of Industry 4.0 will, however, solve different problems with technology.

Aspects of Industry 4.0, such as big data, the Internet of Things, and the smart factory, play a positive role in encouraging the adoption of information technology (IT), which leads to sustainable business efficiency. Diversifying the practise, innovating and collaborating with others and using emerging technology are all essential to perform more effectively and sustainably.

Industry 4.0 in cooperatives cannot succeed on a stand-alone basis and need to be supplemented by members' active participation. In the progress of adopting and handling of digital tools, the members of cooperatives must feature with certain competencies such as technical knowledge and skills, desire to contribute and/or accept and capability of collaborating effectively. Thus, features of Industry 4.0 can improve the quality, quantity and access to services of cooperatives and its members at large. It goes without saying that if the cooperatives have a ubiquitous platform, every member shall be able to avail benefits accrued out of such activities.

While demand for technology has increased, majority of cooperatives face challenges in adopting and successfully using it. Cooperatives, on the other hand, see technological change as a challenge. They are attempting to set simple goals and following a flexible strategy, progressing step by step, in order to effectively go digital. Cooperatives must satisfy the demands of different stakeholders in their market community, and the stakeholders are encouraging them to go digital:

- Members expect that their relationships with cooperatives be monitored in almost real-time using emerging technology, as well as to have meaningful insights to new tools. They want advice and assistance in incorporating technologies like precision agriculture.
- Members are criticizing the new paradigm internally. They need more user-friendly yet adaptable techniques, mostly to promote enterprise growth.
- Consumers and third-party providers are moving in order to keep pace through a greater automation of workflows.
- Certain cooperatives are part of distribution network, where operations are aided by the use of digital technologies that enable for easier communication.

To respond to and help cooperatives' transformational change, IT structure must progress as:

- Conversion of IT models into data aggregation platforms for all data sources (resources, processes, mobile devices, etc.) – usage of information systems.
- Execution of Big Data platforms as required satisfying the needs of high information flow and real-time computing.
- Existing operations (advisory systems, distribution networks, etc.) where emerging media provides new tools and approaches.
- Innovative offerings (data usage, for example), at the possibility of the outsider exploring majority of the value chain.

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A Study on the Financial Performance of Venginniserry Service Cooperative Bank (VSCB) Ltd. No. R.528

Devika J*, Naila**

Abstract:

The Primary Agricultural Credit Society (PACS) is the grassroots component, and foundation for cooperation and possesses a position of power in the short-term cooperative framework. It aims to advance rural communities, promote inclusive economic growth as well, and improve agriculture as a whole by the principles of cooperation. This study was carried out to evaluate the financial performance of VSCB. For the financial analysis of VSCB statistical tools viz., growth index, ratio analysis, graphs, etc., were employed to arrive at a meaningful conclusion. The period of the study was five years, i.e., from 2016-17 to 2020-21. The financial performance of VSCB was measured across three dimensions: efficiency in mobilization, efficiency in deployment, and efficiency in the operation of the bank. The study shows the bank's commendable performance in mobilizing funds through deposits and borrowings, which was revealed by the ratios.

Keywords:

Financial Performance, PACS, Credit Cooperatives, Ratio Analysis

1. Introduction:

Co-operative is an autonomous association of persons united voluntarily to meet their common economic social and cultural needs and aspirations through jointly owned and democratically controlled enterprises. Co-operative banks have historically played a critical role in the economic

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development and social progress of their members and communities while maintaining sustainable profits from their competitive economic activities. The microeconomic and macroeconomic levels have acknowledged the special role of co-operatives in banking. Unlike commercial banks, co-operative banks often have the same customers as their members, so they place a greater emphasis on providing quality service and financing to their customers – members, while profitability only serves to sustain their survival. The stability of the financial system is strengthened further by co-operative banks due to their sound capitalization, their low-risk asset profile, their consistency of performance, their ability to monitor peers, and their pioneering in corporate social responsibility. Additionally, they provide incentives for competitiveness, since they are among the most significant participants in financial systems.

India's financial system is dominated by co-operative banks. The Co-operative banks include both urban and rural co-operative credit institutions. The Rural Credit Co-operatives may be further categorized into short-term credit co-operatives and long-term credit cooperatives. The co-operative credit structure for the short term is a three-tier one with primary agricultural credit societies at the bottom, the central co-operative bank at the district level, and the state co-operative bank at the apex level. Though the organization of central and state co-operative banks was mainly for the benefit of the agricultural credit sector, they serve non-agricultural societies too.

Rural (agricultural) borrowers are dealt with directly by PACS, which provides loans, collects repayments, and performs distribution and marketing services. Cooperative credit structures are based on them and they occupy a dominant position. On the one hand, it provides the final link between the ultimate borrowers and the higher financial institutions, such as the Scheduled Commercial Banks and RBI/NABARD.

2. Statement of problem:

The "Financial Performance of Venginissery Service Cooperative Bank (VSCB) Ltd. No. R.528." study seeks to investigate and analyze the financial health and sustainability of VSCB in the agricultural sector. PACS play a critical role in assisting farmers by providing finance, marketing facilities, and a variety of other services that are critical for increasing agricultural output and rural development. Despite their critical function, many PACS have

financial issues that limit their ability to serve their members efficiently and contribute to the larger agricultural economy. The purpose of this study is to uncover the important elements driving PACS's financial success, such as revenue production, expense management, loan portfolio quality, and overall sustainability. This study intends to provide valuable insights and recommendations to policymakers, agricultural stakeholders, and the cooperative sector itself by assessing the financial health of PACS, allowing them to devise strategies and policies that can improve the financial viability and long-term sustainability of primary agricultural cooperative societies. Finally, the outcomes of this research will help to strengthen the agricultural sector, farmers' livelihoods, and rural communities' economic development.

3. Objective of the study:

- To analyze the financial performance of VSCB in the light of trend analysis.

4. Research Methodology:

This study adopts descriptive research methods. Data required for the study are drawn from the financial statements and annual reports of VSCB apart from the focus group discussion with the officials of VSCB. The study utilized simple statistical tools such as percentage and trend analysis. Since the trend analysis enables taking time dimension into account, the examination of whether the financial position of a firm is improving or deteriorating over the years is possible and therefore trend analysis is employed for the study. The period of the study is from 2016-2017 to 2020-2021.

5. Scope of the study:

The study was intended to understand the financial performance of Venginissery Service Cooperative Bank (VSCB) Ltd. No. R.528. This study would therefore reflect the financial performance of the bank with special reference to the source of funds and applications of funds. The inferences drawn from the study may also help in indicating the financial soundness of the bank in the future to a certain extent.

6. Review of Literature:

Vanlalmuana and Laldinliana (2020) conducted a study on "Structure and Financial Performance of Primary Agricultural Credit Co-operative Societies

in Mizoram". In this paper, financial performance was evaluated using certain organizational structures in 25 sample PACS. In terms of financial parameters, they include villages covered, membership, employment generation, working capital, total business, capital structure, CD ratio, debt-to-equity ratio, and return on investment. The data were analyzed with statistical tools such as CAGR, t-value of curve estimation, ratios, and Pearson correlations. While the coverage of the village is low, membership rates have improved dramatically. The sample PACS took advantage of its membership base to increase its share capital. However, the credit-deposit ratio and capital structure had no significant relationship to return on investment.

Soni and Saluja (2012) in their research paper "Role of Cooperative Bank in Agricultural Credit: A Study Based on Chhattisgarh " 2012. The reference period for gathering secondary data on agricultural lending from the Co-operative Bank was three years, from 2009-2010 to 2011-2012. The vast majority of respondents are pleased with the way Co-operative Banks provide agricultural financing and rural development. The degree of service provided by a Co-operative Bank is extraordinary. Co-operative Banks are crucial in agricultural finance and rural development. Co-operative Banks, in short, provide all-around help to rural Chhattisgarh and have proven to be a tool for sharing growth while also promoting social justice. These Co-operative Banks are critical to the delivery of rural credit in the state of Chhattisgarh.

Gupta and Jain (2012) in their paper titled "A Study on Co-operative Banks in India with special reference to Lending Practices". This survey is based on several successful co-op banks in Delhi (India). The financial performance of long-term co-operatives turned out to be even weaker than that of short-term co-operatives. It was also observed that the co-operative branch network was spread throughout the country, but concentrated in specific areas. The investigation of the bank's performance, as well as the lending procedures given to consumers, is now underway. The customer has obtained multiple types of bank loans. Furthermore, they advised that the bank implement the most recent banking technologies, such as ATMs, internet / online banking, credit cards, and so on, to compete with private sector banks.

Pujari (2008) attempted to analyze the "Performance of primary agricultural Co-operative credit societies in Haryana and Karnataka". The data was analyzed using tabular analysis. Simple statistical procedures such as

averages, percentages, correlation, regression analysis, compound growth rate, and multiple regression were utilized to get the above-mentioned conclusions. Both states recorded increases in membership, capital, deposit mobilization, borrowings, working capital, loan outstanding, loan advances, loan recovery, overdue, and cost of management over the study period at a five percent level probability, the compound growth rates (CGRs) of these variables were found to be significant.

Desai and Namboodri (1991) studied “Comparative Performance of Farmers’ Service Societies and Primary Agricultural Co-operative Credit Societies”. This paper examines the performance of farmers’ service societies (FSS) in comparison with primary agricultural Co-operative credit societies (PACS). Organizational and member performance must be evaluated from two perspectives: the organizations and the members. This necessitates data collection and analysis for both of these economic units. However, in this paper, they only look at organizational data; however, the criteria employed to measure performance allow us to make conclusions from the perspective of members. It is a comparative study because FSS was developed primarily in reaction to the awareness that PACS lacked the potential to perform multipurpose responsibilities and overlooked the weaker sectors of society such as agricultural laborers, marginal farmers, and women.

7. Organizational Profile:

The Venginissery Service Cooperative Society/Bank Ltd No. R528 was established in 1946 with its head office in Venginissery Village in the Thrissur District. With the cooperation of the people, the bank has been working as a class-1 special-grade bank since 2004. The bank continues to operate in profit according to the audit report. Many new schemes have been devised and implemented successfully by the bank’s management committee under the supervision of the Co-operative Department. A grant was awarded to the bank for outstanding performance in the Model Co-operative Societies grant program in 2009-2010. Furthermore, this bank has received a special incentive prize from the District Co-operative Bank. Now having achieved the criteria of Super Grade Bank, the bank has been devising innovative schemes and successfully implementing them.

Table 1: Various sources of funds in MDCB

YEAR	MEMBERSHIP	SHARE CAPITAL (IN RS. LAKHS)	RESERVES (IN RS. LAKHS)	DEPOSITS (IN RS. LAKHS)	LOANS AND ADVANCES (IN RS. LAKHS)	NET PROFIT (IN RS. LAKHS)
2016-2017	5840	3.40	0.39	106.22	95.22	60.28
2017-2018	5962	3.48	0.79	120.17	101.46	30.26
2018-2019	6859	4.06	0.79	136.79	117.63	29.54
2019-2020	6903	4.01	11.83	152.44	131.23	26.76
2020-2021	6919	3.16	0.97	164.85	146.10	7.22

Source: Compiled from Annual Reports of VSCB from 2016-17 to 2020-21

Table 1 illustrates that there is an increasing trend in the Membership position of VSCB during the study period. In the year 2016-17, VSCB's membership position was 5840, which increased to 6919 in 2020-21. There is an increasing trend in share capital except in the final year, where the share capital falls to ₹ 3.16 Lakhs. From 2016-17 to 2019-20, Reserves showed an upward trend and reached a peak value of ₹ 11.83 Lakhs. Despite giving a maximum value, it shows a downward trend in the following year. Besides, it is also to be noted that there is an increasing trend in deposits during the study period i.e., 2016-17 to 2020-21. Deposit increased from ₹106.22 Lakhs to ₹164.85 Lakhs. The loans and advances show an increasing trend during the study period. The highest value recorded was ₹146.10 Lakhs in the year 2020-21. It is also observed from the table that the Net profit of VSCB was ₹60.28 Lakhs during the year 2016-17 which decreased to ₹ 7.22 Lakhs during the year 2020-22

8. Results and Discussion:

In this section, an effort has been undertaken to assess the financial performance of VSCB by examining various financial ratios such as efficiency in mobilization, efficiency in deployment, and efficiency in the operation of the bank to draw significant conclusions.

A. Efficiency in Mobilization:**Table 2: Efficiency in Mobilization**

Year	Owned fund to Working capital	Borrowed funds to working capital	Deposits to working capital	Owned fund to borrowed fund
2016-17	2.52	77.08	70.49	0.03
2017-18	2.51	79.29	70.54	0.03
2018-19	2.60	79.27	73.38	0.03
2019-20	9.04	93.27	87.02	0.10
2020-21	2.36	101.59	94.11	0.02

Source: Compiled from Annual Reports of VSCB from 2016-17 to 2020-21

Table 2 illustrates the efficiency in mobilization of VSCB from 2016-17 to 2020-21. The owned fund to working capital ratio shows a fluctuating trend and increases from 2.52 percent to 2.36 percent during the study period. The highest ratio is found in the year 2019-20 due to an increase in the owned fund than working capital. So, the higher ratio indicates that the bank has a greater ability to mobilize the owned funds. The borrowed fund to working capital ratio increased from 77.08 percent to 101.59 percent during the study period. The deposit to working capital ratio increased from 70.49 percent to 94.11 percent during the study period. The owned fund to borrowed fund ratio shows the same value from 2016-17 to 2018-19 and then shows a slight decrease to 0.02 percent. This indicates that the bank was not successful in mobilizing the owned funds for its operation. It's always advisable to keep more owned funds compared to the borrowed funds.

B. Efficiency in Deployment:**Table 3: Efficiency in Deployment**

Year	Credit-to-deposit ratio	Credit to Working capital ratio	Credit to Borrowed funds ratio
2016-17	0.90	63.20	0.82
2017-18	0.84	59.56	0.75
2018-19	0.86	63.10	0.80
2019-20	0.86	74.92	0.80
2020-21	0.89	83.40	0.82

Table 3 illustrates the efficiency of deployment of VSCB. The credit-to-deposit ratio has decreased from 0.90 percent in 2016-2017 to 0.89 percent in 2020-21. The credit to the working capital ratio has increased from 63.20 percent in 2016-17 to 83.40 percent in 2020-21. This was due to the growth of credit being commensurate with working capital. The higher ratio denotes the ability of banks to manage funds efficiently. The credit-to-borrowed-fund ratio first shows a decrease from 0.82 percent in 2016-17 to 0.75 percent in 2017-18 and then increased to 0.82 percent in 2020-21. The higher ratio implies the efficiency in deploying the funds, so a high ratio is preferred.

C. Efficiency in Operation:

Table 4: Efficiency in Operation

YEAR	SPREAD RATIO	BURDEN RATIO	PROFITABILITY
2016-17	0.028	0.013	0.015
2017-18	0.052	0.008	0.044
2018-19	0.050	0.015	0.035
2019-20	0.075	0.006	0.069
2020-21	0.078	0.005	0.073

Source: Compiled from Annual Reports of VSCB from 2016-17 to 2020-21

Table 4 illustrates the efficiency of the operation of VSCB. The spread ratio has increased from 0.028 percent in 2016-2017 to 0.078 percent in 2020-21. The upward trend shows that the bank receives more income through interest received on loans and investments. This is primarily due to the increase in deposit interest rates. The burden ratio gives a fluctuating trend during the study period. The highest ratio was recorded in the year 2018-19 while the lowest ratio is in the year 2020-21. Profitability shows an upward trend from 2016-17 to 2020-21. The highest profitability was recorded in the year 2020-21. This shows that the bank is profitable.

9. Conclusions:

The study on the financial performance of Venginissery Service Cooperative Bank (VSCB) through trend analysis has yielded valuable insights into its operational areas, particularly in raising funds and lending practices. The analysis indicates that VSCB's performance in these specific domains is commendable and satisfactory.

First, in terms of fund mobilization, the owned fund to working capital ratio exhibited a fluctuating trend, with a peak in 2019-20, indicating the bank's capacity to mobilize its owned funds. However, the owned fund to borrowed fund ratio remained relatively stagnant, suggesting challenges in leveraging owned funds for operations. The bank should maintain a higher proportion of owned funds compared to borrowed funds for stability.

Moving on to fund deployment, the credit-to-deposit ratio remained relatively stable, while the credit-to-working capital ratio increased, reflecting the bank's efficient management of funds, particularly about its working capital. The credit-to-borrowed fund ratio initially dipped but then increased, emphasizing the banks improved efficiency in deploying funds over time.

In terms of operational efficiency, the spread ratio displayed an upward trajectory, indicating that the bank generated more income through interest on loans and investments, likely attributed to increased deposit interest rates. The burden ratio exhibited fluctuation throughout the study period, with its highest point in 2018-19 and the lowest in 2020-21. However, profitability showed a consistent upward trend, reaching its peak in 2020-21, indicating the bank's overall financial health and profitability.

In summary, the analysis suggests that VSCB has demonstrated strength in mobilizing owned funds and efficient fund deployment, particularly in working capital. The bank's ability to generate higher income from interest and its consistent profitability highlight its operational effectiveness. Nonetheless, it should continue to focus on maintaining a balanced ratio of owned to borrowed funds for long-term stability and growth.

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Substituting Banking Needs Through Cooperative Society: An Assessment of Governance and Performance

Dr. Ankita R. Ojha*

Abstract:

The cooperatives are one of primarily, autonomous, economic institutions of user members united voluntarily to meet their common economic, social, cultural needs and aspirations through a jointly owned and democratically controlled enterprise. Even before formal cooperative structures came into being through the passing of a law, the practice of the concept of cooperation and cooperative activities were prevalent in several parts of India. Cooperative Credit Societies Act, 1904 was the first Incorporation in India related to the cooperatives. Over the years the cooperatives have grown to a mammoth institution which supports and influences the lives of millions of people in India. The following paper provides an idea about how loan amount is determined, types of loan provided, factors of sanctioning the loan, etc. by the cooperative societies, and satisfaction level regarding operational functional by the society. It was found that salary and class is the major factor of determining the loan amount to be given, whereas duration of service and number of shares a beneficiary holds were the major factor for sanctioning the loan to the beneficiaries. As far as satisfaction is concerned with the term of operational function, majority of the members of cooperative society were satisfied. Nevertheless, there were issues on which researcher has stated her suggestions regarding policy drafting and a comprehensive 4-way Model is developed by the researcher for preparing a society on contemporary norms.

Keywords:

Cooperative, Credit Cooperative Society, Credit facility, Sanctioning credit, Measures of member Satisfaction, 4-way Model

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1. Introduction:

A Co-operative Society is an organization that is formed by a group of people whose primary objective is the promotion of the economic interests of its members. This is achieved by the Cooperative sharing its profits amongst its members, in proportion to their contribution to the Cooperative's business, from which its overall profits are derived.

Credit Cooperative Societies are set up with the objective of helping people by providing credit facilities. They provide loans at a minimal rate of interest and flexible repayment tenure to its members and protect them against high rates of interest that are charged by private money lenders.

Prime Minister Shri Narendra Modi, addressing the nation on the occasion of 77th Independence Day from the Red Fort in New Delhi, said that Cooperatives are a significant part of the country's social economy. He said that a separate Ministry of Cooperation has been created to strengthen cooperatives, modernize them and strengthen the biggest unit of democracy in every nook and corner of the country.

Prime Minister said that Ministry of Cooperation is spreading a network of cooperatives in the country, ensuring that the voices of even the poorest individuals are heard, their needs are met, and they can contribute to the nation's development. He stressed that India has chosen the path of "Sahkar se Samridhi".

It is essential to map contrasting diversities and analyse the reasons, which could be resource base of the State. Statistics indicate that Maharashtra has the highest number of cooperative societies, followed by Uttar Pradesh. The maximum number of cooperatives are in the field of credit, agro, housing, multi-purpose and dairying. It is essential to undertake research on the major parameters that contribute to the development of such societies and their distribution in specific regions.

The Union government has also decided to set up a cooperative university for cooperative education in the coming days. Shah further said that there was never a national cooperative policy in the country between 2003 and 2020. Before Diwali this year, the new national cooperative policy will be formulated which will put the map of cooperatives in front of the country for the next 25 years.

2. Literature Review:

Célia Dorigan de Matos Furlanetto et.al. (2023) in her study title ‘Conscious Capitalism and Construction of Humanized Relationships: A Study in a Credit Cooperative from the Sensemaking Perspective’ Results: this study provides an expanded look at a specific phenomenon (humanized financial relations) in organizations guided by particular and universal principles (credit unions) that, while competing with non-cooperative financial institutions (banks), need to balance economic and social interests, without ceasing to be competitive.

Paul Ndonye and Jagongo Ambrose (2023) in their study title ‘A research agenda on portfolio diversification, government regulations, and the financial performance of deposit-taking SACCOs in Nairobi County, Kenya’ revealed that an evaluation of the portfolio decisions made by SACCOs in Nairobi County, Kenya, reveals concerns that have adversely affected their financial performance. Diversification of the portfolio is a crucial response to the changing financial needs of the SACCO's members. Sadly, deposit-taking SACCOs in Nairobi County have not fully implemented portfolio diversification, and those that have done so have done so inefficiently, rendering the majority of them financially untenable.

Inayati Nuraini Dwiputriet. al. (2022) ‘The Effect of Cooperatives Credit to the Welfare’ The results of the analysis show that the use of cooperative credit is able to improve the welfare of the people of Batu City in particular. The higher the number of cooperative credits used, the higher the level of community welfare. However, the longer credit period can reduce the level of community welfare because it can be caused by the increasing cost of living for the community from year to year.

Iyer et al., (2021) stated that the cooperative law in Korea has made it easy to open a business, furthermore, the constitution in the Philippines has recognized cooperatives as a tool for equity, social justice and economic development.

Iyer et al., (2021) proved that in Japan, Malaysia and India, cooperative laws have helped the growth of the agricultural sector and have made it easier for cooperative members to get finance or credit.

McKillop et al., (2020); Silva &Morello, (2021) As an institution that is close to the community, cooperatives are considered to have a large socio-economic impact on the welfare of the community. Many studies on cooperatives from various regions of the world have found that cooperatives have an effect on people's welfare. The welfare of the community can increase when they become a member of a cooperative because there are some benefits that are obtained by members.

Kiprotich Charles and Dr. OnsomuZipporah (2021) Financial Engineering and Financial Performance of Deposit Taking Savings and Credit Co-operative Societies in Kenya, SACCOs have adopted financial engineering practices: product engineering, process engineering and financial solutions engineering in their operations. Financial engineering has an influence on financial performance of SACCOs. Specifically, adoption of process engineering practices can significantly improve the financial performance. As such, SACCOs should automate its operations, adopt paperless services, use mobile banking services platform, use electronic funds transfer and install ATMs.

Lawrence Musiitwa Kyazze and Isa Nsereko (2020) Cooperative practices and non-financial performance of savings and credit cooperative societies, the purpose of this paper is to examine the relationship between cooperative practices of accountability, cooperative ownership, advanced communication and non-financial performance in savings and credit cooperative societies. The findings reveal that cooperative practices of accountability, cooperative ownership and advanced communication are significantly and positively associated with non-financial performance of savings and credit cooperative societies.

Debela, Diriba & Bekeley (2017) Iyer et al. (2021), Su & Cook (2020) argue that cooperatives play an important role as an economic driver, especially in local communities. Cooperatives and society are interconnected in the Pancasila economic system, which values based on kinship and cooperation are one of the reasons Indonesian people become members of cooperatives.

3. Research Methodology:

3.1 Research Gap:

From the overview of the existing literature on Cooperative Credit Societies, it

is clearly visible that a comprehensive study on broader spectrum viz., humanized financial relation with regards to credit unions, diversification of the portfolio crucial for changing financial need, cooperative credit and welfare of the people, amount of loans affect financial performance, accountability, cooperative ownership and advanced communication are significantly associated with non-financial performance of credit cooperative societies, etc. has been done. But it is clearly visible that a comprehensive study on Substituting Banking needs through cooperative society has not been done. This lacuna of the existing literatures provides the basic access to do the present research study. At the same time this research study has been undertaken to enhance the existing knowledge based on the relationship between the credit facilities and credit availability and satisfaction among members regarding operational facilities of the society of Amravati city.

3.2 Objectives of the Study:

1. To assess operational functions of the society.
2. To understand satisfaction of the board members on operational efficiency.
3. To develop model matching with present time needs for the societies.

3.3 Hypotheses:

1. There is a significant impact of factors like salary and classon determining the loan amount.
2. There is a significant impact factors like shareholding and duration of serviceon sanctioning of loan amount.
3. There is statistical significance in classifying the societies in different group.
4. There is a difference in satisfaction level among group of members Management, Supervision, Audit by the society.

3.4 Research Design:

In this part a brief description of the methodology adopted for the study is given. It included, database, sampling design and analytical procedures adopted in the present analysis.

3.5 Data Base:

Questionnaire method has been used for the collection of data. The data for the study were collected from both secondary and primary sources.

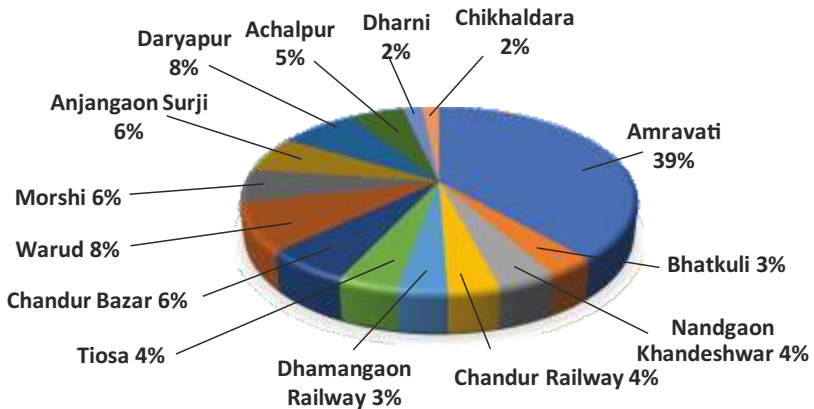
3.6 Secondary data:

Records of societies, circulars and policy letters are the main sources of secondary data. Secondary data were also gathered from various publications and reports of committees. The details of the Credit Cooperative Society in the Amravati City were collected from the DDR office of Co-operative Societies.

3.7 Primary Data:

There are 6 types of Cooperative Society function in India viz., Farmer's Cooperative Societies, Marketing Cooperative Societies, Cooperative Housing Societies, Credit Cooperative Societies, and Producer's Cooperative Societies. There are 2006 Cooperative societies in Amravati district.

Cooperative Societies as on 31-03-2022 in Amravati District



For collecting primary data from the sample respondents, questionnaire was prepared and distributed among 120 Board of Members of 40 Credit Cooperative Societies. Out of which 87 Board of Members of 29 Credit Cooperative Societies were responded to it.

3.8 Sampling Design:

A purposive sampling technique was used for the collection of primary data.

3.9 Analytical Procedure:

The collected data were classified and tabulated. Tables and statistical results have been derived through SPSS. To analyse and interpret data collected for the study from different sources, mathematical and statistical tools such as Cumulative Percentage, Average, Descriptive Statistics, etc. were made use of. Statistical techniques like 'ANOVA' test 'Cluster' analysis have also been suitably employed. In order to delve about the Credit Cooperative Societies time period of two years 2021-2023 was studied.

3.10 Limitations of the study:

Every study has some or the other limitations which are common for all studies based on social survey. The present study also suffers from certain limitations. The study is confined only to the Housing Cooperative Society, Employee Credit Cooperative Society and Cooperative Societies of Others (Non-agriculture) of Amravati city for the reason of manageability. The study is limited for the period of 2 years.

4. Observations:

Table 1. Number of Members

Descriptive Statistics				
	N	Minimum	Maximum	Mean
Member Number	87	5.00	1003.00	292.5172
Valid N (listwise)	87			

From the above table 1, number of cooperative societies studied were 29 included Housing Cooperative Societies, Employees' Credit Cooperative Societies, and Cooperative Societies of Others (Non-agricultural) with average number of members in each society was 293.

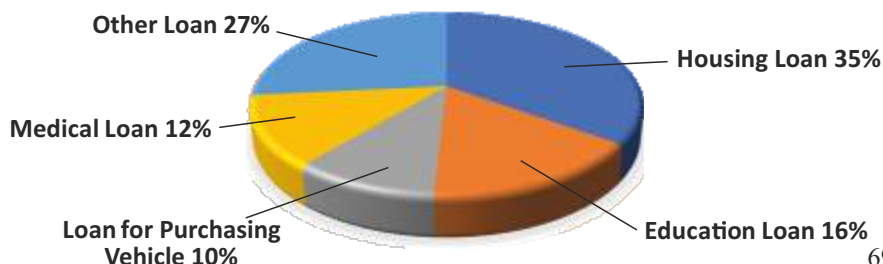
Chart 1. Accepted Deposit From Board of Members

From the above chart, 54 board of member i.e., 62.1% have accepted deposits from their members whereas, 37.9% of the board members stated that they don't accept deposits from their members.

Table 2: Interest on Deposit

Descriptive Statistics			
	N	Maximum	Mean
DI1	87	9.00	5.4713
DI2	87	11.00	7.5000
DI3	87	11.00	8.4138
DI4	87	11.00	4.6782
DI5	87	15.00	6.3506
Valid N (listwise)	87		

The above-mentioned table indicates that maximum interest on 'Saving Deposits' is 9% with mean of 5.47. Whereas, maximum interest on 'Time Deposits', 'Fixed Deposits', and 'Recurring Deposits' is 11% with the mean 7.5, 8.4, and 4.6 respectively. As far as interest on 'Other deposits' are concerned, the maximum interest is 15% with the mean of 6.3. This shows that cooperative societies are paying more interest rate as compared to banks.

Chart2. Types of Loan Demanded

From the following chart, it is concluded that the most demanded loan is Housing loan followed by ‘Other’ type of loan i.e., business loan, personal loan etc. Demand for ‘Education loan’ and ‘Medical loan’ is moderately demanded whereas, demand of loan for ‘Purchasing of Vehicle is very low.

Chart 3. Factors for determining limit of loan

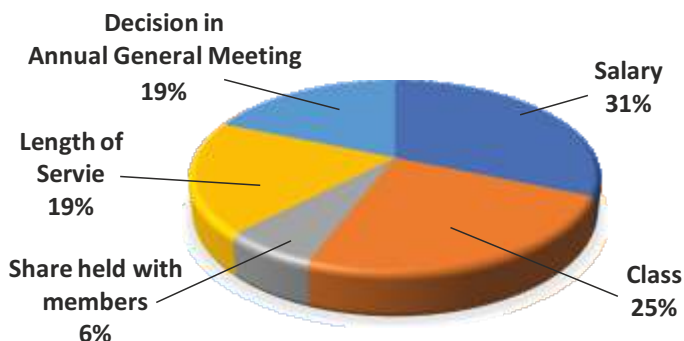


Chart3 discloses that ‘Salary’ and ‘Class’ of employees are the most prominent factors for determining the limit of loan provided to the members. ‘Length of Service’ and Decision in annual general meeting’ are the moderate factors for determining the limit of loan. Whereas, ‘Shares held with members’ is the lowest affecting factors for determining the limit of loan. It is been concluded that hypothesis i.e., there is a significant impact of factors like ‘Salary’ and ‘Class’ on determining the loan amount is accepted.

Chart 4. Factors for sanctioning loan Amount

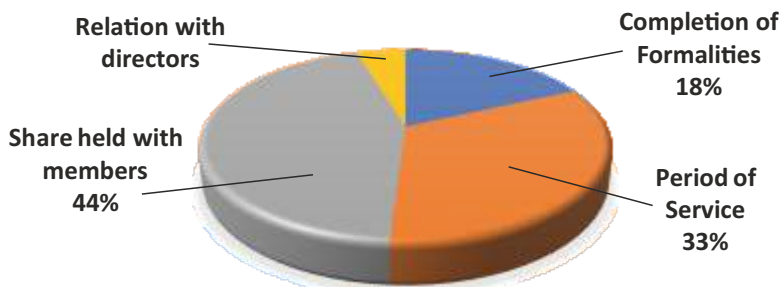
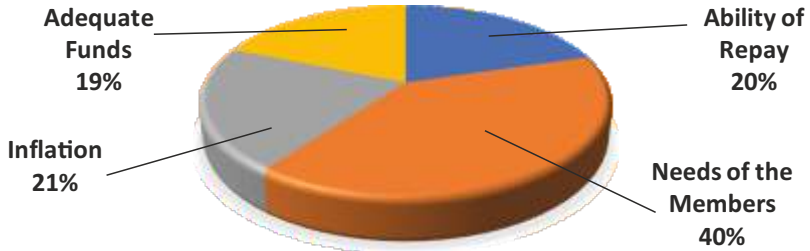


Chart 4 indicates that ‘Share held with members’ is the most affecting factor for sanctioning loan followed by ‘Duration of Service’. Next factor i.e., ‘Completion of Formalities’ is moderately affected for sanctioning of loan and ‘Relation with directors’ is the lowest affecting factors that effect on

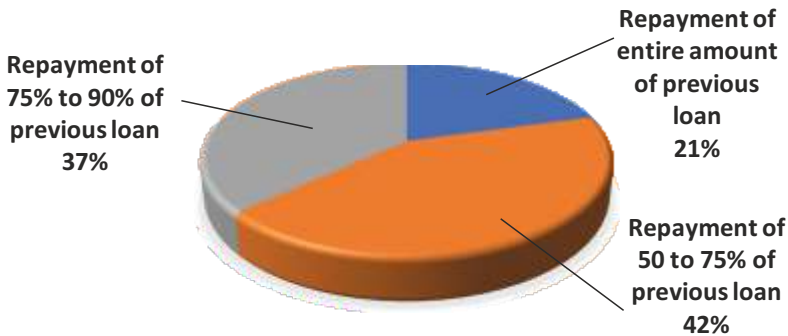
sanctioning of loan to the members. So, the stated hypothesis, i.e., there is a significant impact of factors like 'Shareholding and Duration of Service' on sanctioning of loan amount is accepted.

Chart 5. Factors of Increasing Loan Amount



From chart5, it is concluded that 'Needs of the member' is the highest affecting factor followed by 'Inflation', 'Ability of repay' and 'Adequate Funds' for increasing the limit of loan amount in the last five years.

Chart 6. Conditions to take Loan Again



According to the facts shared by Board of Members, majority of the society has adopted policy of repayment of 50% to 75% of previous loan to take loan again followed by the condition that repayment of 75% to 90% of loan payer will only be eligible to take loan again. Only 21% of the respondent cooperative society adopted condition of repayment of entire amount of previous loan to take loan again.

Chart 7. Overdues

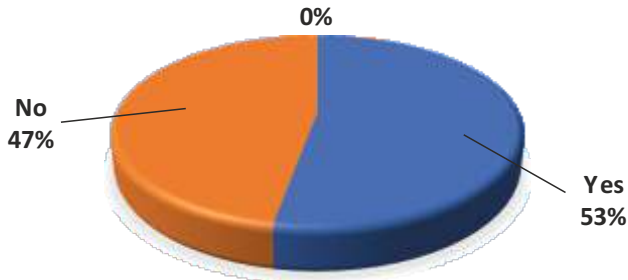
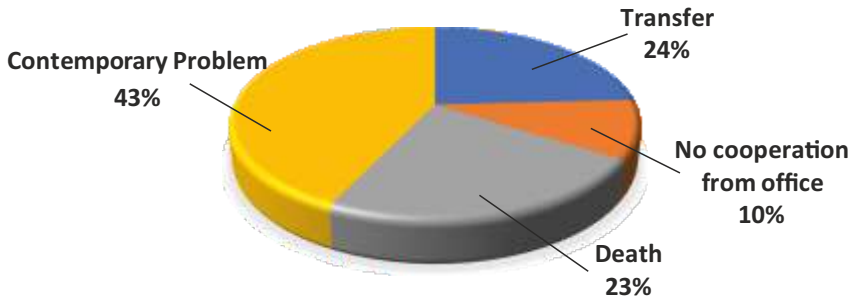


Chart 7 discloses that 53% of the Board of Members accepted that their society is suffering from overdues. This overdues leading their cooperative society towards inadequate fund against loan borrow. Whereas, 47% of the Board of Members rejected overdues in their cooperative society.

Chart 8. Reasons for Overdues



53% of Board of Members those who accepted that there are overdues in their cooperative society stated the reasons for overdue that due to contemporary problem (43%), transfer of the employee (24%), death(23%), and no cooperation from office(10%) repayment of loan is in pending status. This is one of the reason due to which society does not have sufficient amount for future expenses.

4.1 Cluster Analysis:

Cluster analysis is a multivariate data mining technique whose goal is to groups objects (eg., products, respondents, or other entities) based on a set of user selected characteristics or attributes. It is the basic and most important step of data mining and a common technique for statistical data analysis, and it is used in many fields. K Means clustering is used considering number of

samples and number of clusters to be formed is decided beforehand, i.e., three clusters. Cluster analysis is done based on Satisfaction score with the operational function performed by the society.

Table 3. Number of cases in each cluster

Cluster 1	46.000
2	15.000
3	26.000
Valid	87.000
Missing	.000
Cluster No. 1=46	
Cluster No.2= 15	
Cluster No. 3=26	

Majority of the Board Members who were highly satisfied are in Cluster No. 1 i.e., 46, whereas, 15 Board of Members who had no opinion are in cluster 2 and 26 Board of Members were dissatisfied with the operational function by the society are in cluster 3.

Table 4. Final Cluster Centers

Statements	CLUSTERS		
	1	2	3
Sat 1	4.52	4.13	4.00
Sat 2	4.30	2.00	4.08
Sat 3	4.50	1.07	1.69
Sat 4	4.39	3.80	2.65
Sat 5	4.33	4.53	4.00
Sat 6	4.52	2.27	4.12
Sat 7	4.37	2.53	4.04

From the above table it is clear that the averages for the variable for the individuals who happen to have been placed in that cluster. It is determining whether Sat1 the average value for all the people in cluster 1 is 4.52, the smaller the number is, it is the closest to the cluster center.

4.2 One Way Anova:

Researcher further used One Way ANOVA to test the significance of the classification using K means Clustering. One Way ANOVA is used to test level of significance in classifying the board of members based on these three parameters. The results of the same are as depicted in the table below.

Table 5. Significance satisfaction in classifying the board of members on different parameters of operational function by the society and Cluster of predominant factors.

ANOVA						
	Cluster		Error		F	Sig.
	Mean Square	Df	Mean Square	Df		
Sat1	2.509	2	.324	84	7.746	.001
Sat2	31.081	2	.543	84	57.273	.000
Sat3	101.807	2	.547	84	186.023	.000
Sat4	25.081	2	.634	84	39.570	.000
Sat5	1.539	2	1.070	84	1.439	.243
Sat6	28.962	2	.417	84	69.378	.000
Sat7	19.202	2	.660	84	29.108	.000

The F tests should be used only for descriptive purposes because the clusters have been chosen to maximize the differences among cases in different clusters. The observed significance levels are not corrected for this and thus cannot be interpreted as tests of the hypothesis that the cluster means are equal.

Based on the 5 percent significance level well performance of management function, cordial relationship between all level of management, people in the management are expert in the field of banking and cooperation, proper check is made over the utilization of loan amount, cooperative department audit is conducted periodically, and audit remarks are attended properly are statistically significant in classifying the societies in different group as these values are .001 and .000 for rest which are less than .05. Here, the hypothesis 3 is accepted whereas, Audit is properly conducted by audit department of bank is not statistically significant in classifying the board of members in different

group as these values is .243 which is greater than .05. so, the hypothesis for the factor 'Audit' is rejected. From the above given data, it is concluded that hypothesis 3 is accepted on Sat1, Sat2, Sat3, Sat4, Sat6 and Sat7's front, but not for the case of Sat5.

4.3 One-Way ANOVA Test:

The One-Way ANOVA is commonly used to test the Statistical differences among the means of two or more groups, Statistical differences among the means of two or more interventions, or, Statistical differences among the means of two or more change scores.

Ho: There is no difference in satisfaction level among the group members.

H1: There is a difference in satisfaction level among the group members.

Table 6: ANOVA

ANOVA					
SatisfactionAvg					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	28.069	25	1.123	3.373	.000
Within Groups	20.304	61	.333		
Total	48.373	86			

From table 6 it is concluded that the mean square of satisfaction difference between groups is 1.123 and mean square of satisfaction difference within groups is 0.333 with the significance value of 0.000. Since the significance value is less than .05, we can reject the null the hypothesis. So, accepting alternative hypothesis we conclude that there is a difference in satisfaction level among the group members of the societies.

5. Findings:

1. Housing Cooperative Societies, Employees' Credit Cooperative Societies, and Cooperative Societies of Others (Non-agriculture) with average number of members in each society was 293.

2. Majority of the Board of Members of different societies from selected sample have accepted deposits from their members whereas, there are few of the board members stated that they don't accept deposits from their members.
3. In comparison of Saving deposits, Time deposits, Fixed deposits and Recurring deposits, societies are paying maximum interest on 'Other' deposits i.e., averagely 15%.
4. As far as types of loan demanded is concerned, 'Housing loan' followed by 'Other loan' is demanded the most. Demand for 'Education loan' and 'Medical loan' is moderately demanded, whereas, demand for loan for 'Purchasing vehicle' is very low.
5. Factors like 'Salary', 'Class', 'Length of Service' and 'Decision in Annual General Meeting' is impactful as high and moderate respectively on determining limit of loan amount.
6. According to board of members, 'Shares' and 'Period of Service' are the most affecting factors for sanctioning loan whereas, 'Formalities completion' is the less affecting factor.
7. 'Need of the member' is the highest affecting factor followed by 'Inflation', 'Ability of repay' and 'Adequate funds' are the moderate affecting factors for increasing loan amount in the last five years.
8. Majority of the Board of members stated that there is overdue in their society and the reason behind it was the Contemporary Problem, followed by Transfer and Death of the debtor.
9. Factors like Performance of management function, cordial relationship, expert in the field of banking and cooperation, surveillance over the utilization of loan amount, periodical audit conduction, and proper audit remarks were statistically significant in classifying the societies in different groups. Whereas, factor 'Audit by bank' is not statistically significant.
10. There is a difference in satisfaction level among the group members of the societies.

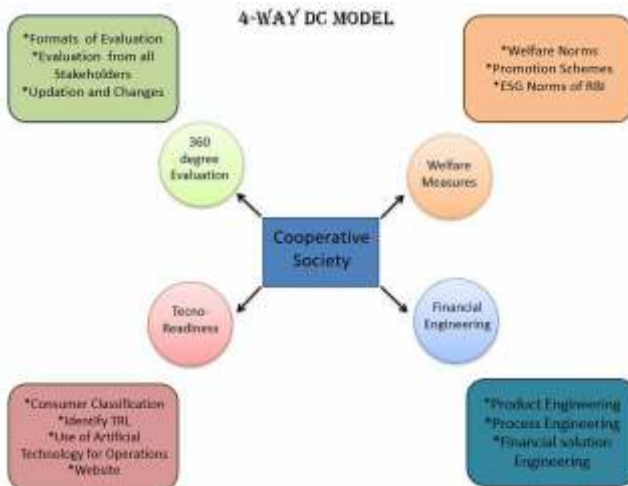
6. Conclusion:

The present study mainly focused on the identification of the various influencing factors and their impact on factors determining loan amount, sanctioning loan amount, increase loan amount, overdues and reason behind overdues by carrying out an exhaustive review of the literature and application of the various statistical analysis on the data collected from the respondents of Housing Cooperative, Society, Employee Credit Cooperative Society and Cooperative Societies of Others (Non-agriculture). On the basis of the results obtained in the study, it is found that the factors mentioned in findings have deep impact. Hence, it is concluded that all sampled cooperative societies do not accept deposits from their members and they are giving high interest on deposits of Saving, Recurring, etc., which is leading it towards inadequate fund against loan borrow. Salary and Class are the highest impacted factors on determining loan amount. To reclaim the loan borrower has to make 50% to 90% payment of the previous loan amount. Societies those are suffering from overdues stated the reason of contemporary problem, transfer, death etc. of the borrower. This leads to unsatisfactory of the performance of operational function by the society.

7. Model Development:

Researcher also developed the 4-Way Cooperative Development Conqueror Model to put forward suggestions of findings of the study in a concise way. See Figure 1.

Figure 1: 4-way Cooperative Development Conqueror Model



Based on the research findings, the researcher has prepared a model named as 4-Way DC Model which means 4-way Development Conqueror Model. With the help of this model, the researcher wants to tell that if cooperative society has to be developed completely, then first of all they will have to work on-

***Welfare measures** - in which they will have to work on welfare of the employees as well as beneficiaries of the society like motivation, hygienic environment, work culture, congenial relationships, etc., which are called as welfare norms. Then promotion schemes like benefits of mortality, insurance, retirement, deposits, loan, etc., will have to introduce and promote so that beneficiaries will get attract towards it. Environmental, Social and Governance is a frame work used to assess an organization's business practices and performance on various sustainability and ethical issues. It also provides a way to measure business risks and opportunities in those areas. So, the cooperative society has to implement it for their development.

***Financial Engineering** - In this regards, cooperative society will have to improve product with the help of product engineering. Then they will have to work on process to launch product with the help of process engineering. And then to plan required finance for the product, process and promotion, they will have to take help of financial solution engineering.

***Techno readiness** - On the third part, cooperative society will have classified their consumer and diverted their working mechanism from manual to technology. They will have to introspect on Techno readiness level and then Co-operative credit societies should start ATM, RTGS, NEFT, AT PAR cheque books, Net banking etc. proper writing of accounting records and preparation of financial statements according to accounting standards and norms which show clear financial position of the society. All the customers of the societies may not be familiar with the upcoming modern techniques e.g., ATM, Net Banking. In such cases the customers may feel uncomfortable in handling societies transactions. The societies have to play an important role in educating their customers in this area as well help them. In some societies the employees are not in a position to handle such sophisticated level of technology because of lack of knowledge or skill. Therefore, the rip of management of the co-operative credit societies should take the necessary steps to provide adequate training to their employees.

***360-degree Evaluation**-On the fourth part cooperative society has to evaluate its overall performance. For that sake they will have to take feedback from

their members and stakeholders to evaluate the performance. Wherever any deficiency is seen, changes should be made in it or process should be updated.

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Cooperative Finance and Economic Well-being of the Members: An Empirical Study on the Member's Perspective

Dr. Dipak Y. Chacharkar*

Abstract:

This project work is aimed at showing the use of cooperative society as a measure to improving the economic activities of the society. The objectives are geared towards evaluating the roles of cooperative societies in evaluating the lacks in the satisfaction about cooperative societies and providing the immediate solution and helping them improve by creating additional inputs to enhance satisfaction and welfare facilities to the beneficiaries. Cooperatives are expected to serve its members by providing agricultural or non-agricultural inputs, output marketing and mobilizing savings and providing credit services to their members to satisfy their needs and provide welfare facilities to enrich their standard of living. The data for the study are gotten through questionnaires administered on sample size of 140 from 29 cooperative societies. The data are tabulated and analyzed. Also, hypotheses are formulated and tested statistically to confirm or reject the hypotheses. By using Multinomial Logistic Regression, it is concluded that there is a significant impact of components like age, work experience, percentage of investment on satisfaction of welfare facilities provided by cooperative society. Furthermore, researcher has used Correlation method and Cluster analysis to find relation between satisfaction on welfare facilities provided by society and overall satisfaction about society. A model has developed by researcher, so on implementing it will bring to open the importance of cooperative societies and their activities uplift the economic activities of their members.

Keywords:

Cooperative society, evaluation role, Cooperative credit services, Cooperative Welfare activities, Member satisfaction on welfare activities.

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1. Introduction:

‘Under the Austrian Act, a co-operative society is an association with unlimited number of persons, the object of which is the promotion of industry or trades of their members by means of common action or credit.’

Under the Japanese Law of 1921 a co-operative society is an association having legal existence, formed by persons of modest means in order to promote & develop, according to principles of mutuality, the exercise their occupations & the improvement of their economic condition.

The Indian co-operative society’s act of 1912 has not given any definition of co-operation. Section 4(c) considers a co-operative society as “a society which has its objects the promotion of the economic interests of its members in accordance with co-operative principles.” The act has however, not precisely defined what is co-operation; nor has it attempted to defined economic interest or co-operative principle. An attempt to define these terms precisely was avoided deliberately in the interest of elasticity & simplicity.

Necessity of restrictive framework for any money establishment has been universally felt, primarily to safeguard the interest of an oversized range of shareholders and depositors and to confirm correct functioning of the financial organisation that square measure the half and parcel the money system. The man of science has analyzed the system of management with special relevancy the money aspects and dealing of the ECCS and also the legal provisions of act applicable to the ECCS. (Arun H. Gaikwad, 2013). Societies should be vigilant in advancing loans & in no case loans, which cannot be recovered should ever be sanctioned. These societies must adopt the modern management practices including computerization in their working, professional training to their employees & to their members of the board & should keep their level of functioning very competitive. This only can bring success to these societies. (Prof. S. S. Gavane 2012).

Maintaining the delicate balance between its institutional goals & its enterprise goals is a skilful art to what extent the cooperative has succeeded in mastering this art determines its success. (Dr. B. Niranjana Raj Urs 2010). (Biswa Swarup Misra 2010) stated that keeping the balance between short- and medium-term loans tipped towards the former to ensure optimum growth. The author concluded by citing better lending practices as an important factor which affects the financial health of the cooperatives.

2. Literature Review:

Durmishi, L., Bazsik, I., & Farkas, T. (2023). The results prove that there is indeed a significant increase in community life, cooperation, trust, quality of life, and communication in the community since establishing social cooperative.

Richard, I. M., Kazuzuru, B., Mataba, L., & Severine Sirito, A. K. (2023). The results indicate that SACCOS' services had significantly impacted on the household livelihood outcomes in terms of maize yields, household assets, savings, food expenditures and non-food expenditures.

Sungirirai, L., Gurajena, H., & Gaolawole, G. (2022). In their research titled, 'Challenges, Opportunities And Options In Savings And Credit Cooperatives Society Schemes As Strategy For Micro-Financing Housing In Botswana', supports the non-bank and informal finance systems provide small loans and small savings for housing finance. The informal systems include group-based savings collections such as Savings and Credit Cooperative Society (SACCOS), Internal Savings and Lending Schemes (ISLES) and microfinance firms that cover a wide range of community needs. ISLES serve economic and social purposes. SACCOS are an extension of Rotang Savings and Credit Association (ROSCAS).

Popker, S. M., & Naik, A. F. (2022). The analysis reveals that only ten UCCSs were efficient in terms of constant returns to the scale, variable returns to the scale and scalers efficiency for the period under study. The study identifies that two DMUs out of 30 UCCSs under study consideration have input as well as output slack. Analysis also divulges that one DMU has only output slack during terminal year. Further, study indorses that all inefficient DMUs can maintain its output at same level by reducing inputs if to be on efficient curve.

Joseph, M., & Godfrey, J. J. (2022). The findings from the regression analysis indicate that competitive aggressiveness and autonomy positively and significantly influenced the loan repayment performance while innovation influenced the loan repayment performance negatively. The study also revealed that proactiveness and risk-taking did not influence loan repayment. It recommends the government to initiate the policies which will enforce the entrepreneurship training for SACCOS clients.

Benti, A., Gabisa, N., & Tesfaye, M. (2022). The result from research stated that by using binary logistic regression model shows that out of 17 selected variables, fourteen were found significantly influencing participation of women in study area whereas, three variables were insignificant. Respondents of the study area were highly dissatisfied with management and satisfied with credit activities of their cooperatives. In general, appropriate intervention strategies, and best experience sharing are needed at zonal and regional levels.

Nathaniel, N. T., Ishengoma, E., & Mori, N. (2022). The results show that the duration of the relationship is negatively and significantly related to SACCOS financial performance, substantiating the relationship lending theories. The number of relationships has an insignificant effect on financial performance.

Dwiputri, I. N., Prastiwi, L. F., Agustin, G., & Ibrahim, M. D. (2022). The results of the analysis show that the use of cooperative credit is able to improve the welfare of the people of Batu City in particular. The higher the number of cooperative credits used, the higher the level of community welfare. However, the longer credit period can reduce the level of community welfare because it can be caused by the increasing cost of living for the community from year to year. This study provides additional empirical evidence that the use of cooperative credit in the community can improve the economy.

3. Research Methodology:

3.1 Research Gap:

From the overview of the existing literature on Cooperative Credit Societies, it is clearly visible that cooperative society has increased quality of life, it is significantly impacted on the household livelihood, it also supports that non-bank and informal finance systems provide small loans and small savings for housing finance. It is efficient in terms of constant returns to the scale, variable returns to the scale and scalers efficiency. The study also revealed that proactiveness and risk-taking did not influence loan repayment, appropriate intervention strategies, and best experience sharing are needed at zonal and regional levels, the number of relationships has an insignificant effect on financial performance, and the higher the number of cooperative credits used, the higher the level of community welfare. But it is clearly visible that a comprehensive study on cooperative finance and economic well-being of the

beneficiaries of the cooperative society has not been done. This lacuna of the existing literatures provides the basic access to do the present research study. At the same time this research study has been undertaken to enhance the existing knowledge based on the relationship between the satisfaction on welfare facilities provided by society and overall satisfaction about society.

3.2 Objectives of the Study:

1. To study the socio-economic profile of employees/ beneficiaries of Co-operative Credit Societies.
2. To understand overall experience of beneficiary about society.
3. To assess level of satisfaction of beneficiary about society.
4. To know the factors and its inter-relation with satisfaction.

3.3 Hypothesis:

1. There is no significant impact of components like age, work experience, and percentage of investment on satisfaction of welfare facilities provided by Cooperative Societies.
2. There is a significant relationship between satisfaction on welfare facilities provided by cooperative society and overall satisfaction about society.

3.4 Research Design:

In this part a brief description of the methodology adopted for the study is given. It included, data base, sampling design and analytical procedures adopted in the present analysis.

3.5 Data Base:

Questionnaire method has been used for the collection of data. The data for the study were collected from both secondary and primary sources.

3.6 Secondary data:

Records of societies, circulars and policy letters are the main sources of secondary data. Secondary data were also gathered from various publications and reports of committees. The details of the Credit Cooperative Society in the Amravati City were collected from the DDR office of Co-operative Societies.

3.7 Primary Data:

For collecting primary data from the sample respondents, questionnaire was prepared and distributed among 200 Beneficiaries of 40 Credit Cooperative Societies. Out of which 141 odd respondents from 29 Credit Cooperative Societies were responded to it.

3.8 Sampling Design:

A purposive sampling technique was used for the collection of primary data.

3.9 Analytical Procedure:

The collected data were classified and tabulated. Tables and statistical results have been derived through SPSS. To analyse and interpret data collected for the study from different sources, mathematical and statistical tools such as Cumulative Percentage, Average, Descriptive Statistics, etc. were made use of. Statistical techniques like ‘Multinomial Logistic Regression’, ‘Correlation’, and ‘Cluster’ analysis have also been suitably employed. In order to delve about the Credit Cooperative Societies time period of two years 2021-2023 was studied.

3.10 Limitations of the study:

Every study has some or the other limitations which are common for all studies based on social survey. The present study also suffers from certain limitations. The study is confined only to the Employee Credit Cooperative Society of Amravati city for the reason of manageability. The study is limited for the period of 2 years.

4. Observations:

Table 1. Profile of Respondents			
Particulars	Category	Frequency	Percentage
Age	20-30 years	11	7.8%
	30-40 years	36	25.5%
	40-50 years	48	34.0%
	Above 50 years	46	32.6%

Particulars	Category	Frequency	Percentage
Gender	Male	111	78.7%
	Female	30	21.3%
Marital Status	Married	116	82.3%
	Unmarried	11	7.8%
	Widow	14	9.9%
Work Experience	Below 5 years	27	19.1%
	5-10 years	27	19.1%
	10-15 years	23	16.3%
	15-20 years	23	16.3%
	20-25 years	25	17.7%
	More than 25 yrs	16	11.3%

From the table 1, it is found that respondents from age group of 40-50 years and 50 years above responded in majority from which maximum were male respondents and they were married. As far as work experience is concerned, all the respondents belonged into it is averagely 15% to each category.

Table 2. Status and Percentage of Investment

Particulars	Category	Frequency	Percentage
Working of Cooperative Society	Excellent	60	42.6%
	Very Good	60	42.6%
	Good	21	14.9%
Percentage Investment	0-20%	52	36.9%
	20-40%	19	13.5%
	40-60%	26	18.4%
	60-80%	33	23.4%
	80-100%	11	7.8%

From table 2, it is clearly visible that respondents responded that working of cooperative society is Excellent for them, whereas, few responded as Very Good & Good. Percentage of investment between 0-20% were majorly responded by 50 beneficiaries i.e., 36.9% further followed by 60-80% and 40-60 i.e., 23.4% and 18.4% respectively.

4.1 Multinomial Logistics Regression:

Multinomial Logistic Regression is the regression analysis to conduct when the dependent variable is nominal with more than two levels. Multinomial

regression is used to explain the relationship between one nominal dependent variable and one or more independent variables.

H0: There is no significant impact on satisfaction of age, work experience, percentage of investment

H1: There is impact on satisfaction of age, work experience, percentage of investment

Table 3: Step Summary

Step Summary				
Model	Action	Effect(s)	Model Fitting Criteria -2 Log Likelihood	Effect Selection Tests Chi-Square ^b
0	Entered	Intercept, Age, Work Experience, Percentage Investment ^a	225.373	.
Stepwise Method: Forward Entry				
a. No effects can be added to the initial model.				
b. The chi-square for entry is based on the likelihood ratio test.				

From the above table it is depicted that the factors which are important included in the analysis and other factors are deleted.

Table 4: Likelihood Ratio

Likelihood Ratio Tests				
Effect	Model Fitting Criteria	Likelihood Ratio Tests		
	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.
Intercept	241.645	16.272	2	.000
Age	232.043	6.669	2	.036
Work Experience	244.452	19.079	2	.000
Percentage Investment	250.618	25.245	2	.000

Since value is less than .05 these predictors are significant to the final model.

Table 5: Parameter Estimates

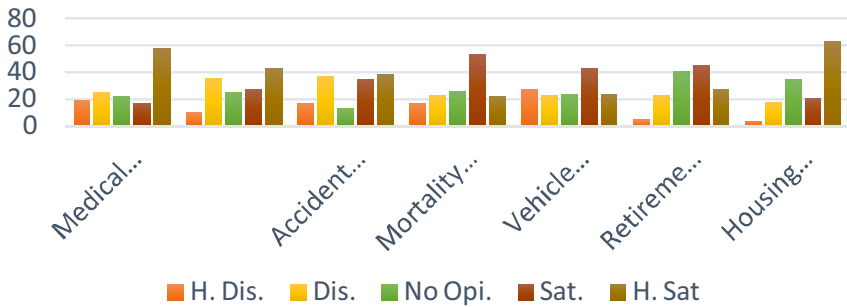
Parameter Estimates									
Working		B	Std. Error	Wald	df	Sig.	Exp(B)	95% Confidence Interval for Exp(B)	
								Lower Bound	Upper Bound
Very Good	Intercept	-3.680	1.235	8.879	1	.003			
	Age	.830	.335	6.151	1	.013	2.294	1.190	4.422
	Work Experience	.046	.188	.061	1	.805	1.047	.725	1.513
	Percentage Investment	1.239	.319	15.054	1	.000	3.453	1.846	6.458
Good	Intercept	-4.695	1.283	13.391	1	.000			
	Age	.646	.343	3.544	1	.060	1.908	.974	3.738
	Work Experience	.540	.185	8.497	1	.004	1.716	1.194	2.468
	Percentage Investment	1.194	.324	13.552	1	.000	3.299	1.747	6.229
a. The reference category is: 4.00 that is Excellent									

Barring two interactions other variables are significant in predictions in opinion on working of the society.

Table 6: Model Fitting Information

Model Fitting Information				
Model	Model Fitting Criteria	Likelihood Ratio Tests		
	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	274.652			
Final	225.373	49.278	6	.000

From the above table of Model Fitting Information, significant value is less than .05, so it is concluded that alternative hypothesis is accepted, that there is a significant impact between dependent and independent variable which means that there is a significant impact of satisfaction of welfare facilities provided by cooperative society on components like age, work and percentage of investment.

Chart 1: Level of satisfaction on the Welfare Facilities

From the above given chart, it is concluded that majority of the employees are satisfied with Medical loan, Educational loan, Accidental benefits, Mortality benefits, Vehicle loan, Retirement benefits and Housing loan facilities. But the matter of concern is out of these respondents some are dissatisfied with those provided benefits and facilities. That means cooperative society has to work at this front. They need to find out the reason of dissatisfaction and resolve it soon to increase fund for their society.

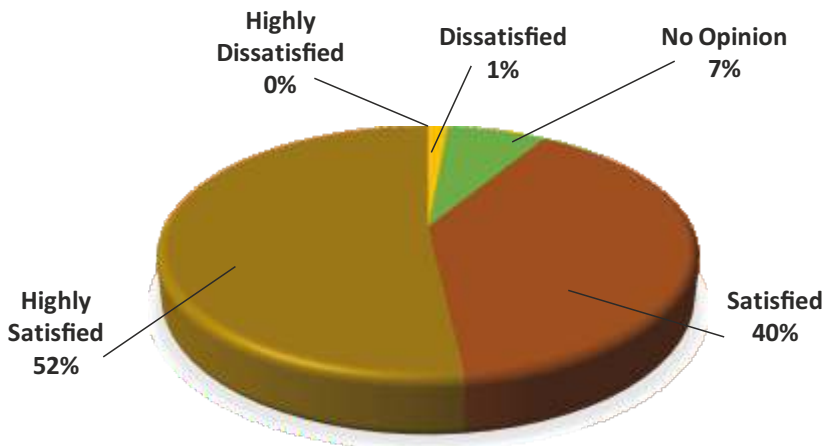
Chart 2: Overall Satisfaction level on the Facilities.

Chart shows that majority of the respondents are satisfied with overall facilities provided by society like sanctioning of loan without delay, convenient repayment period, interest on deposits, procedure of getting amount after maturity, rate of dividend, etc.

4.2 Correlation:

Correlation analysis is a statistical method used to measure the strength of the linear relationship between two variables and compute their association. Correlation analysis is used to show whether there is any the significant relationship between the variables. In this study, it is used to find out the strength of relationship between satisfaction on welfare facilities and overall satisfaction.

H0: There is no significant relationship between satisfaction on welfare facilities provided by cooperative society and overall satisfaction about society.

H1: There is a significant relationship between satisfaction on welfare facilities provided by cooperative society and overall satisfaction about society.

Table 7: Correlation between Satisfaction on Welfare Facilities and Overall Satisfaction

Descriptive Statistics			
	Mean	Std. Deviation	N
Sat Average	4.2722	.53333	141
SAT W AVG	3.3977	1.10667	141

From the above table, it is stated that mean of the overall satisfaction is 4.27 with standard deviation of 0.53 and mean of satisfaction on welfare facilities is 3.39 with standard deviation of 1.10 of 141 beneficiaries of the 29 societies.

Table 8: Correlations

Correlations			
		Sat Average	SAT W AVG
Sat Average	Pearson Correlation	1	.187*
	Sig. (2-tailed)	.028	
	N	141	139
SAT W AVG	Pearson Correlation	.187*	1
	Sig. (2-tailed)	.028	
	N	139	139

*. Correlation is significant at the 0.05 level (2-tailed).

Correlation between Satisfaction on Welfare Facilities and Overall Satisfaction about the society is very weak i.e., 0.187 only at .05 level of significance. It means both these factors are not correlated. This means that though the beneficiaries are satisfied with the welfare facilities and overall facilities of the cooperative society, but both these variables are not correlated. So, it is concluded that null hypothesis is accepted that there is no significant relationship between satisfaction on welfare societies provided by cooperative society and overall satisfaction about society.

4.3 Cluster Analysis:

Cluster analysis is a multivariate data mining technique whose goal is to groups objects (eg., products, respondents, or other entities) based on a set of user selected characteristics or attributes. It is the basic and most important step of data mining and a common technique for statistical data analysis, and it is used in many fields. K Means clustering is used considering number of samples and number of clusters to be formed is decided beforehand, i.e., three clusters. Cluster analysis is done based on Satisfaction score on Welfare Facilities and Overall Satisfaction score about the society.

Table 9: Number of Cases in each Cluster

Number of Cases in each Cluster	
Cluster 1	38.000
2	68.000
3	33.000
Valid	139.000
Missing	2.000

The beneficiary samples were grouped in three groups based on satisfaction score on Welfare Facilities and Overall Satisfaction score about the society. Three cluster has memberships as mentioned in the above table.

Cluster 1 had 38 members which is nomenclature as Not Fully Satisfied Members.

Cluster 2 had 68 members which is nomenclature as Highly Satisfied Members and

Cluster 3 had 33 members which is nomenclature as Satisfied Members.

Table 10 : Final Cluster Centers

Final Cluster Centers			
Cluster			
	1	2	3
Sat 1	4.55	4.76	4.88
Sat 2	3.95	4.56	4.39
Sat 3	3.63	3.63	4.55
Sat 4	4.05	4.75	4.24
Sat 5	3.24	3.79	4.27
Sat 6	3.84	4.65	4.09
Sat 7	4.00	4.38	4.67
Sat 8	4.13	4.53	4.39
SAT W 1	1.55	4.44	3.70
SAT W 2	1.95	4.31	3.12
SAT W 3	1.87	4.53	2.33
SAT W 4	1.95	4.28	2.73
SAT W 5	1.79	4.24	2.18
SAT W 6	2.53	4.21	2.97
SAT W 7	2.58	4.71	3.52

From the above given table no. 10, it is determined that Sat 1 has the average value for all the beneficiaries in cluster 1 is 4.55, in cluster 2 the average value is 4.76 and in cluster 3 the average value is 4.88. likewise, the average values for all three clusters for different parameters of satisfaction is given.

Table 11: Anova

ANOVA						
	Cluster		Error		F	Sig.
	Mean Square	Df	Mean Square	df		
Sat1	1.003	2	.288	136	3.484	.033
Sat2	4.594	2	.725	136	6.341	.002
Sat3	10.497	2	.977	136	10.748	.000
Sat4	6.762	2	.682	136	9.921	.000
Sat5	9.576	2	.783	136	12.225	.000
Sat6	8.799	2	.833	136	10.561	.000
Sat7	4.016	2	.731	136	5.495	.005
Sat8	1.930	2	.479	136	4.028	.020
SATW1	102.766	2	.773	136	132.943	.000
SATW2	69.433	2	.794	136	87.496	.000
SATW3	105.720	2	.505	136	209.541	.000
SATW4	72.740	2	.545	136	133.448	.000
SATW5	90.335	2	.614	136	147.202	.000
SATW6	39.443	2	.614	136	64.195	.000
SATW7	57.447	2	.630	136	91.247	.000
The F tests should be used only for descriptive purposes because the clusters have been chosen to maximize the differences among cases in different clusters. The observed significance levels are not corrected for this and thus cannot be interpreted as tests of the hypothesis that the cluster means are equal.						

The beneficiary samples are grouped in three groups based on Satisfaction score on Welfare Facilities and Overall Satisfaction score about the society. Three clusters had memberships as mentioned in the above table. Cluster 1 had 38 members, Cluster 2 had 68 members, and Cluster 3 had 33 members. Significance values in the ANOVA table indicates all variables are significant in classifying samples in different clusters as all values are less than .05.

5. Findings:

1. It is found that respondents from age group of 40-50 years and 50 years above responded in majority from which maximum were male respondents and they were married.

2. As far as work experience is concerned, averagely 15% of the respondents belonged to all the category of work experience. Respondents responded that working of cooperative society is Excellent for them, whereas, few responded as Very Good & Good.
3. Percentage of investment between 0-20% were majorly responded by 50 beneficiaries i.e., 36.9% further followed by 60-80% and 40-60 i.e., 23.4% and 18.4% respectively.
4. Age, Work experience and percentage of investment significantly impacted on satisfaction of welfare facilities provided by cooperative society.
5. Variable like satisfaction on welfare facilities and overall satisfaction about society are nowhere related to each other.
6. All variables in classifying samples in different clusters are significant.

6. Conclusion:

From the present study it is concluded majority of the employees who are permanent are having more than 5 years of working experience with their respective cooperative society. It shows that they have adequate knowledge about working mechanism and facilities provided by their society. But percentage of investments in society is low that somewhere or the other effects on credit facilities provided by society. Hence it impacts on satisfaction of the employees. As far as findings are concerned, impact of age, work experience and percentage of investment on satisfaction and relationship between satisfaction of welfare facilities and overall satisfaction about society by carrying out an exhaustive review of the literature and application of the various statistical analysis on the data collected from the respondents of Employees' Credit Cooperative Society. On the basis of the results obtained in the study, it is found that the factors mentioned in findings have significant impact. Whereas, variables like satisfaction on welfare facilities and overall satisfaction is concerned, both these variables are nowhere related to each other.

7. Suggestions:

Deposits:

1. The number of members should be increased as deposits from them should increase automatically which will increase working capital and satisfy the need of loan of the members and employees.

2. The society should come forward with attractive deposits schemes such as children deposits, marriage deposits etc., to attract deposits and at the same time inculcate the habit of savings in a world increasingly attracted by consumerism.

Credit:

3. Amount of loans should be increased with increase in installments of loans. Cooperative Society should see to it that borrower makes payment of these loan installments regularly and at the same time, keep certain amount every month in the form of recurring deposits. In this way, CCS will be in a position toward elevate finances regularly through method of deposits. At time of final settlement of loan account, their recurring deposits may be converted into loan installments partly or proportionately as the case may be. This will create conducive atmosphere and will help in maintaining solvency, profitability and liquidity position.
4. The credit societies could succeed in introducing new loan products from time to time to meet the needs of the customers in the changing environments.
5. Credit Cooperative Societies should deduct minimum 10 percentage amount from the sanctioned loan as the share capital so that fund will be sufficient for providing adequate amount of loan.
6. Members of the Cooperative Societies were not ready to become guarantor to others for getting loan because some responsibility of repaying the loan in case of default of loan. Therefore, Cooperative Societies should start insurance scheme to cover the loan of borrowers.

Funds:

7. Try to increase in total income by increasing interest earned on loan and advances distributed, increase income through investment and other sources such as interest on non-refundable reserve funds, fees and penalties, commission etc. and control over expenses of the society.
8. Fund should be used in high yield investment, marketable investment, which will increase in net worth.

Welfare measures and Satisfaction:

9. The adoption of effective welfare measures can improve the quality of work life of employees and enhance the productivity and efficiency of the employees.
10. Employees are active resources, because they have feelings. So, it is necessary that they always get work-satisfaction. Organization provides high-quality non statutory welfare schemes because it increases the satisfaction level of employee.
11. Organization should focus on the extra-mural facility like recreation facility.

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Leapfrogging of Multi State Cooperative Societies in India - An exploratory study

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Abstract:

The Government of India wants to realize its vision of 'Prosperity through Cooperation'(Sahkar Se Samriddhi) in India. On 3rd August 2023, the Government has notified the new Multi State Cooperative Societies (Amendment) Act 2023 to suit the changing cooperative business environment. Further, the trend setting event took place on 6th July, 2023 by the creation of Ministry of Cooperation under the Government of India. In this context, an attempt was made to explore the quantum jump in the registration of the Multi-State Cooperative Societies in India after the formation of Ministry of Cooperation. Out of 1556 Multi State Cooperative Societies in India, 104 were established after the formation of the Ministry of Cooperation. Out of thirty states and union territories where we have Multi State Cooperative Societies, only in 18 states, we experienced the new wave. After the formation of the Ministry of Cooperation, significant change took place in the health sector, it was just three cooperatives before the formation and after that 18 new health cooperatives have been registered. The other sector got attention is agro cooperatives with an increasing 21.16 percentage. The cooperatively developed states such as Maharashtra, Kerala, Uttarpradesh, Tamilnadu and Gujarat witnessed a remarkable growth after the formation of the Ministry of Cooperation. This phenomenon clearly indicates a quantum jump from the earlier status, particularly in the agribusiness sector of Indian economy.

Keywords:

Ministry of Cooperation, Amendment, Agribusiness Cooperatives, Cooperatively Developed States, Health Cooperatives

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Introduction:

The Government of India wants to realize its vision of ‘Prosperity through Cooperation’(Sahkar Se Samriddhi) in India. In a way it reflects the long standing vision of the state of Tamil Nadu namely ‘Elevate Cooperatives : Elevate Nation’ (KootraveNattuyarvu). Indian government believes that the cooperatives are panacea for the problems of poverty alleviation, food security and employment generation. India has a network of 8.5 lakh cooperatives, of which 1.77 lakh are credit cooperatives. That is the reason why the Union government wants to strengthen the Primary Agricultural Credit Societies (PACS) as Common Service Centers (CSC) to promote the rural cooperative economy. The Union government of-late has started promoting more number Multi State Cooperative Societies in the country, though there are some sceptic views like more Multi State Cooperative Societies with same area operation and same business domain, is an interference in the cooperative federalism. Based on the recommendations of Sir Frederick Nicholson, and the Edward Law Committee, the first Cooperative Credit Societies Act was enacted on 25th March, 1904. Then to register the non-credit cooperatives and the federal cooperatives, Co-operative Societies Act 1912 was enacted. The subject of cooperation was transferred to the provinces/states based on the Reforms Act 1919.

The systemic transformation at federal level took place when the Multi-Unit Cooperative Societies Act 1942 was brought to register the cooperative societies with more than one state as its area of operation. With the objective of introducing a comprehensive central legislation in order to facilitate the organizing and functioning of multi-state cooperative societies and to bring uniformity in their administration and management, the Multi-state Cooperative Societies Act 1984 was enacted. The earlier Multi-Unit Cooperative Societies Act 1942 was repealed. Then in the year 2002, when the new act was enacted and the MSCS Act 1984 was repealed. The National Cooperative Policy was also announced during the same period. The trend setting ninety seventh constitutional amendment took place in the year 2011, which incorporated the right to form the cooperative as a fundamental right. On 3rd August 2023, the Government has notified the new Multi State Cooperative Societies (Amendment) Act 2023 to suit to the changing cooperative business environment. Further, the trend setting event took place on 6th July, 2023 by the creation of Ministry of Cooperation under the Government of India. The ministry has launched many programs including formation of Cooperative University, new federations, national cooperative policy, and so on and so forth. This new wave of activities at the Union

government level has motivated many cooperators to start cooperative enterprises under the Multi-State Cooperative Societies Act. The Indian subcontinent witnessed this spurt of activities only during the period from 2011 to 2014. Hence an attempt is hereby made to explore the quantum jump in the registration of the Multi-State Cooperative Societies in India after the formation of Ministry of Cooperation.

Objectives and Methodology:

The major objective of the paper is to explore the growth of Multi State Cooperative Societies after the formation of the Ministry of Cooperation, Government of India. The paper further explores the type of Multi State Cooperative Societies established and its spread across the nation. Source for the paper was derived from the data available in the website and the Annual Report 2022-23 of the Ministry of Cooperation. The authors have taken all possible efforts to bring down the mismatch found in the reports. The data so collected were classified into before and after the formation of Ministry of Cooperation on 6th July 2021. The data were also further classified into three categories namely state wise, sector wise and selected states with new wave. Further, reports and research work on Multi State Cooperative Societies were also used for drafting the report.

Analysis and Interpretation:

The analysis and interpretation was carried out under three heads namely state-wise, sector-wise and selected state/sector-wise. Each element was discussed with a table treated with percentages.

Table 1. List of registered Multi State Cooperative Societies in different states in the country before and after the formation of Ministry of Cooperation

(as on 30th September , 2023)

Sr. No.	State/ Ut Name	Before	After	Total	Percentage Increase
1	Andhra Pradesh	20	2	22	10.00
2	Arunachal Pradesh	1	0	1	00.00
3	Assam	5	1	6	20.00
4	Bihar	18	1	19	05.55
5	Chandigarh	1	0	1	00.00
6	Chhattisgarh	8	0	8	00.00

Sr. No.	State/ Ut Name	Before	After	Total	Percentage Increase
7	Dadra And Nagar Haveli	1	0	1	00.00
8	Goa	1	0	1	00.00
9	Gujarat	44	5	49	11.36
10	Haryana	15	6	21	40.00
11	Himachal Pradesh	1	0	1	00.00
12	Jammu And Kashmir	1	1	2	100.00
13	Jharkhand	8	1	9	12.50
14	Karnataka	30	0	30	00.00
15	Kerala	21	12	33	57.14
16	Madhya Pradesh	28	1	29	03.57
17	Maharashtra	618	36	654	05.82
18	Manipur	1	3	4	300.00
19	Nagaland	1	0	1	00.00
20	New Delhi	153	6	159	03.92
21	Odisha	19	0	19	00.00
22	Pondicherry	4	1	5	25.00
23	Punjab	22	1	23	04.54
24	Rajasthan	74	0	74	00.00
25	Sikkim	1	0	1	00.00
26	Tamil Nadu	125	6	131	04.80
27	Telangana	9	4	13	44.44
28	Uttar Pradesh	148	15	163	10.13
29	Uttarakhand	3	2	5	66.66
30	West Bengal	71	0	71	00.00
	Total	1452	104	1556	07.16

Source: Compiled from the data sourced from the website <https://mscs.dac.gov.in/SearchRecord.aspx>

Table 1, depicts the list of registered Multi State Cooperative Societies in different states in the country before and after the formation of Ministry of

Cooperation as on 30th September 2023. Though India has 28 states and 8 Union territories, only 30 states and Union territories have initiated Multi State Cooperative Societies. Out of 1556 Multi State Cooperative Societies in India, 104 were established after the formation of the Ministry of Cooperation. Out of thirty states and union territories where we have Multi State Cooperative Societies, only in 18 states, experienced the new wave. Of which Maharashtra, Kerala, Uttar Pradesh, Tamil Nadu, and Gujarat are leading in forming new Multi State Cooperative Societies. Considering the trend in forming the Multi State Cooperative Societies in India since 1986, this can also be considered as a paradigm shift.

Table 2. Sector-wise list of registered Multi-State Co-operative Societies in the country before & after the formation of Ministry of Cooperation (as on 30th September , 2023)

Sr. No.	Sector	Before	After	No. of Coop. Societies	Percentage of Change
1.	Credit	613	4	617	00.65
2.	Agro	241	51	292	21.16
3.	Housing	139	4	143	02.87
4.	Multi-Purpose	97	0	97	00.00
5.	Dairy	94	1	95	01.06
6.	Co-operative Banks	66	4	70	06.06
7.	Marketing	37	0	37	00.00
8.	Industrial	37	2	39	05.40
9.	National Federation	21	0	21	00.00
10.	Welfare	21	0	21	00.00
11.	Consumer	11	0	11	00.00
12.	Construction	7	1	8	14.28
13.	Tourism	7	1	8	14.28
14.	Fisheries	7	4	11	57.14
15.	Hand loom/ Handicraft	4	0	4	00.00
16.	Technical	6	0	6	00.00
17.	Others	41	14	55	34.14
18.	Health / Hospital	3	18	21	600.00
	TOTAL	1452	104	1556	07.16

Source: Compiled from the data sourced from the website <https://mscs.dac.gov.in/SearchRecord.aspx>

Table 2 speaks about the sector-wise list of registered Multi-State Co-operative Societies in the country before and after the formation of Ministry of Cooperation as on 30th September, 2023. The table clearly indicates the different types of cooperatives registered under the Multi State Cooperative Societies Act 2002. Quite interestingly out of 1556 Multi State Cooperative Societies, 617(39.65 %) are Credit Cooperatives. The second and third most prevalent Multi State Cooperative Societies are Agro (292) and Housing (143) Cooperatives which comes around 18.76 % and 9.19 % respectively. Multipurpose (6.23 %), Dairy (6.10 %) and Cooperative Banks (4.49 %) are playing a vital role in the cooperative economy. Though the Cooperative Banks are less in number compared to the other Multi State Cooperative Societies, their business volume is on the higher side subject to further analysis and substantiation. After the formation of the Ministry of Cooperation, significant change took place in the health sector, it was just three cooperatives before the formation and after that 18 new health cooperatives have been registered. Another sector which got attention was agro cooperatives showing an increase of 21.16 percentage. Credit Cooperatives and Cooperative Banks 4 each were started during the post formation period. Quite interestingly, fisheries sector got much attention and that too inland fisheries cooperatives. This phenomenon clearly indicates a quantum jump from the earlier status, particularly in the agribusiness sector of Indian economy.

Table 3. Type of Multi-State Co-operative Societies registered under MSCS Act, 2002 in the selected states since the formation of Ministry of Co-operation

(as on 30th September, 2023)

Sl.No	Type of MSCS	Maharashtra	Kerala	Uttar Pradesh	Tamil Nadu	Gujarat
1	Health	15	1	0	0	0
2	Agro	11	8	14	3	1
3	Industrial	3	0	0	0	0
4	Transport	1	0	0	0	0
5	Dairy	1	0	0	0	0
6	Labour	1	0	0	0	0
7	Credit	1	0	1	0	0
8	Coop. Bank	1	0	0	0	3

Sl.No	Type of MSCS	Maharashtra	Kerala	Uttar Pradesh	Tamil Nadu	Gujarat
9	Others	2	1	0	0	0
10	Tourism	0	1	0	0	0
11	Fisheries	0	1	0	0	0
12	Housing	0	0	0	3	0
13	Organic	0	0	0	0	1
	Total	36	12	15	6	5

Source: Compiled from the data sourced from the website <https://mscs.dac.gov.in/SearchRecord.aspx>

Table 3, exhibits the type of Multi-State Co-operative Societies registered under MSCS Act, 2002 in the selected states since the formation of Ministry of Co-operation as on 30th September, 2023. In this analysis, the authors have selected only five states namely Maharashtra, Kerala, Uttar Pradesh, Tamil Nadu and Gujarat where there was remarkable growth after the formation of the Ministry of Cooperation. Interestingly all the above states are traditionally cooperatively developed states. Maharashtra has witnessed an exponential growth of especially health and agro cooperatives. Kerala has registered altogether 12 Multi State Cooperative Societies of which 8 were agro, and health, tourism, fisheries one each. The major state of India, Uttar Pradesh found 15 Cooperatives during this period, of which 14 are agro cooperatives. Tamil Nadu has added six more cooperatives in its list with three agro and 3 housing cooperatives. Cooperatively revolutionized state of India, Gujarat has 3 Cooperative Banks, one agro and one organic cooperative society promoted by the Union government. This development distinctly describes the nature of growth during the post formation (Ministry of Cooperation) period. Mostly the states formed agro based cooperatives, which indicates the wave towards agribusiness in India. Further, it can also be inferred that the health cooperatives received much attention.

Conclusion:

Even though cooperation is a state subject, formation of multi state cooperative societies has brought in sea of changes in the cooperative sector. However a progressive and pragmatic approach by the Central government

towards cooperatives has begun only by the first decade of this century. The recent initiatives such as the enactment of the new Multi-state Co-operative Societies Act, proclamation of the cooperative policy, passing of the 97th constitutional amendment and lastly the formation new Ministry for Cooperation, were expected to strengthen the existing co-operatives and more importantly promote new ones throughout the length and breadth of the country particularly the cooperatively most under developed and developing states. This study attempted to examine the growth in the multi state cooperative societies state-wise, sector-wise and selected state wise by examining the number of Multi- state Cooperative Societies before and after the formation of Ministry of Cooperation. The study however revealed that significant positive change occurred after the formation of Ministry of Cooperation in the cooperatively developed states such as Maharashtra, Kerala, Gujarat, Uttar Pradesh and Tamil Nadu. Likewise significant change could be observed in the health, agro, housing and fisheries sector. Let this trend sustain without affecting the existing cooperatives in the country.

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Empowering Women: A case study of Swawlambi Sakhi Producer Company (OFPO)

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Abstract:

In the early 2000s, India introduced Farmer Producer Organisations (FPOs) to empower small farmers. FPOs, which can take the form of registered companies like Farmer Producer Companies (FPCs), enable collective bargaining and economies of scale. They play a pivotal role in improving small farmers' market presence and economic prospects.

To reduce India's agricultural dependency NABARD started an Off-Farm Development Department which is nurturing the Off Farm Sector Development. This department focuses on skill development, credit accessibility, and supporting rural industries and collectives. Their core functions encompass livelihood enhancement, credit facilitation, and fostering Off-Farm Producers' Organizations. This research paper extensively examines Swawlambi Sakhi Producer Company Ltd, an Off Farm Producer Company located in Hubli, Karnataka. It delves into the company's growth, product diversity, and its role in women's empowerment. The case study also scrutinizes the challenges and issues encountered by Swawlambi Sakhi Producer Company.

Keywords:

FPO (Farmer Producer Company), Off Farm Producer Company (OFPO), Women skill, Handmade, NABARD, Authentic Karnataka.

1. Introduction to Farmers Producer Organization in India:

Linking small producers to markets is an important and popular policy and practice issue in improving livelihoods for millions of poor in the developing world (Farina, 2002). Collective action through cooperatives or associations is important not only to be able to buy and sell at a better price but also to help

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small farmers adapt to new patterns and much greater levels of competition (Farina, 2002), (Singh, S., 2008). Cooperatives, one of the oldest forms of producer collectives, have not been able to grow into strong member-controlled and self-sustainable business entities (Shah 2016) because of excessive dependence on government funds, political interference, bureaucratisation, and corruption (GoI 2000). As an alternative, in 2000, the concept of producer companies was recommended by a committee chaired by Y. K. Alagh. These companies were designed to bring together desirable aspects of the cooperative and corporate sectors for the benefit of primary producers, especially small and marginal farmers (Alagh 2019; GoI 2000). In 2002, the Companies Act of 1956 was amended to allow for a new form of corporate entity, namely producer companies (PCs) (GoI 2011; GoI 2013). The Farmer Producer Organization/ Companies (FPOs/ FPCs) model has the potential to become sustainable in terms of its significance to the livelihood of members and to improve the economic situation of farmers and other producers such as weavers and artisans (Neti, A. et al, 2019), (Trivedi, P. et al, 2022). Farmer organization and collective action is a critical factor in making markets work for the poor (Hellin, J. et al, 2009).

Farmers that are members of POs attain higher profitability, added value, employments, labour productivity and economic viability compared to farmers that are not members of POs due to enhancement in the bargaining position of farmers in the supply chain (Michalek, J. et al, 2018).

Particularly small and marginal farmers, experience a positive socio-economic impact on their lives due to exposure to new techniques due to collectivisation (Trivedi, P. et al, 2022).

Producer organizations enhance smallholders' political influence, reduce input/output marketing costs, foster information sharing, and facilitate collective decisions, while also promoting involvement in value-added activities and lowering transaction costs for processing/marketing agencies (Farina, 2002; Singh, 2008).

Producer organizations play a vital role in achieving sustainability and inclusive development, offering a crucial avenue to uplift small and marginal farmers from poverty. They should be actively promoted and supported (Tagat, V. et al, 2016). Research by Jose, E. et al in 2019 revealed that one primary motivation for forming producer companies is to secure better prices by bypassing middlemen through direct sales of produce.

Additionally, producer companies are seen as a promising means to bolster farmers' position in relationships with supermarket chains in India, but building trust and awareness among farmers is essential (Trebbin, A., 2014; Deka, N. et al, 2020). Data from the Union Ministry of Corporate Affairs, as of February 2023, indicates a total of 16,000 Farmer Producer Companies (FPCs) in India, with a significant surge in registrations over the last three years (2020-21, 2021-22, 2022-23), where 65% of FPCs were established (DTW, 2023).

2. Status of Non Farm Activities:

The 2019 Situation Assessment of Agricultural Household, as per NSO data, highlights a significant shift in farm household income sources. On average, agricultural households now earn 47.35% of their income from non-agricultural activities, up from 40% in 2012-13. This emphasizes the growing importance of non-agricultural income. To enhance farm household income rapidly, it is imperative to harness both agricultural and non-agricultural avenues.

Agriculture offers valuable insights for India's 2047 development vision. Dairy, poultry, and fishery sectors show promising growth rates for this transformation. Horticulture and agro-forestry have untapped potential, requiring liberalization. While non-farm sectors promise high growth, agriculture remains vital for inclusive development, employment, renewable energy, and sustainability, integral to achieving the vision of a developed "Viksit Bharat" during the "Amrit Kaal." (From Green Revolution to Amrit Kaal July 2023)

3. Vital role of National Bank for Agriculture and Rural Development (NABARD):

For better income realization through aggregation and value addition, NABARD is promoting formation of Off-Farm Producer Organizations (OFPOs). "Off-Farm Producer Organizations are legal entities formed by producers like artisans, weavers, craftsmen etc. which provides for sharing of profits/ benefits among members" (nabskillnabard.org). The core functions of Off-Farm Development encompass livelihood enhancement by supporting rural industries in handloom, handicraft and other off farm activities to boost local employment through value addition, design innovation and development, processing, brand-building, creation of storage and logistics infrastructure, mechanization and development of technology with strong forward and backward linkages for sustainable and inclusive development

through formalization and collectivization (nabskillnabard.org), credit facilitation, encouraging young entrepreneurs (Business Today, 2020), fostering Off-Farm Producers' Organizations to reduce rural dependence on agriculture and to arrest large-scale migration of small and agricultural labourers to the urban areas in search of livelihood opportunities (Business Today, 2020).

The data available states that, till 31st March 2020, there were 33 OFPOs that have been supported with grant assistance of ₹12.88 Crore which covered around 11,678 beneficiaries across 19 states. Under Companies/Societies Act, 18 OFPOs have been registered which are engaged in aggregation, marketing and input distribution operations (nabskillnabard.org).

4. Deshpande Foundation in India:

The Deshpande Foundation in India has been dedicated to understanding and tackling the challenges faced by rural and semi-urban communities. Their core focus areas include Agriculture, Micro-Entrepreneurship, Skilling, and Startups. They operate as a unique social enterprise, combining business expertise with the compassion of not-for-profits. To date, they have built over seventy thousand farm ponds benefiting one lakh farmers, supported over 4,900 micro-entrepreneurs, and aided more than 300 startups across India. (deshpandefoundationindia.org)

The Micro Entrepreneurship Development Program, initiated by the Deshpande Foundation in 2011, is dedicated to empowering entrepreneurs with the skills needed for successful businesses. It primarily targets those at the grassroots level, offering essential mentorship, resources, and support to boost their annual earnings. This holistic program serves as a robust platform, creating a nurturing environment for entrepreneurs. Its overarching objective is to foster growth among individuals from rural and peri-urban areas by delivering mentorship, credit access, marketing support, and invaluable business guidance.

Through training, mentoring, monitoring, evaluation and application of best practices, Micro-Entrepreneurship Development Program (MEDP) by Deshpande Foundation assists local micro-entrepreneurs in establishing and expanding their sustainable enterprises. To help achieve their goals, MEDP works with both individual entrepreneurs as well as clusters of them. This program strives to transform rural India through its efforts.

The MEDP operates in two distinct sandboxes, covering a total of 12 districts across two states: Hubballi Sandbox in Karnataka and Kakatiya Sandbox in

Telangana. This program offers a comprehensive package comprising four key elements: business coaching and mentoring, skill training and development, networking events, and marketing and sales support. These combined efforts empower women to enhance their skills and excel in entrepreneurship. MEDP has made it possible for local businesses and entrepreneurs to produce sustainable business results. In North Karnataka & Telangana, it has already begun to significantly transform the financial ecosystem of rural and semi-urban areas. (deshpandefoundationindia.org)

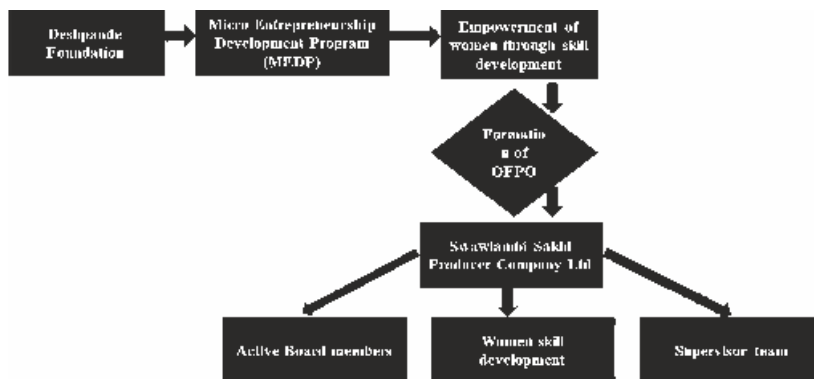


Fig 1:- Formation of Swawlambi Sakhi Producer Company with pillars of company

5. Genesis of Swawlambi Sakhi Producer Company Ltd. (SSPCL):

Swawlambi Sakhi Producer Company Ltd. was born amid the COVID-19 as a start-up that made masks to fight the pandemic battle. The Micro Entrepreneurship Development Program by Deshpande Foundation recognized the need for innovation and solutions. Deshpande Foundation made these 200 women from twin cities of Hubballi-Dharwad join hands, turning the threat into an opportunity that evolved into a livelihood option and decided to supplement the family income through a new venture while their husbands were laid off or facing salary cuts amidst the lockdown. This organization got featured as an all-women embroidery unit skilled in Aari and Kantha embroidery, as well as tailoring with the help of Micro Entrepreneurship Development Program of the Deshpande Foundation. SSPCL's primary goal is to empower these women economically and establish a self-reliant community-owned organization. (newindianexpress.com).

Swawlambi Sakhi Producer Company Ltd. (SSPCL) was registered on 9th October, 2020. It is registered at Registrar of Companies, Bangalore. Its

authorized share capital is Rs. 1,500,000 and its paid-up capital is Rs. 103,500 (zaubacorp.com).

This community owned Off-Farm Producer Company lending a helping hand to the women to earn sustainably and become self-reliant. The working of SSPCL has expanded its presence to encompass two urban centre's in Karnataka: Dharwad and Hubli.

6. Evolution of 'Authentic Karnataka' - the Brand

SSPCL has an all women unit under the embroidery wing who are Aari embroiderers, kantha embroidered products (like quilts, cushion covers etc.) and tailors. With the support of a collective of Deshpande Foundation and NABARD, a collective of 100+ Aari artisan members is working with vigorous efforts to set up production and a marketing wing for all the products of the members and Aari artisans as an OFPO.

The Micro Entrepreneurship Development Program of the Deshpande Foundation started teaching Aari embroidery in 2018 with 14 Aari certified craftsmen. Women in the area began to request more of these types of training from the team. A series of training sessions in Aari embroidery in and around Hubballi-Dharwad began with this. Following their instruction, the women craftsmen started working alone, collecting orders from their close connections or the clients they already had. These artisans had a variety of employable skills, and their pay was entirely dependent on the quality of their outputs.

Aari embroidery is known to be done primarily during festive times, and during other times the women might not receive enough orders. Thus, the concept of creating a collective for these women emerged. As a group, they are now producing goods with exquisite Aari embroidery instead of merely focusing on seasonal personalized orders. It has been dispersed across Dharwad and Hubli, two urban areas in Karnataka.

This company has formed a brand 'Authentic Karnataka' with the help of NABARD and has opened many stores in Karnataka to sell their handmade products. In Northern Karnataka, this is the first producer company that was owned by women. The brand provides the elegance of handcrafted goods as well as the mindfully curated products. With a traditional purse for everyday use or unique jewellery for special occasions, Authentic Karnataka gives the best options to complete the style.

On the one hand, the handcrafted, one-of-a-kind items help express consumers' distinct sense of style and on the other hand brings in a lot of pride to the women artisans. This effort is undoubtedly telling the tale of a revolution, highlighting the triumph of teamwork and the will of women to improve their life.

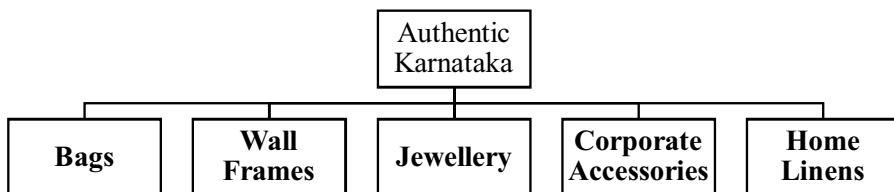


Fig 2:- Product range under Authentic Karnataka Brand

They provide a wide range of handcrafted products, including conference bags, tab covers, diary covers with diaries, laptop bags, hand embroidered wall frames and potli and tote bags with exquisite embroidery on them. These can all be personalized with an organization name or logo. Additionally, they make custom Aari jewellery (refer exhibit no. 1).

The company has a dedicated training unit exclusively for women, where they acquire expertise in Aari work. Upon mastering this skill, these women become integral to crafting distinctive handmade products. Each woman gets exposure to diverse product manufacturing processes and subsequently chooses to specialize in areas of personal interest, enhancing their ability to create high-quality handmade products that will sell under the "Authentic Karnataka" brand.

These women are self-motivated and each product category has a dedicated supervisors who manage training, production, and quality control. In addition to physical outlets across Karnataka, the company also extends its reach through www.authentickarnataka.com, allowing these handmade products to reach a broader audience.

7. Way forward for Swawlambi Sakhi Producer Company Ltd.:

Swawlambi Sakhi Producer Company Ltd. (SSPCL) is an Off Farm Producer Organization (FPO) committed to empowering artisans and promoting handmade Aari products. This comparison leads to price discrepancies, placing a burden on artisans. However, to succeed in today's competitive market, it is imperative for FPOs like SSPCL to secure market access and adapt to changing consumer preferences. The strategic roadmap for SSPCL is to expand its market presence, connect with corporates, explore franchise-

based mall chains, target specific customer segments, leverage e-commerce platforms, and engage with the fashion industry.

Market Access and Product Positioning: One of the challenges faced by FPOs like SSPCL is the comparison between machine-made and handmade products, often leading to price disparities that burden artisans. To address this, SSPCL should focus on highlighting the unique value of their handmade Aari products. These products should be positioned as premium, high-quality, and reflective of traditional craftsmanship.

Corporate Tie-Ups: To tap into the corporate gifting market, SSPCL should establish tie-ups with IT companies and other businesses that provide corporate gifts, especially during festivals like Diwali. To facilitate this, SSPCL may consider setting up a dedicated team to liaise with corporate clients and offer customized Aari products as corporate gifts.

Franchise-Based Mall Chains: In urban areas, franchise-based mall chains have gained popularity. SSPCL can explore collaboration opportunities with these supermall chains to showcase their exclusive Aari products. Such collaborations can help SSPCL reach a wider consumer and gain visibility among urban consumers.

Product Development and Customer Targeting: Given that Aari products are handmade and often come at a premium price, SSPCL should target the middle-upper and higher-class segments of society. Moreover, the company should constantly innovate its product offerings to meet the evolving preferences of these consumer groups. Understanding the needs and preferences of these segments is crucial to staying relevant in the market.

E-commerce Platforms: To expand its reach nationally and internationally, SSPCL should leverage e-commerce platforms such as Amazon, Flipkart, and Myntra. Some Aari products can be repositioned as fashion accessories, such as mobile pockets, laptop bags, and potli bags, which can appeal to a broader audience beyond traditional buyers.

Fashion Shows and Designer Collaborations: SSPCL can explore collaborations with fashion designers and event organizers to feature their handmade Aari products in fashion shows. This exposure can help the company position its products as trendy and fashionable while preserving the essence of traditional craftsmanship.

8. Conclusion:

The case of Swawlambi Sakhi Producer Company Ltd. (SSPCL) demonstrates the transformative potential of Off-Farm Producer

Organizations (OFPOs) in empowering rural communities, particularly women artisans. SSPCL emerged as a response to the COVID-19 pandemic, harnessing the skills of women in Aari and Kantha embroidery, and tailoring to create a sustainable livelihood option. Through the support of the Deshpande Foundation and NABARD, SSPCL has provided economic empowerment to women and established itself as a trailblazing producer company in Northern Karnataka.

The success story of SSPCL highlights a unique business model where women are trained to create each product with exceptional quality. Each product has a dedicated supervisor responsible for overseeing the training and manufacturing. The marketing team focuses on effective promotion, and all these supervisors are women. Additionally, the board of directors actively participates in all kinds of communication.

It is strongly recommended that SSPCL position its products as premium, high-quality, and reflective of traditional craftsmanship. This strategic approach will help SSPCL address challenges related to price disparities by specifically targeting customer segments that appreciate the value of artisanal craftsmanship. Leveraging e-commerce platforms and engaging with the fashion industry will also play a pivotal role in expanding SSPCL's reach and enhancing the impact of its artisanal products.

Overall, SSPCL represents a shining example of how OFF Farm Organizations can drive sustainable and inclusive development in urban and rural areas, contributing to economic growth and the preservation of traditional crafts. As it continues to evolve and adapt to changing market dynamics, SSPCL holds the promise of not only improving the lives of its members but also enriching the cultural heritage of the region.

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The significance of Cooperation in mitigating poverty

Dr. C. P. Jayaseelan*

Abstract:

India's cooperatives are essential for reducing poverty because they give excluded populations access to affordable loans, economic opportunities, and a marketplace for their products. They have a big impact on reducing poverty because there are 8.3 lakhs registered cooperatives functioning in industries like agriculture, dairy, fishing, and handicrafts. 52% of the workforce in India is employed by farm cooperatives, so their success is significant. Greater attempts to reduce poverty might result from policies that encourage cooperative growth and provide strong government backing. Aims of the study to probe the role of cooperative in poverty alleviation and to assess challenges faced by cooperative sector and present entitled on the significance of cooperation in mitigating poverty.

Introduction :

Cooperatives in India are vital for poverty alleviation by promoting inclusive economic growth and social development. They operate across sectors like agriculture, finance, and housing, aiming to improve the livelihoods of their members and local communities. Cooperative banks and credit societies provide financial services to underserved individuals and communities, enabling them to access funds for income-generating activities, education, and healthcare. Agricultural cooperatives empower small farmers by pooling resources and market access, increasing productivity and income. Rural cooperatives engage in economic activities, contributing to rural development and poverty reduction. Women's self-help groups and cooperatives empower women economically and socially, offering training, credit, and support for income-generating activities. Cooperatives also provide affordable housing solutions, ensuring equitable distribution of wealth and resources. Cooperatives in India play a crucial role in poverty alleviation by providing

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affordable credit, facilitating access to quality inputs, enhancing productivity through technical support, marketing support, and advocacy. They help small and marginal farmers invest in their businesses, increase productivity, and achieve economies of scale. Cooperatives also advocate for policies that support their interests and influence government policies in favor of small producers, ultimately contributing to poverty alleviation. Cooperatives in India are incorporating digital tools to improve operations and services, increasing efficiency and accessibility. They are also pooling resources for larger projects, diversifying into renewable energy and tourism, and collaborating with the government to support their growth. These trends indicate that cooperatives are evolving to meet member needs and are becoming more integrated into the broader economy, reducing dependency on traditional agriculture-based livelihoods.

Aims of the Probe :

- ❖ To Exploration of the role of cooperative in poverty alleviation
- ❖ To Identify the challenges faced by cooperative sector in poverty alleviation

Methods and Materials :

The exploration of secondary web-based resources serves as the foundation for the analytical aspect of the exploration endeavor that is being provided to gain knowledge of numerous digital source techniques. The necessary data has been gathered to determine the benefits and drawbacks of the National Cooperative Development Corporation and National Institute of Rural Development, including through examination of Cooperative Department reports in India and the growth of the Ministry of Cooperation and Rural development IT media outlets, newspapers, magazines, and annual financial reports from numerous Poverty alleviation in India carriers that are accessible via their official websites on the internet.

A Role of Cooperative in Poverty Alleviation

In India, cooperatives have been instrumental in reducing poverty by giving underprivileged populations a voice and opening up doors for economic development. Cooperatives have made it possible for small and marginal farmers to access reasonable loans, high-quality inputs, and better markets across a variety of industries, including agriculture, dairy, fisheries, and handicrafts. Given that 52% of India's workforce works in agriculture, the success of cooperatives in the industry has specific consequences for the fight

against poverty. Cooperatives can, in general, be a potent instrument for reducing poverty in India, especially with increased government support and laws that encourage their creation and expansion.

Financial Inclusion

Co-operatives are community-based organizations that are owned and controlled by their members. They are popular in rural India because of their ability to provide financial services to people who are otherwise excluded from formal banking systems. Co-operatives can help to promote Financial Inclusion in rural India in the following ways:



Outline of the Info graphic :

Co-operatives play a crucial role in promoting financial inclusion and poverty alleviation in rural India. They provide small loans to individuals and businesses, encourage savings, offer insurance, foster financial literacy, and promote community development. They provide safe and convenient places to hold money, educate people about financial management, and foster trust and social capital. By doing so, they help build a more inclusive and prosperous society, particularly for farmers and artisans.

Agricultural Development

Co-operatives play a significant role in agricultural development and poverty alleviation in rural India. They provide several benefits to farmers, such as access to credit, market linkages, and affordable inputs. Here are some ways co-operatives promote agricultural development in rural India:

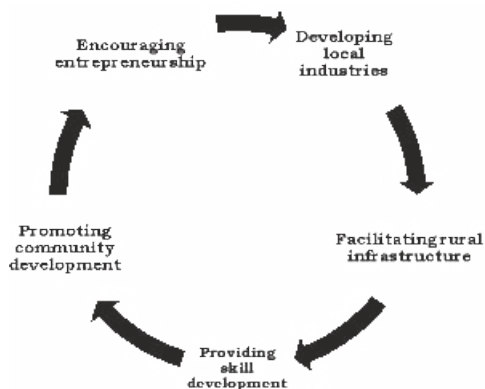


Outline of the Info graphic :

Co-operatives offer farmers affordable credit, market linkages, and affordable inputs to improve their yields and productivity. They connect farmers to markets, ensuring fair prices and facilitating negotiations. Co-operatives also provide training and education on sustainable farming practices, reducing costs and mitigating risks. Collective bargaining helps farmers negotiate better prices for their crops and inputs, achieving economies of scale and strengthening their bargaining power. Overall, cooperatives contribute to agricultural development and poverty alleviation in rural India.

Employment Generation :

Co-operatives can be instrumental in generating local employment opportunities and contributing to poverty alleviation in rural India. Here are some ways in which co-operatives promote employment generation in rural areas:

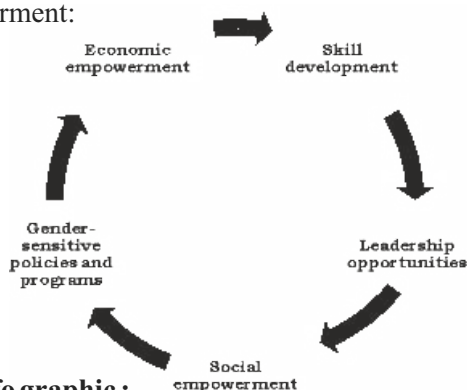


Outline of the Info graphic :

Co-operatives play a crucial role in rural India by encouraging entrepreneurship, developing local industries, facilitating rural infrastructure, providing skill development, and promoting community development. They provide financial assistance and technical support to support small-scale businesses, enabling self-employment and income generation. Co-operatives also facilitate the production and marketing of locally made goods, attract investment, and create new jobs. They also impart vital skills to enhance employability and foster a sense of community among rural people, leading to the creation of local-level institutions.

Women Empowerment :

Co-operatives can help to empower women in rural India and contribute to poverty alleviation by providing them with access to resources, training, and leadership opportunities. Here are some ways in which co-operatives promote women's empowerment:

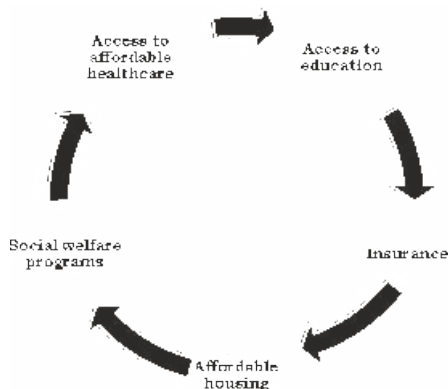


Outline of the Info graphic :

Co-operatives can significantly contribute to women's empowerment and poverty alleviation in rural India. They offer access to financial services, skill development programs, leadership positions, social empowerment, and gender-sensitive policies. These programs help women become agents of their own development and contribute to the overall development of their communities. Women's participation in decision-making can lead to more gender-sensitive policies. Overall, co-operatives play a crucial role in women's empowerment and poverty alleviation in rural India.

Social Security :

Co-operatives can play an essential role in providing social security to the rural population, particularly in areas with weak social safety nets. Here are some ways in which cooperatives promote social security:

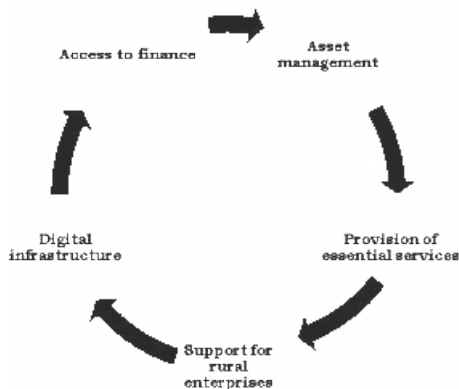


Outline of the Info graphic :

Co-operatives offer various benefits to rural communities, including access to affordable healthcare, education, insurance, housing, and social welfare programs. Health cooperatives provide primary care, diagnostic services, and medicines, improving health outcomes and reducing poverty. Education cooperatives offer affordable training programs, insurance protects against risks, and housing cooperatives pool resources for construction and maintenance. Social welfare programs, like food banks and community kitchens, support vulnerable groups and alleviate poverty. Overall, co-operatives contribute to poverty alleviation and social cause.

Infrastructure Development :

Co-operatives can play an essential role in infrastructure development in rural India. Infrastructure development is a crucial factor for poverty alleviation as it can enhance access to basic services and support economic growth. Here are some ways in which co-operatives promote infrastructure development:

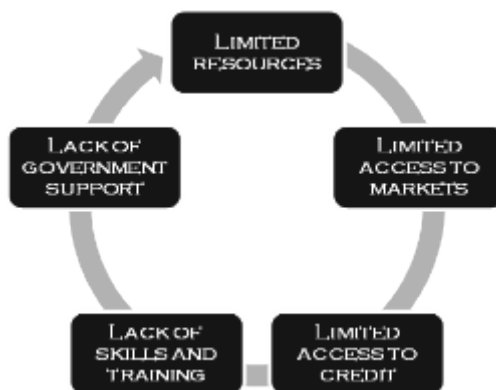


Outline of the Info graphic :

Co-operatives can significantly contribute to rural India's infrastructure development by mobilizing community resources, managing infrastructure assets, providing essential services, supporting rural enterprises, and developing digital infrastructure. They can leverage economies of scale to provide services at lower costs than individual households. Cooperatives also support rural enterprises by providing access to storage facilities and transportation networks. Additionally, they support the development of digital infrastructure, such as internet connectivity, which can enhance access to information and communication technologies, supporting economic growth and improving the standard of living in rural areas.

Community Development :

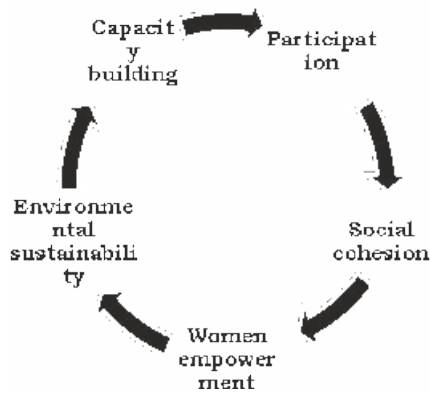
Co-operatives can play an essential role in community development in rural India. Community development involves empowering individuals and communities, fostering social cohesion, and enhancing community well-being. Here are some ways in which co-operatives promote community development:



Outline of the Info graphic :

Co-operatives can enhance rural communities' skills and capabilities through capacity building programs, promoting active community participation, and fostering social cohesion. They also play a crucial role in women's empowerment by providing access to credit and training programs, thereby improving their economic opportunities and breaking down gender barriers.

Furthermore, co-operatives can promote environmental sustainability by adopting sustainable practices like organic farming, renewable energy, and waste management. Overall, co-operatives contribute significantly to community development and poverty alleviation, empowering rural communities to take charge of their own development.



A Challenges Faced By Cooperative Sector In Poverty Alleviation :

The cooperative sector in reducing poverty has several kinds of difficulties, such as:

Outline of the Info graphic

Cooperatives in India face challenges in expanding operations, accessing markets, and obtaining credit, which can limit growth potential. Lack of skills and training among members also hinders effective management. Despite government promotion, some cooperatives still lack financial and technical assistance, limiting their growth potential and ability to address poverty effectively.

In conclusion, the challenges that the cooperative sector faces in eradicating poverty highlight the need for additional finance, education, and access to markets and financial

Discussion Of The Present Dissertation :

In giving their members access to markets, financial help, and technical support, cooperatives significantly contribute to the reduction of poverty in India. Recent trends have made it easier for cooperatives to adapt to the changing demands of their members and integrate themselves into the larger economy. Examples include resource pooling, diversification, digitization, and government involvement. To fully achieve the potential of cooperatives in

eradicating poverty, however, issues including scarce resources, restricted access to markets and financing, a lack of skills and training, and limited government backing must be addressed. Overall, the cooperative sector has the potential to significantly contribute to the fight against poverty in India, and sustained support can help realize this promise.

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Socio- Economic conditions of member workers in primary Coir Cooperatives

Neeraj S Nair *

Abstract:

The socio-economic conditions of member coir workers in the coir industry, particularly in regions like Kerala, have been significantly shaped by their involvement in coir cooperatives. These cooperatives play a pivotal role in improving the livelihoods of coir workers by fostering cooperative principles, providing access to raw materials, offering skill development and training, ensuring fair wages and working conditions, and facilitating marketing opportunities. Despite challenges such as fluctuations in demand, competition from synthetic alternatives, and climate change impacts, coir cooperatives have been instrumental in enhancing the socio-economic status of their members. The collaboration between cooperative members, government support, and industry stakeholders is essential to address these challenges, leading to sustained improvements in the well-being of coir workers and their communities. The present study analyses the socio-economic problems of member workers in primary coir cooperatives. The study was conducted among 60 member coir workers of the societies. However special attend will be given to aspects like input, payment, infrastructure, health and finance.

Introduction :

The coir industry in India holds a prominent position globally, with the country being the largest producer and exporter of coir and coir products, contributing around 80% of the global coir fiber production. This industry generates significant employment opportunities, providing livelihoods to over 1 million people. In Kerala, the leading state for coir production, approximately 70% of India's total coir fiber output originates, with the industry employing around 500,000 individuals. Kerala's coir exports

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contribute to the state's economy and foreign exchange earnings, while the government provides support through initiatives, financial assistance, subsidies, and skill development programs. The annual export value of coir and coir products from India exceeds \$250 million, with major export destinations including the United States, European Union, Middle East, and East Asian countries.

Coir cooperatives play a significant role in the Indian economy and are integral to the country's coir industry. Coir, derived from the husk of the coconut, is a versatile natural fiber with a wide range of applications. It is used for making ropes, mats, rugs, brushes, mattresses, and several other products. Coir cooperatives in India are community-based organizations that bring together coir producers, artisans, and workers to collectively engage in the production, processing, and marketing of coir products. These cooperatives operate on the principles of cooperation, democratic decision-making, and shared benefits among their members. The primary objective of coir cooperatives is to empower and uplift the socio-economic status of coir workers and producers. They provide various services and support to their members, including access to raw materials, training and skill development, technical assistance, and marketing facilities. By pooling resources and expertise, coir cooperatives enable small-scale coir producers to overcome individual challenges and benefit from economies of scale. Coir cooperatives also play a crucial role in promoting sustainable practices in the coir industry.

They encourage environmentally friendly methods of production, waste management, and the use of organic materials. Additionally, they help to ensure fair wages and working conditions for coir workers, fostering social welfare and inclusive growth. In India, coir cooperatives are prevalent in regions with significant coconut cultivation, such as Kerala, Tamil Nadu, Karnataka, Andhra Pradesh, and West Bengal. These cooperatives are often supported by government initiatives and agencies that provide financial assistance, training programs, and marketing support. Overall, coir cooperatives in India contribute to rural development, employment generation, and the preservation of traditional craft skills. They have played a crucial role in promoting the coir industry as a sustainable and economically viable sector, both domestically and internationally.

Coir cooperatives have a strong presence in Kerala, a state in southern India known for its abundant coconut plantations and thriving coir industry. Kerala's coir cooperatives have played a pivotal role in the socio-economic

development of the region and have contributed significantly to the growth and promotion of the coir sector. Coir cooperatives in Kerala comprise coir producers, artisans, and workers who are involved in various stages of coir production, including husking, fiber extraction, spinning, weaving, and product manufacturing. Membership is open to individuals engaged in coir-related activities. Coir cooperatives in Kerala focus on value addition and processing of coir products. They provide facilities for processing coir fiber, manufacturing yarn, and producing finished coir goods such as mats, rugs, brushes, and mattresses. This value addition enhances the marketability and profitability of the products. One of the key functions of coir cooperatives in Kerala is to procure raw materials for coir production. They establish collection centers where coconut husks are brought by farmers, and they are used for further processing. These cooperatives ensure a consistent supply of raw materials to their members. Coir cooperatives in Kerala actively promote skill development and training programs for their members. They organize workshops and training sessions to enhance the technical expertise of coir workers, ensuring quality production and product innovation. Coir cooperatives in Kerala undertake marketing activities to promote and sell coir products. They participate in domestic and international trade fairs, exhibitions, and expos to showcase their products and explore export opportunities. These cooperatives often collaborate with government agencies and export promotion councils to expand their reach in global markets. Coir cooperatives in Kerala receive support from various government agencies and initiatives. The Government of Kerala, through organizations like the Kerala State Coir Corporation and the Coir Board, provides financial assistance, subsidies, and infrastructure development to strengthen the cooperative sector. Coir cooperatives in Kerala have significantly contributed to the economic upliftment of coir workers and artisans, empowering them with improved livelihoods and socio-economic opportunities. They have also been instrumental in preserving traditional coir craft skills, promoting sustainable practices, and positioning Kerala as a global hub for high-quality coir products.

2. Review of literature:

Sivanesan (2013) conducted a study on problems of workers in coir industries of Kanyakumari district. He attempted to explore the working conditions of coir workers and analyze the problems faced by the coir workers in Kanyakumari District. The study pointed out that the majority of the coir workers face the problem of very low wages and long working hours. Coco-

hush-pith arises from their coir making process cause large number of diseases like asthma, anemia and T. B. The study suggested that the Government must take the effort to increase the wages of coir industry workers. Minimum and Maximum age limit may be fixed by the Government and be strictly implemented to avoid the employment of children and old age group.

Thomas (2015) conducted a study on personal finance of the coir-workers at Cherthala with special reference to their savings and investments. The focal point of the study was the analysis of personal finance of coir-workers at Cherthala. The study mainly resorted to the survey method for collecting the primary data. A total of 300 households were selected using stratified random sampling. The study revealed that the traditional coir-workers normally save about 18% of their income on an average while that of new entrants is 29%. The gap between the two groups in respect of savings may be due to the fact that the latter group may have a better exposure and understanding of various savings schemes and modern investment avenues. Consumption expenditure augments in proportion to the change in income. This trend erodes the propensity to save. The new measures including the micro finance schemes have not yet brought the expected level of influence on the thrifting and investment preference of coir-workers. The study brought out the fact even after that even 68 years of independence, the experimentation of various political machineries and tailor-made schemes/projects, a spectacular change in the socio-economic settings of the coir-workers have not yet been attained for making them self-reliant.

Nagaraja (2016) conducted a study to examine the socio-economic status of coir co-operative societies worker. The study also aimed to analyze the income and expenditure pattern of workers in coir industries, to analyze the problems of workers of coir industries, to identify the living conditions of workers of coir industries in two Districts. Primary data was collected from 1000 coir workers. The study revealed that the conditions of coir workers are pathetic. The state and central government can formulate many policies to increase the welfare of the workers. The study suggested that the government should fix the minimum wage system and the government should give necessary training to the women workers to increase the efficiency of the workers.

Indra and Kumar (2017) in their study entitled 'A Socio Economic Analysis of Coir Workers in Kanyakumari District pointed out that Coir industry gives a major contribution towards women employment and 44.2 percent of the coir

workers belongs to the age group of 41-50 years. Coir workers from backward community take up this work interestingly. Agriculture income is another source of income for 80 percent of the workers. Work related illness is common in Coir Industry but a maximum of 32.7 percent of the workers have affected by the back pain. Regarding the satisfaction of work only 32.1 percent of them have moderately satisfied with their job. The study suggested that more training facilities should be given by the Coir Board at frequent intervals to inculcate the mind of the youth to take up this job and more awareness should be given to the public regarding the benefits of Coir Industry.

Mohanraj and Latha (2017) conducted a study on the problems and prospects of women workers in coir industry with special reference to Singampunari, Sivagangai district. The study made an attempt to assess the problems and prospects of women workers in coir industry and examine the level of satisfaction of women workers and give suitable solution to problem in the study area. The survey was conducted on the basis of convenience sampling method and 100 respondents were selected for this study. Percentage analysis and weighted average have been used for the interpretation of the data. The study revealed that coir workers are not given holidays even on important national and religious festival days. The national holidays may be declared as paid holidays to the coir workers. Hence it is suggested that the government may enforce labour welfare measures such as provident fund and medical facilities for coir workers. The study concluded that despite the growth of the coir industry, there has been only marginal improvement in the production levels, quality and artistic appeal of coir products, with the result that new consumers, particularly of the younger generation, are not attracted to these products. The future of the coir industry depends on the development of non conventional products.

Ashik (2018) attempted a study to find out the socio-economic conditions of coir workers in Kerala. The study also tried to find out ability of coir workers to repay debts and also wage rate they need and wage rate which they get. Data was collected from 200 respondents from two districts that is Kollam & Alappuzha we can find out that most of the coir workers are from Alappuzha districts it's because Alappuzha districts is the main hub of coir industries in Kerala. The usually face health problems while working in the coir industries. Face allergy and lung diseases is the most common among them. The other problem they face is less wages and lack of government support, government

incentives and training support. They are unaware of the market price for coir products and unaware of technological updation.

3. Statement of the Problem:

Coir industry is one among the traditional cottage industries of Kerala. It is one among the biggest employment source for rural artisans. Coir industry provides employment to more than 7.3 lakh people in rural areas, 80% of which are women and it is utmost essential to make it comparative, self-sustainable and capable of providing employment to the rural folk (Press Information Bureau, 2021). The demand for eco-friendly products in the global market and product diversification has revived the coir industry in the recent years.

The coir industry in Kerala is diverse in nature consisting of various segments like co-operatives, NGOs, manufacturers and exporters. Coir cooperatives has a significant role in improving the living conditions of coir workers in Kerala. Alappuzha occupies a unique position because of its special geographical characteristics features like availability of raw husks, long lagoons and brackish waters.

Coir cooperatives in Kerala, like any other cooperative organizations, face various challenges and problems. The coir industry requires skilled workers who are proficient in various coir production processes. However, there is a shortage of skilled labour, and it is often difficult for coir cooperatives to find and retain skilled workers, leading to production inefficiencies. The demand for coir products is subject to fluctuations, both in domestic and international markets. Coir cooperatives often struggle to anticipate and adapt to changing market demands, which can result in issues such as overproduction or inability to meet market requirements. Coir production techniques have evolved over time, with the introduction of modern machinery and innovative processes. However, many coir cooperatives in Kerala face challenges in accessing and adopting new technologies due to financial constraints or lack of awareness. This hampers their competitiveness and efficiency. Coir cooperatives often face difficulties in marketing and promoting their products effectively. They may lack the resources, knowledge, and expertise to reach out to potential customers and explore new markets. This can lead to limited sales opportunities and reduced profitability. Maintaining consistent quality and adhering to international standards is crucial for coir cooperatives to compete

in the global market. However, ensuring quality control across the entire production process and achieving standardization can be challenging for smaller cooperatives, resulting in product variations and lower customer satisfaction. Coir cooperatives often struggle with financial constraints, including limited access to credit and capital. Insufficient funds can hinder their ability to invest in modern machinery, technology upgrades, training programs for workers, and marketing initiatives. Coir faces competition from synthetic alternatives in various industries. Synthetic materials often have lower costs and are marketed as more durable or eco-friendly. Coir cooperatives need to constantly innovate, improve product quality, and promote the natural and sustainable characteristics of coir to remain competitive. Climate change can impact the availability and quality of coconut husks, the primary raw material for coir production. Increasing weather variability, such as droughts or storms, can affect coconut cultivation and result in fluctuations in raw material supply, impacting the operations of coir cooperatives. The coir cooperatives in Kerala are experiencing intense competition from private companies, which procure coconut husks from Tamil Nadu at a rate of Rs 18/kg. Furthermore, private firms generate income by exporting coir pith, whereas coir cooperatives have not engaged in any coir pith exports. Additionally, the cooperatives purchase coconut husks from farmers at a higher rate of Rs 40/kg. Addressing these challenges requires cooperative members, government support, and industry stakeholders to collaborate in finding solutions. This may involve providing skill development programs, improving access to technology and finance, promoting coir products through effective marketing strategies, and encouraging research and development in the coir industry.

The study intends to identify the problems faced by coir member workers of Vazhamuttom Coir Vyavasaya Cooperative Society Ltd no:3061 located in Trivandrumtaluk of Thiruvananthapuram district and Padinjare Muri Coir Vyavasaya Sahakarana Sangham Ltd. No. 459 located in Vaikom Taluk of Kottayam District.

4. Objective:

To study about the socio-economic conditions of coir member workers of primary coir cooperatives.

5. Methodology:

5.1 Location of the study:

The study is confined to VazhamuttomCoir Vyavasaya Co-operative Society Ltd No:3061 located in Trivandrum taluk of Thiruvananthapuram district and PadinjareMuri Coir VyavasayaSahakaranaSangham Ltd. No. 459 located in VaikomTaluk of Kottayam District.

5.2 Data source:

Primary data will be used for the study.

5.3 Sample selection:

For the purpose of collecting primary data, from the total of 140 coir member workers from both the societies, 60 coir member workers will be selected through random sampling method.

5.4 Data collection:

The primary data will be collected through a pre-structured interview schedule from selected respondents.

5.5 Data analysis:

- ❖ Data will be analysed with the help of index method.
- ❖ Index method will be used to analyse problems of member coir workers.
- ❖ The statements were graded on a three -point Likert scale. To generate a total score, responses of the statements are summed or averaged.
- ❖ The weightage of responses is assigned as follows:

RESPONSES	SCORE
Mostly felt	3
Moderately felt	2
Least felt	1

- ❖ The formula for calculating the index for each individual statement is as follows:

$$\text{Index for the statement} = \left(\frac{\sum \sum x_{ij}}{n \times \text{maximum score}} \right) \times 100$$

Where i denotes the respondent

j denotes the statement

n denotes the number of respondents

- ❖ The overall index for a problem

$$= \frac{(\text{Total score obtained for the problem}) \times 100}{(\text{Maximum score} \times \text{number of respondents} \times \text{number of statements})}$$

6. Observations made under study:

- Socio-economic profile of the coir member workers.
 - Age
 - Gender
 - Marital Status
 - Educational Qualification
 - Monthly Income of the family
 - Monthly Income of the coir worker
 - Main Occupation
 - Subsidiary Occupation
 - Number of years of experience
- Problems related to material, wage, health, infrastructure and finance.
 - ✓ Material Problems
 - Low quality of coir fibre
 - Unavailability of raw material
 - Price fluctuations in raw material

- ✓ Wage Problems
 - i. Low wage payment
 - ii. Delay in payment of wages
 - iii. Inconvenient mode of payment
 - iv. Payment under income support scheme
- ✓ Occupational Health Problems
 - i. Respiratory problems
 - ii. Skin Problems
 - iii. Allergy Problems
 - iv. Leg Pain
 - v. Back Pain
 - vi. Joint Pain
- ✓ Infrastructure Problems
 - i. Lack of power supply
 - ii. Lack of storage facility
 - iii. Lack of transportation facility
- ✓ Financial Problems
 - i. Irregular or insufficient income
 - ii. Lack of access to credit or loans
 - iii. Difficulty in saving or investing
 - iv. Lack of financial literacy and management skills

7. Scope of the study:

The study focuses on the socio-economic conditions of coir member workers. The findings of the study will help the societies to concentrate more on the welfare of the workers effectively.

8. Limitation of the study:

The study is limited to Vazhamuttom Coir Vyavasaya Co-operative Society, Padinjare Muri Coir Vyavasaya Sahakarana Sangham and the coir member workers only, so generalisation of the result is not possible.

9. Result and Discussion:

9.1 Socio- Economic Profile of the member coir workers of the society:

Socio-economic profile of the respondents has an important role in their attitude, behavior and activities. Socio economic factors of the members of the society are expressed in terms of age, gender, marital status, education, income, occupation etc. All these factors have a great role in giving a basic idea about the member coir workers of the society and deriving a true picture of the social profile.

Table 9.1.1 Profile of the member coir workers of the society

SL No:	Particulars	No. of respondents	Percentage
1.	Age		
	31- 40	11	18.3
	41- 50	33	55
	51- 60	11	18.3
	Above 60	5	8.3
	Total	60	60
2.	Gender		
	Female	60	100
3.	Marital Status		
	Married	60	100
4.	Educational Qualification		
	Below SSLC	39	65
	SSLC	20	33.3
	Higher Secondary	0	0
	Degree	1	1.6
	Total	60	100
5.	Monthly Income of the family		
	Less than 15000	60	60
6.	Monthly Income of the Coir Worker		
	Below 2000	18	30
	2000-4000	12	20
	4000-6000	14	23.3
	Above 6000	16	26.6
	Total	60	100
7.	Main Occupation		
	Coir spinning	60	100
8.	Subsidiary Occupation		
	MNREGA	38	63.3
	Not having any subsidiary occupation	22	36.6
	Total	60	100

Source: Compiled from primary survey

Table 9.1.1 shows that out of 60 respondents, 55 percent were of the age group 41-50.18.3 percent was in the age group 31-40 and none of the respondents were below the age 30. Another 18.3 percent belong to the age group 51-60 and the remaining 8.3 percent of the coir workers had age above 60. This clearly indicates that the younger generation is not ready to take up job in the coir sector due to the low status offered by the work and low income from this occupation.

The sex wise classification of the respondents revealed that all the respondents were women. Only women are engaged in the spinning sector in that locality. Even though the society is giving membership to males, the spinning activities are carried out by the female member in that household.

The marital status of the respondents revealed that all of the respondents are married. The respondents included those who have taken up this occupation after marriage.

The educational qualification of the respondents showed that 65 percent of the total respondents are below SSLC.33.3 percent of the respondents passed SSLC and only the remaining 1.6 percent have graduation. This clearly reveals that majority of the respondents have dropped education and engaged in coir spinning activities.

All of the respondents were having monthly family income less than 15000 This indicates that the coir workers are not having enough income to maintain a healthy standard of living.

Income is a very important factor determining the quality of life of an individual. Incase of monthly income of coirworkers, 30 percent of the coir workers are having monthly income less than 2000.26 6 percent of the respondents are having monthly income more than 6000 and 23.3 percent are having monthly income between 4000-6000, The remaining 20 percent are having monthly income between 2000-4000. The reason for difference in the monthly income of member coir workers is that the members carryout their work only after doing their household chores. Coir spinning being their major occupation, major part of their income comes from coir industry.

Out of 60 respondents, all are having coir spinning as their main occupation and 63.3 percent of the people are going to work under MGNREGA when it is available. Their shift to MGNREGA has decreased their monthly productivity in coir spinning. The respondents stated that they are attracted more towards work under MGNREGA due to comparatively higher wage and less work.

Table 9.1.2 Number of years of experience as a coir worker

Number of years of experience	No.of respondents	Percentage
Below 10 years	5	8.3
10-20 years	10	16.6
20-30 years	33	55
Above 30 years	12	20
Total	60	100

Source: Compiled from primary survey

Coir spinning being a skilled work, number of years of experience has a major role in determining the productivity of a coir worker. Table 9.1.2 depicts that out of 60 respondents, 55 percent have years of experience between 20-30 years. 20 percent of the respondents have more than 30 years of experience in this field. This clearly reveals that majority of the workers have taken up this work at their age of schooling itself. For 16.6 percent of the total respondents the number of years of experience ranged between 10-20 years. The remaining 8.3 percent have experience less than 10 years because they have started spinning coir after coming to this locality after their marriage. In general, the details regarding number of years of experience reveals that younger generation is not taking up initiative to work in this sector and only those who have practiced this occupation from their early ages are still continuing it.

9.2 Problems felt by member coir workers:

Despite having potential in India, the Coir Sector faces a number of problems. These problems may affect the growth and development of coir industry. The major problems faced by coir workers are categorized under five heads:

- Material problems
- Wage problems
- Occupational health problems
- Infrastructure problems
- Financial problems

All these problems were analyzed on the views of member coir workers of the society rather than from the view of society so the analysis gives a result of the problems faced by the coir workers.

Weightage were given for the responses in the following manner:

Response	Weightage
Mostly felt	3
Moderately felt	2
Least felt	1

Based on these scores, index for each individual statement under the problem heads were calculated.

- ❖ The formula for calculating the index for each individual statement is as follows:

$$\text{Index for the statement} = \left(\frac{\sum \sum x_{ij}}{n \times \text{maximum score}} \right) \times 100$$

Where i denotes the respondent

j denotes the statement

n denotes the number of respondents

- ❖ The overall index for a problem

$$= \frac{(\text{Total score obtained for the problem}) \times 100}{(\text{Maximum score} \times \text{number of respondents} \times \text{number of statements})}$$

Based on the index obtained the problems are categorized as below:

Problem Index	Level of problem
>33.33	Least felt
33.34-66.6	Moderately felt
66.67-100	Mostly felt

9.2.1 Material Problems:

Coir Fiber is the prime raw material for this industry and the fiber is extracted from coconut husk. The operation of the coir units depends on the availability of the coconut husk. Providing enough raw material to the member coir workers to carry out their work should be one of the prime concern of the society. In this article the material problems were analyzed in terms of three factors namely quality of coir fiber, availability of raw material and price fluctuations in raw materials.

Table 9.2.1 Material Problems faced by the member coir workers of the society

	Material Problems		
Sl No	Statements	Score	Index
1	Low quality of coir fiber	113	62.78
2	Unavailability of raw material	62	34.44
3	Price fluctuations in raw material	179	99.44
	Composite Index	354	65.56

Source: Compiled from primary survey

Table 9.2.1 depicts the material problems faced by the member coir workers of the society. Among the material problems price fluctuations in raw material is the mostly felt problem and it affects the profitability of the society. The problem of low quality of coir fiber is moderately felt followed by unavailability of raw material. So, this suggests a move from the part of government to utilize the coconut husks in the state rather than depending on our neighbouring state Tamilnadu to solve the price hikes in the raw material. Even though the coir industry is facing the problem of unavailability of raw material, this problem is not that much felt among the members of the society as the society is successful in its efforts to ensure adequate supply of raw materials needed by the members.

9.2.2 Wage Problems:

Ensuring reasonable and timely wages to its members is the main responsibility of a cooperative society. As coir spinning is the major occupation of the members of the society, it forms the main source of income to the members. The problems regarding payment of wages are analyzed in terms of four variables namely low wage payment, delay in the payment of wages, inconvenient mode of payment and payment under income support scheme.

Table 9.2.2 Wage Problems faced by the member coir workers of the society

	Wage Problems		
Sl No	Statements	Score	Index
1	Low wage payment	140	77.78
2	Delay in payment of wages	60	33.33
3	Inconvenient mode of payment	60	33.33
4	Payment under income support scheme	118	65.56
	Composite Index	378	52.50

Source: Compiled from primary survey

Table 9.2.2 depicts the wage problems faced by the member coir workers of the society. Among the payment problems, low wage payment is mostly felt problem. Even though the wage was increased from 300 to 350 in the year 2019, the coir workers are of the opinion that it is not adequate and reasonable for the work they do and resulted in the shift in their working hours to MGNREGA Scheme. The problem of delay in the payment under income support scheme is moderately felt. Delay in payment of wages and inconvenient mode of payment are least felt problems as the society is providing timely wages to its members every month. 60 percent of the total wage is given by the society and there is delay in getting 40 percent of the remaining wage provided under the Income Support Scheme. So it is suggested that the government should take effective steps to provide the benefits of income support scheme timely to the coir workers and review the minimum wage standards for the coir workers.

9.2.3 Occupational Health Problems:

Occupational health is another major concern for women working in coir industry. The occupational health was analyzed on the basis of following health hazards, respiratory problem, skin problem, allergy problem, leg pain, back pain and joint pain.

Table 9.2.3 Occupational Health Problems faced by the member coir workers

	Occupational Health Problems		
Sl No	Statements	Score	Index
1	Respiratory problems	91	50.56
2	Skin Problems	87	48.33
3	Allergy Problems	119	66.11
4	Leg Pain	129	71.67
5	Back Pain	119	66.11
6	Joint Pain	118	65.56
	Composite Index	663	61.39

Source: Compiled from primary survey

Table 9.2.3 depicts the occupational health problems of the coir workers of the society. Leg pain is the mostly felt problem as they have to stand long hours

while spinning. Most of the coir workers have allergy problems and back pain. Allergy problems are due to the dust involved in the manufacturing of coir. Joint pain followed by respiratory problems and skin problems fall under the category of moderately felt problem along with the above mentioned allergy problems and back pain.

9.2.4 Infrastructure Problems:

Infrastructure problems were analyzed in terms of three parameters namely storage facility, power supply, and transportation facility.

Table 9.2.4 Infrastructure Problems faced by the member coir workers

	Infrastructure Problems		
Sl No	Statements	Score	Index
1	Lack of power supply	115	63.89
2	Lack of storage facility	60	33.33
3	Lack of Transportation Facility	71	39.44
	Composite Index	246	45.56

Source: Compiled from primary survey

Table 9.2.4 depicts the infrastructure problems faced by the coir workers of the society. The problem of lack of power supply is mostly felt by the members. As the coir workers are women they can do spinning only when they get time after all the household chores. So, power cuts at that time is a problem for the coir workers. The transportation facility is moderately felt problem, and it affects mostly the members who are away from the society. Lack of storage facility is least felt by the members and it also indicates that there is timely procurement of coir yarn by the society minimizing the need and space for storage of coir yarn.

9.2.5 Financial Problems:

The financial problems faced by the coir workers were analyzed in terms of four factors namely irregular or insufficient income, lack of access to credit or loans, inadequate savings or investment and lack of financial literacy and management skills.

Table 9.2.5 Financial Problems faced by the member coir workers

	Financial Problems		
Sl No	Statements	Score	Index
1	Irregular or insufficient income	123	68.33
2	Lack of access to credit or loans	173	96.11
3	Inadequate savings or investment	130	72.22
4	Lack of financial literacy and management skills	127	70.56
	Composite Index	553	76.81

Source: Compiled from primary survey

Table 9.2.5 depicts the financial problems faced by coir workers. Lack of access to credit or loans was analyzed as the mostly felt problem among the coir workers followed by inadequate savings or investment. Mostly felt problems also include lack of financial literacy and management skills and irregular or insufficient income. Most of the respondents lack security to take loan from commercial banks and most of them have taken loan from kudumbasree.

9.3 Overall Problem Index:

Table 9.3 Overall Problem Index

Overall Problem Index		
Sl No	Problems	Composite Index
1	Material Problems	65.56
2	Payment Problems	52.5
3	Occupational Health Problems	61.39
4	Infrastructure Problems	45.56
5	Financial Problems	76.81

Source: Compiled from primary survey

Table 9.3 depicts that under the five major problem heads, financial problem is the problem mostly felt by the coir workers. Most of the coir workers lack assets and securities and coir spinning is the major occupation. The maximum wage for a member coir worker a month is less than 10000 and this itself shows the depth of financial problems faced by the coir workers. As this income

forms the major part of their living, they take membership in the name of male members of the family to earn more. Under the moderately felt problems, material problem is most intense following by occupational health problems, payment problem and at last infrastructure problems. Even though most of the respondents had the problem of low wage payment, the overall index for payment problem stood low compared to other problems because of the timely payment and convenient mode of payment of wages by the society. The leg pain, joint pain ,back pain and allergy are the sole reason for increase in composite index for occupational health problems. Among all these major problems, infrastructure problems showed the lowest composite index compared to other problems.

10. Suggestions:

- The government should take necessary steps to open defibering units in the state wherever coconut husk is available in plenty to counter the problem of low-quality price fluctuations in coir fiber imported from Tamil Nadu.
- Training programs for value addition should be undertaken which will help the workers to diversify their activities and earn more from coir industry.
- Coir industry is under the strong threat of extinction as no new entrants are coming into this industry Presently the industry is surviving with already existing people and majority of them are above middle age. So, in a decade, there won't be enough traditional expertise hands in this industry. As a solution to this problem the government should implement new projects to attract youngsters to this industry Training programs should be undertaken by the government to impart skill to youngsters. Also, automatic spinning units should be opened to save the industry from this threat of extinction.
- The government should review the wage rate fixed every year to prevent the shift of workers to MGNREGA scheme.
- The government should look upon the delay in payment under the Income Support Scheme.
- As lack of awareness about the government schemes is the major factor which adversely affected their overall attitude towards government schemes, Proper awareness about government schemes in coir sector should be given to the coir workers.

11. Conclusion:

From the study, it was concluded that financial problem is identified as the mostly felt problem by the coir workers. Under the moderately felt problems, material problem is most intense following by occupational health problems, payment problem and at last infrastructure problems.

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SWOT Analysis of Marine Primary Fisheries Cooperative Societies in Kanyakumari, Tamil Nadu

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Abstract:

Fisheries primary cooperative societies are grassroots-level institutions mainly engaged in the utilization of fisheries resources, income generation and support for the socio-economic development of small-scale fishing communities. SWOT analysis is a strategic planning tool used by organizations to assess and evaluate their present strengths, weaknesses, opportunities and threats. Marine fisheries cooperative societies are well established in the majority of coastal fishing villages in Tamil Nadu. The present study was conducted in the Kanyakumari district of Tamil Nadu with randomly selected 42 marine primary fisheries cooperative societies consisting of 21 fishermen and 21 fisherwomen cooperative societies. The perceived strengths, weaknesses, opportunities and threats of marine fisheries cooperative societies were collected from executive body members and general body members of selected cooperative societies through focus group discussions using structured interview schedule. The strengths, weaknesses, opportunities and threats were analysed using TOWS matrix. The study found that strengths and opportunities were predominating weaknesses and threats of marine fisheries cooperative societies in Kanyakumari district of Tamil Nadu. To enhance the governance quality of marine fisheries cooperative societies, strengthening linkages and convergence with research & training institutes, implementing digital literacy & skill development programs, dynamic leadership, building infrastructure facilities, utilizing ecosystem approach to fisheries management, diversifying income generating activities, performance benchmarking with other cooperatives and offering diverse welfare services were suggested.

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Keywords:

Marine fisheries, Cooperatives, Strength, Weakness, Opportunity, Threat, TOWS matrix.

Introduction:

Fisheries cooperative societies are instrumental pillars in the sustainable management and development of fisheries sector. These cooperative entities bring together fishers, stakeholders, and communities to collectively navigate the challenges and opportunities of the fishing industry (Ibitoye, 2012). With over 3 million cooperatives worldwide, driven by values rather than capital gains, these enterprises stand united in their pursuit of a better world. Remarkably, cooperative members now account for approximately 12% of the global population, showcasing the widespread influence of this model. Moreover, cooperatives play a pivotal role in the global job market, providing employment opportunities to a staggering 280 million individuals (ICA, 2020). In India alone, there are an impressive 8.55 lakh cooperatives, directly impacting the lives of around 13 crore people. Notably, a striking 91% of villages in India benefit from the presence of some form of cooperative endeavor.

Zooming in on the fisheries sector, the cooperative structure in India exhibits a robust framework, comprising one National Level Federation, 24 State Level Federations, 9 Regional Level Federations, 138 District Level Federations, and an impressive network of 27,906 Primary Fisheries Cooperative Societies, collectively representing a membership base of 3.9 million dedicated fishers (FISHCOPFED, 2022).

Kanyakumari district is rich in fishing resources and excels in the marine primary fisheries cooperative sector in Tamil Nadu. It ranks third in the state for overall fish production, yielding an impressive 85,049.98 metric tons. Moreover, the district boasts the third-highest number of marine primary fisheries cooperative societies (84 cooperatives), with an average of 1,399 active members per cooperative – the highest in the state. Additionally, it holds the second-highest total number of members in these cooperative societies, with a notable 1,17,490 registered members (TN Policy Note, 2022). Kanyakumari District is the southernmost district of Tamil Nadu, lying in the tip of peninsular India. The district lies between 77°15' E and 77°36' E

longitudes and 8°03' N and 8°35' N Latitudes. Three sides of Kanyakumari district are surrounded by the sea: Arabian Sea in the west, Bay of Bengal in the East and Indian Ocean in the south, hence the confluence makes the place more productive. There are 42 fishing villages with a coastal length of 71.5 Km, whereas 60 km covers the west coast and the remaining 11.5 km covers the east coast.

The fisheries cooperative societies in Kanyakumari district play a very important role in the fisheries sector. For further improvement of the societies, the governance of fisheries cooperative societies should give more focus. Because, the governance of cooperative societies is an important facet as it is an indicator of success or failure of any cooperative society. For improving the governance quality of fisheries cooperative societies, there is a need to study the strengths, weaknesses, opportunities and threats of cooperative societies. In this context, the present article provides insights into strengthening the fisheries cooperative societies in this district.

Methodology:

The information on strengths, weaknesses, opportunities and threats of marine primary fisheries cooperative societies located in Kanyakumari district were gathered through focus group discussion with structured interview schedule. Seven marine primary fisheries cooperative societies each for fishermen and fisherwomen from Agastheswaram, Kalkulam, and Vilavankodetaluks selected randomly for primary data collection. This resulted in a total of 21 fishermen and 21 fisherwomen whose primary data were collected. The data collection process was carried out in two stages. First, we identified the cooperative society's possible strengths, weaknesses, opportunities and threats through literature review and discussed with extension and cooperative experts. Then, the collected/identified strengths, weaknesses, opportunities and threats were administered to group of executive body members and general body members of each fisheries cooperative society separately and data were analysed using TOWS matrix (Fitriani, 2022).

Results and Discussions:

SWOT Analysis of Marine Primary Fisheries Cooperative Societies:

SWOT analysis is a strategic planning tool used to assess marine primary

fisheries cooperative societies internal strengths and weaknesses, as well as the external opportunities and threats it faces (Humphrey, 2005). The acronym "SWOT" stands for Strengths, Weaknesses, Opportunities, and Threats, which are the four key elements considered in this analysis.

Strengths perceived by cooperative societies:

Strengths refer to the internal capabilities and resources that provide fisheries cooperative societies with a competitive advantage. These are the positive attributes that cooperative societies can leverage to achieve their objectives. The identified strengths include member's collective strength and support, educated and trained leadership, democratic decision making, strong network with district & state level bodies, access to fishing resources and strong local presence and market knowledge.

The study revealed that access to fishing resources, member's collective strength and support, and strong local presence and market knowledge were perceived as major strengths by both fishermen and fisherwomen cooperatives. Regarding member's collective strength, more than three quarters of FMCSs and FWCSs fell into the 'more perceived' category. A cooperative with a large membership can significantly contribute to the socio-economic development of its members and the broader community. In terms of strong local presence and market knowledge, two third of FMCSs and all FWCSs were in the 'more perceived' category. Fisherwomen were primarily involved in fish vending, which granted them a comprehensive understanding of the local fish market compared to fishermen. As for fishermen, most of them were engaged in various fishing activities, including traditional and deep-sea fishing. They had access to specialized fishing crafts, gears and fishing equipments, which were not readily accessible to fisherwomen. Consequently, in terms of access to fishing resources, more than three quarters of FMCSs were in the 'more perceived' category.

Weaknesses perceived by cooperative societies:

Weaknesses are internal factors that hinder the marine fisheries cooperative societies' ability to achieve its goals. These can be areas where the fisheries cooperative societies are lacking compared to competitors or where improvements are needed. The identified weaknesses include inadequate infrastructure facilities, less educated and unskilled members, weak linkage

with government agencies, NGOs, research institutes, etc., irregularity in conducting meetings, poor documentation and record management, less active participation of members, lack unity and trust among members, conflict among executive body & general body, absence of income generating activities, and corruption.

The study found that weak linkage with government agencies, research institutes, KVKs, absence of income generating activities, less active participation of members, inadequate infrastructure facilities and less educated and unskilled members were the major weaknesses perceived by both fishermen and fisherwomen cooperatives, respectively. Regarding weak connection with Government agencies, NGOs, KVKs, and research institutes, over half of the FMCSs and FWCSs fell into the 'more perceived' category. As a result, members are not receiving adequate training programs related to fisheries, fish value addition, and capacity development. Additionally, marine cooperative societies are not receiving proper guidance for collaborative developmental planning and resource management. In terms of inadequate infrastructure facilities, three-quarters of FMCSs and all FWCSs were categorized as 'more perceived'. Due to this insufficiency, fisheries cooperative societies were struggling to maintain records and conduct regular meetings. In terms of less active participation of members, more than half of FMCSs were categorized as 'more perceived'. As mentioned earlier, most of the fishermen were involved in deep-sea fishing activities, particularly using trawlers. They were only available during festival times and fish ban seasons. This was identified as the reason for the lower attendance in FMCSs' meetings. However, this was not the case in FWCSs. That's why more than half of the FWCSs were categorized as 'less perceived'. Coming to income-generating activities, nearly all FMCSs and FWCSs were categorized as 'more perceived'. The main reasons for the low level of income-generating activities were poor awareness about the potential of marine cooperative societies, inadequate knowledge about managing fisheries resources, and a lack of willingness.

Opportunities perceived by cooperative societies:

Opportunities are external factors and trends that the fisheries cooperative societies can capitalize on to further its mission and objectives. The identified opportunities include potential options of income-generating activities,

availability of certified training programs, scope of community services, trade & export opportunities, PMMSY, and information communication technologies.

The study revealed that potential options of income-generating activities, availability of certified training programs, and scope of community services were the major opportunities for by both fishermen and fisherwomen cooperatives, respectively. In terms of potential options of income-generating activities, more than three-quarters of FMCSs and all FWCSs were categorized as 'more perceived'. There were more scope for the income generating activities like fishing accessories shop, fish feed shop, ice factory, fish by-product factory, value-added fish product shop, open sea cage culture, marine ornamental fish shops, lobster/crab fattening units, gear and craft repairing shops, etc. Coming to the availability of certified training programs, more than three-quarters of FMCSs and two-thirds of FWCSs were categorized as 'more perceived'. The required training programs, such as capacity building, digital literacy programs, fish value addition, marine ornamental fish rearing, fattening techniques of lobster and crabs, culture techniques of seaweed, conservation of marine ecosystem, handling and maintenance of modern fishing technologies and electronic equipments like wireless, GPS, echo sounder, etc., were identified for both FMCSs and FWCSs' members. Therefore, there is a scope for conducting these kinds of programs through fisheries cooperative societies for the betterment of both fishermen and fisherwomen. The study also found that all the FMCSs and FWCSs were categorized as 'more perceived' in terms of scope of community services. The identified major community services include e-Seva, gold loan centers, health camps, and blood donation camps.

Threats perceived by cooperative societies:

Threats are external factors or conditions that could negatively impact the marine fisheries cooperative societies' ability to meet its goals. The identified threats include high dependency on natural resources, competition from other fishing entities/organisations, fluctuations in fish prices and demand, political and religious interference in functioning of cooperatives, declining fish catch, waste water from nearby seafood industries, less equipped marketing facilities, and increasing middlemen's encroachment.

The study found that high dependency on natural resources, less equipped marketing facilities, increasing middlemen's encroachment and fluctuations in fish price and demand were the major threats perceived by both fishermen and fisherwomen cooperatives. In terms of high dependency on natural resources, all the FMCSs and more than three-quarters of FWCSs were categorized as 'more perceived'. Coming to the fluctuations in fish prices and demand, two-thirds of FMCSs and more than three-quarters of FWCSs were categorized as 'more perceived'. This indicates that local fish vendors, mostly fisherwomen, were affected more by fish price fluctuations than fishermen. More than two-thirds of both FMCSs and FWCSs were categorized as 'more perceived' in terms of less equipped marketing facilities. This indicates that both fishermen and fisherwomen faced challenges in marketing their fish catches in local areas. Coming to the increasing middleman encroachment, nearly half of the FMCSs and more than two-thirds of the FWCSs were categorized as 'more perceived'. This reveals that fisherwomen are affected more than fishermen.

TOWS matrix:

The TOWS matrix is a strategic planning tool used to identify and evaluate the internal strengths and weaknesses of a fisheries cooperative societies, as well as the external opportunities and threats it faces (Weihrich, 1982). The present study, TOWS matrix was created by combining these factors in a matrix to generate strategic options. It helped in formulating strategies by matching internal strengths and weaknesses with external opportunities and threats.

The present study has considered strengths and weaknesses as internal factors, and opportunities and threats as external factors. Unit scores have been calculated for each strength, weakness, opportunity, and threat. Based on these unit scores, mean unit scores were derived and both internal and external factors were analyzed for marine primary fishermen cooperative societies (Fitriani, 2022). The overall analysis indicated that strengths and opportunities are predominant over weaknesses and threats in the marine fisheries cooperative societies in Kanyakumari. Both fishermen and fisherwomen cooperatives were positioned in the maxi-maxi quadrant of TOWS graph, signifying that they possess more strengths and opportunities. However, upon closer comparison, it became evident that fishermen cooperative societies exhibited even higher levels of strengths and opportunities.

Harmonizing TOWS Matrix Strategies with Sustainable Development Goals (SDGs):

The strategies outlined in the TOWS matrix resonate deeply with various Sustainable Development Goals (SDGs), demonstrating their potential for significant positive impact. Firstly, the collective strength of members and the presence of export opportunities may be utilized to promote collective exports through cooperatives, ultimately generating better revenue. This aligns seamlessly with SDG 8 - Decent Work and Economic Growth. By actively promoting collective exports through cooperatives, these strategies not only serve to generate improved revenue but also foster economic stability, ultimately creating avenues for meaningful employment. Furthermore, the utilization of available certified skill development training programs to equip unskilled general body members with the skills needed to sustain their livelihood directly aligns with SDG 4 - Quality Education. This forward-thinking initiative not only bolsters entrepreneurship but also empowers individuals with the essential skills and knowledge necessary for engaging in income-generating activities, effectively creating a pathway towards sustainable economic growth. In tandem, promoting income diversification activities may lead to increase income of cooperative societies and reduce dependency on fishing resources that resonates with both SDG 1 - No Poverty and SDG 2 - Zero Hunger. Through diversifying income streams and enhancing production methods, cooperative societies play a vital role in lifting members out of poverty while also contributing significantly to the overarching goal of global food security. Furthermore, the utilization of certified skill development training programs to uplift unskilled general body members aligns perfectly with the aspirations of SDG 9 - Industry, Innovation, and Infrastructure. By elevating the skill set of cooperative members, these strategies contribute tangibly to the development of robust infrastructure, foster inclusive and sustainable industrialization, and ignite the flames of innovation within the community. Lastly, the emphasis on educated and trained leadership can be utilized to reduce political and religious interference in the functioning of cooperative societies, aligning aptly with SDG 16 - Peace, Justice, and Strong Institutions. Through the establishment of good governance practices and the reduction of external interference, these strategies set the stage for the creation of effective, accountable, and inclusive institutions at all levels, ultimately paving the way for sustainable progress and prosperity.

Conclusion:

This study has documented the strengths, weaknesses, opportunities and threats of marine primary fisheries cooperative societies in Kanyakumari district. The SWOT analysis provides valuable insights into their strengths, weaknesses, opportunities, and threats, allowing for strategic planning and informed decision-making. Additionally, the study has developed strategies using the TOWS matrix. Aligning these strategies with the Sustainable Development Goals (SDGs) further underscores their significance in achieving global targets, particularly in areas such as economic growth, quality education, poverty reduction, and environmental sustainability. By leveraging their collective strength, skill development initiatives, and income diversification efforts, these societies contribute not only to the prosperity of their members but also to the broader objectives of a more equitable and sustainable future. Through mindful leadership and effective governance, they are poised to create lasting positive impacts on both local communities and the wider global environment.

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Role of Cooperative hospitals in providing sustainable health care services to the community: A study

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Abstract:

The cooperative hospital is established with the purpose of Providing Health care services to the Society on Sustainable basis. These objectives can be achieved only when the resources of the association are put to the best use. Human recourse of a hospital plays an important role in achieving the Health care goals. The select hospital is standing as the best and the well-established in the area on cooperative basis. They have tried to bring the most recent in medical science to the people .It was with the noble objective the TC Hospital was founded in 1987. The cooperative hospital started performance at a rented building in the heart of the tellicherry town, with just 75 beds and four specialty departments, has grown to its own building with 250 bed hospital in 1997. TCH has tried to imbibe the latest in medical science and has been encouraging doctors to pursue brilliance in their selected field. Being a part of this noble venture, a TCH member is entitled to avail wide-ranging benefits such as predilection to meet the doctors, reduction on hospital charges, accident insurance cover up, insurance cover up for the families etc. TCH is pressed to learn the most up-to-date in its field and put it into practice. TCH has been acquiring the most recent in medical technology as well. The present study deals about the health care service extended by the TCH to the human

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society in attaining health care services which is one of the SDG. The study covers this TCH and this patients The study covers this TCH and this patients both inpatients and out patients .the study aims to describe the healthcare service provided by the TCH and assesses the health care services from the patients numbering 30inpatients and 30 out patients will be studied on random basis. The influence will be useful for further strengthen healthcare service provided as well as to the community.

Keywords:

Providing Health care (PHC), Community Sustainable Goals, Quality of life care,cooperative hospital (TCH)

Introduction:

The health care industry, or medical industry, is a sector within the economic system that provides goods and services to treat patients with curative, preventive, rehabilitative, palliative, or, at times, unnecessary care. The modern health care sector is divided into many sub-sectors, and depends on interdisciplinary teams of trained professionals and paper of sectionals to meet health needs of individuals and populations. The health care industry is one of the world's largest and fastest-growing industries. Consuming over 10 percent of gross domestic product (GDP) of most developed nations, health care can form an enormous part of a country's economy.

The health care industry is typically divided into several areas. As a basic framework for defining the sector, the United Nations International Standard Industrial Classification (ISIC) categorizes the health care industry as generally consisting of Hospital activities, Medical and dental practice activities ,Other human health activities. This third class involves activities of, or under the supervision of, nurses, midwives. Physiotherapists, Occupational therapists, scientific or diagnostic laboratories, pathology clinics, residential health facilities, or other allied health professions, e.g. in the field of optometry, hydrotherapy, yoga therapy, music therapy, speech therapy. Chiropody and also homeopathy acupuncture, etc.

The cooperative hospital is established with the purpose of Providing Health care services to the Society on Sustainable basis. A cooperative hospital (TCH) is a healthcare institution providing patient treatment with specialized staff and medical equipment. The best-known type of hospital is the general

hospital, which typically has emergency department to treat urgent health problems ranging from fire and accident victims to heart attack. A district hospital typically is the major healthcare facility in its region, with large numbers of beds for intensive care and additional beds for patients who need long-term care. Specialized hospitals include trauma centres, rehabilitation hospitals, children's hospital, senior's (geriatric) hospitals and hospitals for dealing with specific medical needs such as psychiatric treatment and certain disease categories specialized hospitals can help reduce health care costs compared to general hospitals. A teaching hospital combines assistance to people with teaching to medical students and nurses. The medical facility that is smaller than a hospital is generally called a clinic Hospitals has range of departments (e.g.; surgery and urgent care) and specialist such as Cardiology. Some hospitals have outpatient departments and some have choice units. Common support units include a pharmacy, pathology, and radiology. Hospitals are usually funded by the public sector, by health organization (for profit or non-profit), by health insurance companies, or by charities, including direct charitable donations historically, hospitals were often founded and funded by religious orders, or by charitable individuals and leaders.

According to the (TCH) cooperative hospital definition, a district hospital is usually the region's primary healthcare facility, with a large number of intensive-care beds and extra beds for patients who need long-term care. It was with the noble objective the TC Hospital was founded in 1987. The cooperative hospital started performance at a rented building in the heart of the tellicherry town, with just 75 beds and four specialty departments, has grown to its own building with 250 bed hospital in 1997. TCH has tried to imbibe the latest in medical science and has been encouraging doctors to pursue brilliance in their selected field. Being a part of this noble venture, a TCH member is entitled to avail wide-ranging benefits such as predilection to meet the doctors, reduction on hospital charges, accident insurance cover up, insurance cover up for the families etc. TCH is pressed to learn the most up-to-date in its field and put it into practice. TCH has been acquiring the most recent in medical technology as well. The present study deals about the health care service extended by the TCH to the human society in attaining health care services which is one of the SDG. Trauma centre, children's hospitals, rehabilitation hospitals, and seniors' (geriatric) hospitals for coping with particular medical conditions such as psychiatric care are also examples of specialized hospitals and several other disease categories. When opposed to general hospitals,

specialized hospitals can help save money on health care. Based on the source of revenue, hospitals are categorized as general, specialize or government. A teaching hospital integrates patient care with medical students as well as a clinic is a care facility that is smaller than that of a hospital. A hospital's department as surgery and urgent care) and specialty units (such as cardiology) are diverse. Outpatient departments and chronic care centre are available at certain hospitals. Pathology, pharmacy, and radiology are examples of common support units.

One of the important functions of personal development of an organization is to ensure welfare of employees. The aim of or object of welfare activities is partly humanitarian to enable workers to enjoy a fuller and richer life and partly economic to improve the efficiency of workers and partly civic to develop among themselves a sense of responsibility and dignity and thus make them worthy citizens of this nation. Another object of labour welfare is not fulfilling the needs and aspirations of labour. The necessity of labour welfare is felt more in our country. Because it is a developing economy aiming at rapid economic and social development.

Statement of the problem:

Health care is elementary to the quality of life. Good health is a prerequisite to human efficiency and the development process. It has been very aptly fixed "any society should consider that a high quality of life and I suppose say happiness of people, which can only be obtained through a sufficient level of health is not only a pre-requisite for development but should be the basic objective of any development. The environmental impact of health care (TCH) and the puzzle of sustainability raise ethical questions regarding health care's environmental stewardship. Concern for the health of the earth's ecosystems suggests that health care institutions and practitioners should reassess their practices in order to soften or eliminate harmful effects. At the same time, the efficacy Cooperative Hospitals in Providing Sustainable Health Care Services to the Community responsibilities with their obligations to serve the immediate needs of patients. Addressing the issue of balance requires combining considerations from both medical ethics and Community ethics. Hospital is a place where human illness is defined, diagnosed and treated for, whereby restoration of health and well-being is made for those deprived of it temporarily. A large number of professionally and technically qualified people apply their knowledge and skill with the help of complicated equipment and appliances to produce quality care for patient.

Need of the study:

The Hippocratic principle of “do no harm” has strongly influenced the ethics of health care. This principle also requires that health care maintain sustainable practices and avoid harm to both humans and the centre of population world. With Cooperative hospitals and particular departments in the most highly technological and developed economies be able to learn to treat patients effectively while using fewer community resources.

Aim and Objectives of the study:

Aim:

To find the Role of Cooperative Hospitals in Providing Sustainable Health Care Services to the Community: A Study

Objectives:

To study the level of various Health Care Services to the Community strategies adopted in select tellicherry cooperative hospital in Kannur district.

To determine the average gap score (Health care services to the Society on Sustainable basis patients’ perceptions and employees expectations) for each service attribute.

To assess a cooperative hospital service quality along each of the five SERVQUAL dimensions. To track members’ expectations and perceptions (on individual service attributes and/or on the SERVQUAL dimensions) over time.

To compare a cooperative hospital’s SERVQUAL scores against those of competitors. To identify and examine patients segments that differs significantly in their assessments of a tellicherry cooperative hospital’s service performance. To assess internal service quality (that is, the quality of service rendered by one department or division of a cooperative hospital to others within the hospital). Despite all well-documented criticism, it is still widely used as there are no other well established alternatives

To examine the performance level of the employees and patient about Health Care Services adopted in select tellicherry cooperative hospital in Kannur district.

To identify the factors of Health Care Services and Environmental Sustainable treatments in select tellicherry cooperative hospital in Kannur district.

To understand the effectiveness of Health Care training program provided to employees.

To addition the knowledge of individual in doing the specific departments. To know the satisfaction of employee on the training program conducting in tellicherry cooperative hospital.

Research methodology:

Research design:

Descriptive research design is used for the study. Descriptive research is a research of fact finding. Major use of research design is used in those studies which are concerned with Characteristics of such events. The descriptive and analytic research design is used for this study as it described with assessing patient for Health Care Services to the Community and Performance for the employees of Tellicherry Cooperative Hospital.

Research instruments:

In this project the data are collected through structured questionnaire.

Questionnaire:

A questionnaire is a schedule consisting of a number of formulated series of questions related to the various aspects of subjects under study. In this method a pre-printed list of questions, Arranged in sequences is used to retrieve response from the respondents.

Tools for data analysis and interpretation:

Different tools used in this study are: Simple percentage Method In this study, percentage method test is also used. The following is the formula $\text{Percentage of Respondent} = \frac{\text{No. Of Respondents}}{\text{Total no of outpatient and in patient respondents}} \times 100$, Bar Diagram, line diagram, pie diagram use this study

Sample design: Sample design lay down all the details to be included in the sample. It is a definite plan for obtaining a sample from a given population. The sample technique used was the random sampling. In this type of sampling items for the sample are selected deliberately.

Study population: The employees and patients of Tellicherry Cooperative Hospital. **Sample size:** Sampling is the process of obtaining information about the entire population by examining only a part of it. There are many employees working in Tellicherry Co-operative Hospital. Due to shortage of time

researcher found it difficult to approach each employee personally. I have collected the data from 50 employees and 60 patients. The samples were collected using simple random sampling method.

Inclusion criteria:

- The employees of Tellicherry Cooperative Hospital.
- The out patients and in patients of Tellicherry Cooperative Hospital
- Both males and females will be included.

Exclusion criteria:

- The employees of other Cooperative, government, and private Hospital.
- The Patients of other Cooperative, government, and private Hospital.

Other Cooperative, government, and private Hospital

Study duration: The duration of the study is (Aug-16-30-2023)

Framework of Analysis: The data collected were analyzed using relevant statistical tools to make valid inferences based on the objectives of the study. Descriptive statistics and other analytical tools will be used for the study.

Data collection or statistic analysis: This study used Health Care Services to the Community strategies adopted in select tellicherry cooperative hospital two groups of populations (employees and patients) were collected the data for performance level in sustain goals. The entire statistical test was performed using statistical package for social sciences (SPSS) version 21 & graph pad instate software version 3.1 respectively.

Table No. 1 - Demographic characteristics of subjects:

Sl.No	Baseline of characteristics	Employees	In patients/out patients
1	Number of subjects	50	60
2	Age range	27-62	17-52
3	Mean age	29.44	20.33
4	Gender male/ female	19/31	IP-14/16 OP-12/18
5	Health care services	Performance level /evaluation	Performance level / evaluation
6.	Sustain goals.	Health care services/ evaluation	Health care services/ evaluation

Age wise classification of the respondents:

Age plays as important factor in knowing the profile of the respondents and it is categorized on upto 18-20, 21-25, 26-30, 31-35 above 35 years

Table No. 2 - Age wise classification of the respondents

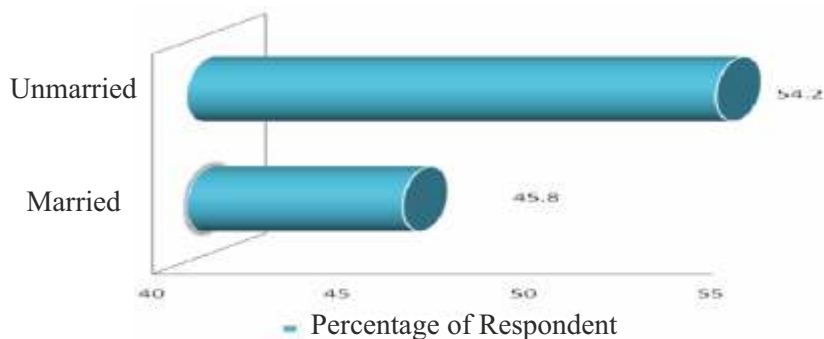
Age	Number of Respondent	Percentage of Respondent
18-20	29	24.2
21-25	43	35.8
26-30	12	10.0
31-35	22	18.3
Above 35 years	14	11.7
Total	120	100.0

Inference: The table shows the age of the respondents in which the 24.2% of the respondents are 18-20 years, 35.8% of the respondents are 21-25 years, 10.0% of the respondents are 26-30 years, 18.3% of the respondents are 31-35 years, 11.7% of the respondents are above 35 years. This shows Health Care Services opportunities and receivers were highly given to above 21-25 year's age in tellicherry cooperative hospital (TCH).

Table No. 3 - Marital status wise classification of the respondents

Marital status	Number of Respondent	Percentage of Respondent
Married	55	45.8
Unmarried	65	54.2
Total	120	100.0

Inference: The table shows the marital status of the respondents in which the 54.2% of the respondents unmarried and 45.8 % of the respondents of the married. This shows Health Care Services opportunities and receivers were highly given to unmarried in tellicherry cooperative hospital (TCH).

Graph No. 1 - Marital status wise classification of the respondents**Qualification wise classification of the respondents:**

Qualification plays as important factor in knowing the profile of the respondents and it is categorized Illiterate, SSLC, HSSC, Graduate, and Post Graduate.

Table No. 4 - Qualification wise classification

Marital Status	Number of Respondent	Percentage of Respondent
Illiterate	24	20.0
SSLC	17	14.2
HSSC	21	17.5
Graduate	32	26.7
Post Graduate	26	21.7
Total	120	100.0

The table shows the qualification of the respondents in which the 53.3% of the respondents are illiterate 20.0%, 14.2% of the respondents are SSLC, 17.5% of the respondents are HSSC, 26.7% of the respondents are Graduate 21.7% of the respondents are Post Graduate Degree. This shows job opportunities were highly given to graduate in tellicherry cooperative hospital (TCH).

Table No. 5 - Total Monthly Income wise classification of the respondents

INCOME	Number of Respondent	Percentage of Respondent
upto8000	74	61.7
9000-15000	43	35.8
22000-28000	2	1.7
above28000	1	.8
Total	120	100.0

Inference: The Table shows that out of 120 responded, 61.7% of the respondent are having family total monthly income is up to 8000, 35.8% of the responded are having family total monthly income is 9000-15000, 1.7% of the responded are having family total monthly income is 22000-28000, .8 of the responded are having family total monthly income is above28000. It is concluded from the study 61.7% of the respondent having total monthly income is Rs 8000.

Graph No. 2 - Total Monthly Income wise classification of the respondents

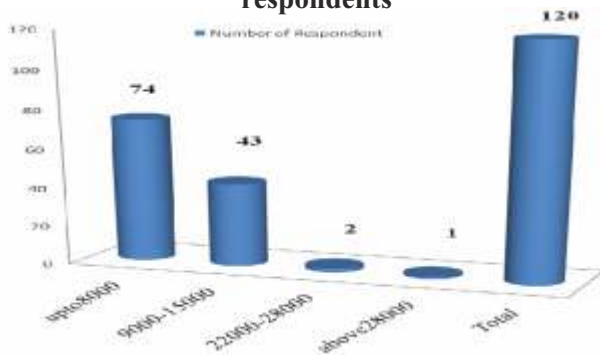


Table No. 6 - Employee promotion wise classification of the respondents

Employees promotion	Number of Respondent	Percentage of Respondent
Agree	94	78.3
Strongly agree	26	21.7
Total	120	100.0

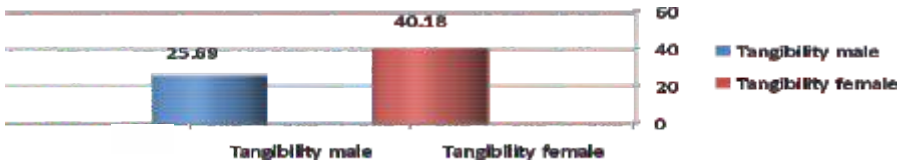
Inference: The table shows that 120 respondents 78.3% of the respondents are agreeing prefer for their, 46.7% of the respondents are strongly agreeing in the effectiveness of employee promotion.

Cooperative Hospitals in Providing Sustainable Health Care Service quality Tangibility male and female in health care system, in Tellicherry cooperative hospital.

Table No. 7

Category	Mean value	SD	P value	r value
SERVQUAL- Tangibility male	25.69	3.683	0.0074	-0.7537
SERVQUAL -Tangibility female	40.18	6.047		

Graph No. 3

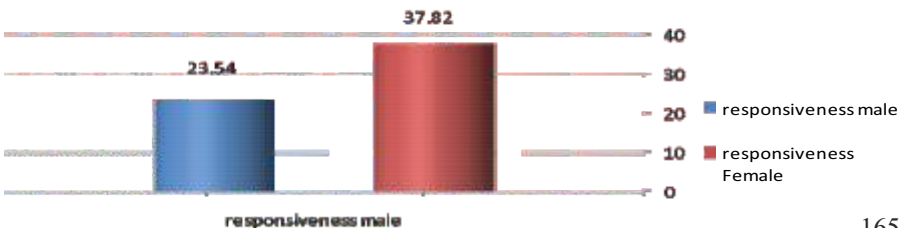


Comparison of Sustainable Health Care performance and quality responsiveness male and female in health care system, in tellicherry cooperative hospital.

Table No. 8

Category	Mean value	SD	P value	r value
SERVQUAL Responsiveness male	23.54	4.274	0.9568	-0.0185
SERVQUAL Responsiveness female	37.82	5.250		

Graph No. 4

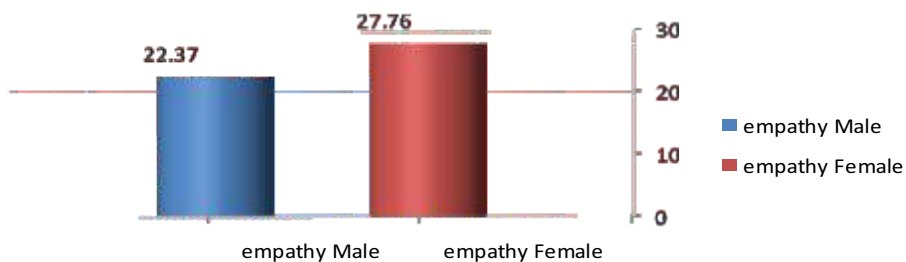


Cooperative Hospitals in Providing Sustainable Health Care performance and quality Empathy male and female in health care system, in Tellicherry cooperative hospital.

Table No. 9

Category	Mean value	SD	P value	r value
SERVQUAL Empathy male	22.37	5.911	0.0454	-0.4909
SERVQUAL Empathy male	27.76	6.969		

Graph No. 5

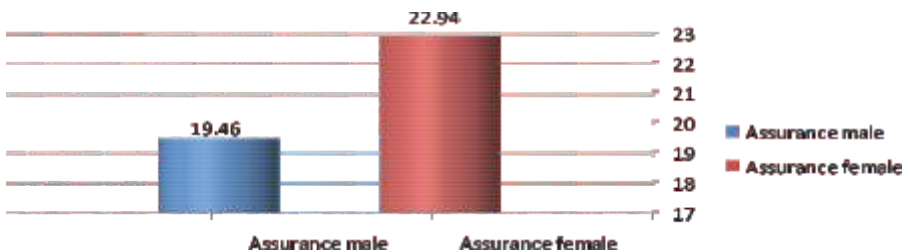


Cooperative Hospitals in Providing Sustainable Health Care performance and sustain developing goals Empathy male and female in health care system, in Tellicherry cooperative hospital.

Table No. 10

Category	Mean value	SD	P value	r value
SERVQUAL Assurance male	19.46	5.564	0.0411	-0.4997
SERVQUAL Assurance female	22.94	5.847		

Graph No. 6



Discussion:

The purpose of the study is to determine the performance level of the employees and patient about Health Care Services adopted in select tellicherrycooperative hospitals in Kannur district.

Conclusion:

Performance Appraisal is a widely used technique to evaluate the people. The early appraisal system was called merit rating in the early fifties performance Appraisal technique began use for technical managerial and professional personal. Tremendous changes have take place, in concept technique and philosophy of employee's appraisal.

Performance Appraisal, also known as employee appraisal is a method by which the job performance of an employees is evaluated. Performance appraisal is a part of career development. Performance appraisal are regular reviews of employee performance within organizations. A process of evaluating am employees current and past performance relative to performance standards. An Appraisal involves:-Setting work expectations/standardsAssessing actual performance vs. StandardProviding feedback and to improve performance

Findings:

In my study, most of the respondents are female employees (64%).63% of the respondents have good knowledge about performance appraisal, from the study it was found 46%of the respondent agreed that the objective of conducting the performance appraisal was behavioral, functional, promotional and training and development82% of the respondent felt that they should be given both monitory and non-monitory benefits after conducting the performance health care services .It was found that 53% of the respondent felt that the performance is based on favoritism .It was found that 78% of the respondent agreed that the performance appraisal methods effective sustainable health care services training and development in tellicherry cooperative hospital. Health care services50% of the respondent are degree holders.

Strengthening the relationship between the management and the employees .64%said that the performance appraisal method followed help in providing

clarity regarding the expectation and responsibilities of the duties to be performed by the employees.

56% of the employees agreed that the performance level of the employees and patient about Health Care Services adopted in select tellicherry cooperative hospital performance appraisal method followed at the cooperative hospital aims at personal development and work performance of the employees.

Suggestions:

The hospitals as that is what the employees expect. The hospital should make necessary modification in the performance appraisal system to motivate the employees to his work in effective manner While conducting the performance appraisal at the hospital the management should keep in view that it is not on the basis of favourism It will be beneficial for the hospital if they retain the experienced employees. The hospital can try to make some modification in their performance appraisal method which will help in increasing the success rate of training and development.

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Emotional Intelligence among the Co-operative Bank Employees

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Abstract:

Emotional intelligence (EI) is the ability to identify, use, understand, and manage emotions in positive ways to relieve stress, communicate effectively, emphasize with others, overcome challenges, and defuse conflict. Emotional intelligence impacts many different aspects of our daily life, such as the way we behave and the way we interact with others. (Swarnalatha and Sekar, 2016)

The study was carried out with the objectives of studying the level of emotional intelligence among the employees of cooperative banks and to determine the demographic factors affecting their emotional intelligence. For the purpose of the study four branches of Vellanikkara Service Co-operative Bank were selected. All the employees of these four branches (30 no's) were selected for the purpose of collecting primary data. The data were collected by using a structured interview schedule during 25th May to 30th July 2022. The tools used for the study were simple percentage analysis, index method and coefficient of correlation. Five key elements of emotional intelligence were selected as the dimensions for the study based on the theory proposed by Daniel Goleman (1998), i.e., self-awareness, self-regulation, motivation, empathy and social skills.

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Findings on the emotional intelligence revealed that self-awareness of the employees in the organization was average, with index value of 87. The employees had average score on emotional awareness and accurate self-assessment. The self-regulation of the employees was average with a composite index of 88. The level of motivation with respect to achievement drive, commitment, initiative and optimism was average. The empathy level of employees was average with a composite index of 86. Finally, the social skills such as communication, leadership, team capabilities, collaboration and co-operation and building bonds had a composite index of 87 and resulted as average.

Thus it can be concluded that the overall emotional intelligence of employees was rated as average and among them motivation ranked first followed by self-regulation, self-awareness and social skills. Out of the five demographic factors (gender, age, educational qualification, designation and experience), only gender was significantly and positively correlated to the emotional intelligence of employees.

Key words:

Emotional Intelligence, Self-awareness, Self-regulation, Motivation, Empathy and Social Skills

1. Introduction:

Emotional Intelligence (EI) is also known as Emotional Quotient (EQ). EI is one of the hot topics among business leaders and HR professionals. It is the ability to identify, use, understand, and manage emotions in positive ways to relieve stress, communicate effectively, emphasize with others, overcome challenges, and defuse conflict. Emotional intelligence impacts many different aspects of our daily life, such as the way we behave and the way we interact with others. (Swarnalatha and Sekar, 2016).

Charles Darwin was the first to recognize the value of emotions. He cited that the emotional system energizes behaviour needed to stay alive. Emotions cannot be stopped, they happen instinctually and immediately in response to various situations and people. Emotional intelligence, and its link to the evolution of the functional use of emotions, has been around since Charles Darwin wrote – in ‘The Expression of the Emotions in Man and Animals’ in

1872 about the 24 functional purpose of emotions. He demonstrated that emotional expression plays a vital role in adaptive behaviour, which remains an important axiom of EI (emotional intelligence) to the present day. We have learned that human body is designed to perceive change in the internal and external environment – the face being the primary signal system to show emotion (Ekman & Davidson 1994).

Daniel Goleman's books, *Emotional Intelligence* (1995) and *Working with Emotional Intelligence* (1998), have served to popularize this relatively new area of 'Emotional Intelligence'. He has presented his adaptation of a few existing models of emotional intelligence and emphasized how it is altered throughout life, the ways basic emotional skills can augment one's ability to function better and to succeed in life, and the price paid for what he calls "emotional literacy". The EI model introduced by Daniel Goleman focuses on EI as a wide array of competencies and skills that drive managerial performance. The competency-based model of emotional intelligence by Goleman (2001) has been designed specifically for workplace applications and it is characterized by the five broad areas. They are, knowing one's emotions (Self-awareness), managing emotions (Self-management), motivating oneself, recognizing emotions in others (Social awareness), and handling relationships (Relationship management).

2. Statement of the problem:

Emotional intelligence is widely recognized as the valuable skill that helps improve communication, management, problem solving and relationships within the work place. It is also a skill that researchers believe can be improved with training and practice. Emotional intelligence is recognized as more important for success in life than IQ. Also, there is considerable body of evidence that a person's ability to perceive, identify and manage emotions allows him to develop the kinds of social and emotional competencies that are important for success in almost any job. Such competencies are becoming more important in today's working environment. It plays a significant role in the organization and becomes an important criterion of evaluation of judgment of an effective employee, increases productivity and trust within and across the organization.

It can be generally assumed that employees in a successful organization have a capacity to be aware and regulate their emotions. Dealing with financial

matters may lead employees to a highly stressed environment. After reviewing the literatures, it can be noticed that, only few studies were undertaken on emotional intelligence and they mainly focused on emotional intelligence on private bank employees. In this backdrop an attempt was made to examine emotional intelligence among the co-operative bank employees.

3. Objectives:

The study was carried out with the objectives of studying the level of emotional intelligence of the employees of cooperative banks and determining the demographic factors affecting the emotional intelligence.

4. Methodology:

For the purpose of the study four branches of Vellanikkara Service Co-operative Bank (VSCB) were selected. All the employees of these four branches (30 no's) were selected for the purpose of collecting primary data. The data were collected by using a structured interview schedule. Only primary data were used for this study. The study was conducted during the month of 25th May to 30th July 2022. The tools used for the study were simple percentage analysis, index method and coefficient of correlation. Five key elements of emotional intelligence were selected as the dimensions for this study based on the theory proposed by Daniel Goleman (1998), i.e., self-awareness, self-regulation, motivation, empathy and social skills.

5. Review of literature:

Salovey and Mayer (1990) reported a system for EI. They followed the underlying foundations of EI to social intelligence and featured how the idea of feeling had been utilized in conventional intelligence. They clarified that EI is related with constructive psychological wellness and emotionally intelligent people were a satisfying an organization though those failing in EI were commonly maladjusted to their condition.

Mayer and Salovey (1997) explained the evolution of the concept of EI and put forth their 4-branch ability model of EI. They cited the role of EI in schools, at home, workplace and in other work settings. They also purported that EI skills are often acquired through education like other skills.

Goleman (1998) broke down the competency models created by analysts in 188 enormous and worldwide associations. He determined the proportion of

specialized aptitudes Intelligence Remainder and EQ as contributing components to great execution and found that 'EI end up being twice as significant as others for employments at all levels'. He additionally talked about the job of five segments of EI (mindfulness, self-guideline, inspiration, compassion and social abilities) in the accomplishment of pioneers.

Cavallo (2001) led the well-known investigation at Johnson and Johnson customer and individual consideration bunch including 358 chiefs and around 1400 representatives in workplaces over the globe with a target to recognize the skills that had any kind of effect among high and normal entertainers. He presumed that directors with more prominent 'emotional ability' were best performing pioneers when contrasted with those with low EQ.

Ayiro (2009) analyzed the effect of EI of school administrators and their presentation among 100 chiefs. The schools were profiled based on high or low execution. The investigation found a positive relationship between absolute EI scores and execution evaluations and experiential EI was seen as the most grounded indicator of execution.

6. Analysis and discussions

6.1 Demographic profile

From table no. 1 below, we can clearly interpret that 70 percent of the employees were females and 30 per cent of the employees were males. Most of the employees (40%) belonged to the age group of 40-50 years and one third (30 percent) of the employees belonged to the age group of 30-40 years. Nearly 1/4th of the employees were coming under the age category of more than 50. In the case of educational qualification, 40 per cent of the employees were qualified with degree and JDC. Less than one fourth (16 percent) of the employees completed B.Com and JDC. Most of the respondents were senior clerk followed by accountant, junior clerk and cashier. Head office of VSCB was under the leadership of secretary and branches were led by branch managers. About the year of experience of the employees, half of the employees had the experience of 10-15 years. One third of the employees (30 per cent) had the experience of more than 15 years. One fourth (20 per cent) of the employees had below 10 years of experience.

Table 1: Demographic profile of the respondents (n=30)

Variables	Frequency	Per cent (%)
Gender		
Female	21	70
Male	9	30
Total	30	100
Age	Frequency	Per cent (%)
Below 20 years	0	0
20-30 years	1	3
30-40 years	9	30
40-50 years	12	40
Above 50	8	27
Total	30	100
Educational qualification	Frequency	Per cent (%)
SSLC	4	13
SSLC & JDC	3	10
Pre degree & JDC	6	21
Degree & JDC	12	40
B.Com (Coop)	5	16
Total	30	100
Designation	Frequency	Per cent (%)
Secretary/Branch manager	4	13
Senior clerk	12	40
Junior clerk	4	13
Accountant	6	20
Cashier	4	13
Total	30	100
Years of experience	Frequency	Per cent (%)
Less than 5 years	3	10
5-10 years	3	10
10-15 years	15	50
15-20 years	7	23
More than 20 years	2	7
Total	30	100

Source: Primary data

6.2 Level of emotional intelligence of employees of cooperative bank:

The responses were collected for five dimensions of EI viz., self-awareness, self-regulation, motivation, empathy and social skills (Daniel Goleman, 1998) by using five-point scale of Likert's summated rating scale. i.e., Strongly Agree (SA), Agree (A), No Opinion (N), Disagree (D) and Strongly Disagree (SD).

Responses	Score
Strongly Agree (SA)	5
Agree (A)	4
No Opinion (N)	3
Disagree (D)	2
Strongly Disagree (SD)	1

The formula for calculating Index were

$$\text{Index} = \frac{\text{Total score obtained for each statement}}{\text{Maximum Score}} \times 100$$

$$\text{Composite Index} = \frac{\text{Total score obtained for each statement}}{(\text{Sum of maximum score} \times 100)} \times 100$$

Self-awareness:

Self awareness is the ability to recognize and understand your moods, emotions, and drives, as well as their effect on others. It's a key part of emotional intelligence because knowing ourselves and how it impacts others will help to maintain strong relationships, build trust, improve communication and a range of other "soft skills".

The level of self awareness was classified as excellent, good, average, poor and very poor based on the following score.

Index	Level of self awareness
>97	Excellent
92-97	Good
81-92	Average
76-81	Poor
<76	Very poor

Table 2: Self-awareness

Statements	Score (SA)	Score (A)	Score ((N)	Score (D)	Score (SD)	Total Score	INDEX	Category
I always know which emotions I am feeling and why	50	60	15	0	0	125	83	Average
I have a guiding awareness of my values and goals and recognize how my feelings affect my performance	25	80	15	0	0	120	80	Poor
I am aware of my strengths and weaknesses	95	44	0	0	0	139	93	Good
I am reflective and try to learn from experience	95	32	9	0	0	136	91	Average
I present myself with self-assurance; I have "presence"	80	56	0	0	0	136	91	Average
I am decisive, and able to make sound decisions despite uncertainties and pressures	50	56	18	0	0	124	83	Average
Composite Index							87	Average

Source: Compiled from Sample survey

Table 2 revealed that the composite index of self awareness of the employees in the organization was 87. It means that the employees of VSCB had an average level of self awareness. They had poor guiding awareness on their values and goals also failed to recognize how feelings affect the performance

Self regulation:

Self regulation is the ability to control or redirect disruptive impulses and moods. The propensity to suspend judgment to think before acting. It's a skill which use on a day-to-day basis to manage the emotions at the moment that an event occurs-it let us take thoughtful actions.

The level of self regulation was classified as excellent, good, average, poor and very poor based on the following score.

Index	Level of self regulation
>94	Excellent
91-94	Good
84-91	Average
81-84	Poor
<81	Very poor

Table 3: Self regulation

Statements	Score (SA)	Score (A)	Score (N)	Score (D)	Score (SD)	Total Score	INDEX	Category
I manage my impulsive feelings and distressing emotions well	50	60	15	0	0	125	83	Poor
I think clearly and stay focused under pressure	75	56	3	0	0	134	89	Average
I consistently act ethically and am considered to be above reproach	70	64	0	0	0	134	89	Average
I admit my own mistakes and confront unethical actions in others	75	60	0	0	0	135	90	Average
I meet commitments and keep promises for meeting my objectives	85	52	0	0	0	137	91	Good
I am organized and careful in my work	80	56	0	0	0	136	91	Good
I smoothly handle multiple demands, shifting priorities, and rapid change	75	60	0	0	0	135	90	Average
I am flexible in how I see events	50	80	0	0	0	130	87	Average
I seek out fresh ideas from a wide variety of sources	35	72	15	0	0	122	81	Poor
I take fresh perspectives and risks in my thinking	85	28	18	0	0	131	87	Average
Composite Index							88	Average

Source: Compiled from Sample survey

The table shows that the employees had an average level of self-regulation and the composite index was 88; they had poor ability to manage their impulsive feelings and distressing emotions. They were not seeking much fresh ideas from a wide variety of sources. They were good at meeting their commitments and organizing their work.

Motivation:

Motivation is the ability to self motivate, with a focus on achieving internal or self gratification as opposed to external praise or reward. Individuals who are able to motivate themselves in this way have a tendency to be more committed and goal focused. It's a passion to work for reasons that go beyond money or status and a propensity to pursue goals with energy and persistence.

The level of motivation was classified as excellent, good, average, poor and very poor based on the following score.

Index	Level of motivation
>97	Excellent
94-97	Good
86-94	Average
83-86	Poor
<83	Very poor

Table 4: Motivation

Statements	Score (SA)	Score (A)	Score (N)	Score (D)	Score (SD)	Total Score	INDEX	Category
I am results-oriented, with a high drive to meet objectives and standards	75	60	0	0	0	135	90	Average
I set challenging goals and take calculated risks	70	48	12	0	0	130	87	Average
I am willing to make personal or group sacrifices to meet a larger organizational goal	95	44	0	0	0	139	93	Average
I use the group's core values in making decisions and clarifying choices	65	68	0	0	0	133	89	Average
I am always ready to seize opportunities	85	44	6	0	0	135	90	Average
I pursue goals beyond what's required or expected of me	90	44	3	0	0	137	91	Average
I am persistent in seeking goals despite obstacles and setbacks	40	88	0	0	0	128	85	Poor
I operate from hope of success rather than fear of failure	120	24	0	0	0	144	96	Good
Composite Index							90	Average

Source: Compiled from Sample survey

Table 4 reflects the responses of employees regarding motivation. The composite index 90 depicts the average level of motivation of the employees. The employees were good at work with a hope on success but poor at persistent seeking of goals and facing obstacles and setbacks.

Empathy:

The ability to recognise the emotional makeup of other people. It’s a skill in treating people according to their emotional reactions. Empathy also allows an individual to understand the dynamics that influence relationships, both personal and workplace.

The level of empathy was classified as excellent, good, average, poor and very poor based on the following score.

Index	Level of empathy
>98	Excellent
92-98	Good
80-92	Average
74-80	Poor
<74	Very poor

Table 5 below depicts the composite score of 86 for empathy, which means that the employees had an average level of empathy. The employees were good at understanding others and seeing diversity as an opportunity. But they were acknowledging and reward people’s strengths, accomplishments, and development in a poor manner.

Table 5: Empathy

Statements	Score (SA)	Score (A)	Score (N)	Score (D)	Score (SD)	Total Score	INDEX	Category
I am attentive to helping others by understanding their needs and feelings and am a good listener	25	100	0	0	0	125	83	Average
I show sensitivity and understand others' perspectives	105	36	0	0	0	141	94	Good
I acknowledge and reward people's strengths, accomplishments, and development	15	80	21	0	0	116	77	Poor
I mentor, give timely coaching, and offer assignments that challenge and grow a person's skill and offer useful feedback	70	48	12	0	0	130	87	Average
I try to understand diverse worldviews and be sensitive to group differences	55	68	6	0	0	129	86	Average
I see diversity as opportunity, creating an environment where diverse people can thrive	120	16	6	0	0	142	95	Good
I understand customers' needs and match them to services or products	60	68	3	0	0	131	87	Average
I seek ways to increase customers' satisfaction and loyalty	80	36	6	0	0	122	81	Average
Composite Index							86	Average

Source: Compiled from Sample survey

Table 6: Social skills

.Statements	Score (SA)	Score (A)	Score (N)	Score (D)	Score (SD)	Total Score	INDEX	Category
I am good at sending clear and convincing messages and deal with difficult issues straightforwardly	35	72	15	0	0	122	81	Poor
I listen well, seek mutual understanding, and fully welcome sharing of information	100	28	9	0	0	137	91	Good
I step forward to lead as needed, regardless of position	65	64	3	0	0	132	88	Average
I guide the performance of others while holding them accountable according to the shared vision and mission	100	36	3	0	0	139	93	Good
I model team qualities like respect, helpfulness, and cooperation to protect the group and its reputation, and share credit with the group	25	88	9	0	0	122	81	Poor
I draw all members into active and enthusiastic participation by building team identity, esprit de corps, and commitment	60	64	6	0	0	130	87	Average
I balance a focus on task with attention to relationships by promoting a friendly, cooperative climate	50	52	21	0	0	123	82	Average
I spot and nurture opportunities for collaboration, sharing plans, information, and resources	90	32	12	0	0	134	89	Average
I cultivate and maintain extensive informal networks and seek out relationships that are mutually beneficial	80	56	0	0	0	136	91	Good
I make and maintain personal friendships among work associates	65	60	6	0	0	131	87	Average
Composite Index							87	Average

Source: Compiled from Sample survey

Social skills:

Social skills are the proficiency in managing relationships and building networks. It is the ability to manage the emotions of others through emotional understanding and using this to build rapport and connect with people through skills such as active listening, verbal and non-verbal communication. The level of social skills was classified as excellent, good, average, poor and very poor based on the following score.

Index	Level of social skills
>95	Excellent
91-95	Good
82-91	Average
78-82	Poor
<78	Very poor

The index on social skills depicted in table 6. The composite index of the social skills scored as average with a value of 87. The employees responded that they were good at listening skill, accountability and maintaining informal networks, but they were having poor social skills on sending clear and convincing messages and deal with difficult issues straightforwardly. The team qualities like respect, helpfulness, and cooperation to protect the group and its reputation was also at poor level.

So, it may be assumed that the employees of VSCB had maintaining an average level of social skills in their work place.

Table 7: Overall level of emotional intelligence of employees

Sl. No.	Dimensions	Index	Level of EI	Rank
1	Self awareness	87	Average	3
2	Self regulation	88	Average	2
3	Motivation	90	Average	1
4	Empathy	86	Average	4
5	Social skills	87	Average	3
6	Over all EI	88	Average	-

In table 7 the overall emotional intelligence index towards 5 dimensions were listed, and ranked them according to their position. It is clearly pointed out that the motivation has the first rank followed by self regulation, social skills and self awareness. Empathy has the least score and ranked fourth.

6.3 Demographic factors affecting emotional intelligence of employees:

Table 8: Correlation coefficient

Sl. No.	Variables	Correlation Coefficient (r)
1	Gender	0.382*
2	Age	0.057NS
3	Education	0.00863NS
4	Designation	0.14431NS
5	Experience	-0.081NS

*Correlation is significant at the 0.05 level (2-tailed). NS- Non- significant

A correlation of the emotional intelligence of the employees towards demographic factors worked out and shown in table 8. Out of the five independent variables, only one variable namely gender was significantly and positively influencing the emotional intelligence of employees. Whereas age, education, designation and experience had no significant relationship with emotional intelligence of employees.

Gender:

From the table it could be inferred that there was a positive and significant relationship with gender and emotional intelligence of employees of VSCB. Majority of the employees were female, and from the response of employees it could be assume that female employees had more EI compared to male. The results are in conformity with the findings of Arteche et al. (2008)

Findings, Suggestions and Conclusion:

The study discovered that 70 percent of the employees were females and most of the employees (40 per cent) belonged to the age group of 40-50 years. Most of the employees (40 per cent) were qualified with degree and JDC. Most of the respondents were senior clerk followed by accountant, junior clerk and cashier. Half of the employees had the experience of 10-15 years and 20 per cent of them had up to 10 years of experience. It was evident that employees of VSCB had average level of EI in all the five selected dimensions. There was a positive and significant relationship with gender and emotional intelligence of employees of VSCB where, majority of them were female employees.

The study highlighted that the level of emotional intelligence in all the five selected dimensions was found to be average. Out of the five dimensions' motivation had the first rank followed by self regulation, social skills and self awareness. Empathy ranked fourth with the least score.

The findings of the study revealed a further scope for improvement of the emotional intelligence of the selected co-operative bank. It is suggested that the employees with exceptional emotional intelligence should be identified and provide them leadership development opportunities. These employees should be able to identify their values and goals and recognize how their feelings affect the performance. Motivational training may be given to manage their impulsive feelings and distressing emotions well. Employees should be self-motivated on persistent seeking of goals despite obstacles and setbacks. An organisational culture should develop among the employees to people reward and to communicate effectively. Finally, it is very necessary to develop the team qualities like respect, helpfulness, and cooperation to protect the group and its reputation, and share credit with the group. Regular assessments and surveys can help track any changes or areas they may need further attention. Because commitment to leveraging emotional intelligence will undoubtedly contribute to the bank's continued growth and prosperity

To conclude, it was an attempt made to draw the inference from the data collected regarding the emotional intelligence of the employees of co-operative bank and the findings were revealed. The study concluded that the female employees of co-operative bank has more emotional intelligence than male employees.

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Innovation and best practices in Cooperatives - A case study on IFFCO

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Abstract:

The Indian Farmers Fertiliser Cooperative Limited (IFFCO) has emerged as an inspiration for success and innovation in Indian agriculture. This study focuses on the multifaceted facets of IFFCO's journey, aiming to shed light on the factors that have contributed to its remarkable achievements. The cooperative model lies at the heart of IFFCO's success, where ownership and control are vested in the hands of farmers themselves. This unique structure has fostered a deep connection with its primary stakeholders, ensuring that the cooperative remains firmly rooted in addressing the needs of the farming community. IFFCO's commitment to delivering high-quality fertilizers tailored to India's diverse soils and crops has been a pivotal driver of its success. Digital transformation has played a significant role in enhancing farmer engagement. IFFCO's mobile apps and web platforms provide farmers with access to vital information on fertilizers, weather updates, and best agricultural practices. The organization's rural retail network, IFFCO Kisan Sanchar Limited (IKSL), has expanded the availability of agricultural inputs and knowledge in remote areas. The study also highlights IFFCO's international presence and its role in facilitating the exchange of global agricultural trends and practices to the benefit of Indian farmers.

Keywords:

Innovation, Agriculture, Fertilizer, Supply Chain, Digital Transformation, Development of Farmers.

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1. Introduction:

In the Early 1960s, the food crisis mobilized Indian farmers and the founding fathers of a 'young' India to look for long-term solutions. International organizations, including the American Co-operative Study Team, conducted fertilizer feasibility studies in India to increase production. The cooperative sector in India at that time was distributing 70 percent of the chemical fertilizers consumed in the country. This sector had adequate infrastructure to distribute fertilizers but no production facilities. With the introduction of a multi-agency approach by the Government of India in the distribution of fertilizers in 1967, the private sector also entered the field of fertilizer distribution. Private sector production units provided more opportunities to the distribution network of private trade and gave secondary preference to the cooperatives in the matter of supplies. Due to this development, the cooperatives started getting less supply of fertilizers. In 1964, the Cooperative League of the USA proposed to the Government of India that American cooperatives were interested in collaborating with Indian cooperatives in setting up fertilizer production capacity. The idea appealed to the Government of India and eminent co-operators of the country. As a result, Indian Farmers Fertilizer Cooperative Limited (IFFCO) was conceived and registered on 3 November 1967, as a multi-unit cooperative society with 57 member cooperatives.

The primary objectives are production and distribution of fertilizers. Today the biggest cooperatives in the world by turnover on GDP per capita with around 35,000 member cooperatives reaching over 50 million Indian farmers.



2. Role of IFFCO in Agricultural Development in India:

IFFCO's vision is to empower rural India and the vision works beyond fertilizers. Over the past 50 years, several initiatives to support the holistic development of farming communities across India.

- Empowering Farmers Through Training
- Village Adaptation Programme
- Farmer Extension activities
- Integrated Rural Development Programme(IRDP)
- Save the Soil Campaign
- Professor Chair in Agricultural Universities & Cooperative Institutions.

3. Objectives of the Study:

- 1) To analyze the technological Inventions for agricultural development in India.
- 2) To analyze the financial performance of IFFCO.
- 3) To Study the Production and Sales performance of IFFCO
- 4) To identify how utilizing ICT technology is an impetus and commitment role in agriculture bringing to the next generation.

4. Research Methodology: The study is based on a descriptive research method. The Data collected for the preparation of the Research study is based on secondary data, which is collected from IFFCO websites, Annual reports, IFFCO press releases, Receipts and disbursement and Balance sheet of IFFCO, recent trends based on newspaper articles, NCUI websites.

5. Functions of IFFCO

- ✓ Production and distribution of fertilizers to farmers across India
- ✓ Marketing of Agricultural inputs such as seeds, pesticides, and micro-nutrients to farmers.

- ✓ To conduct Rural development programs such as education, healthcare, and skill development for farmers and their families.
- ✓ IFFCO initiated Agriculture Research and Development investment for innovating new and better products for farmers.
- ✓ Boosting the economy and social development of rural areas by ensuring they get paid handsomely.

6. Financial Performance and Highlights:

Table-1

IFFCO FINANCIAL HIGHLIGHTS & PERFORMANCE (in Crores)					
YEAR	2018-19	2019-20	2020-21	2021-22	2022-23
SALES	14,039.41	14,896.63	15,250.58	15,037.31	17,933.34
SUBSIDY	13,812.33	14,515.81	12,586.28	25,134.36	42,390.66
TURNOVER	27,851.74	29,412.44	27,836.86	40,171.67	60,324.00
OTHER REVENUES	694.30	629.78	818.18	1,726.55	2,665.76
TOTAL INCOME	28,546.04	30,042.22	28,655.04	62,989.76	62,989.76
COST OF SALES	25,893.83	27,178.86	25,048.59	38,424.24	57,527.27
PROFIT BEFORE DEPRECIATION, INTEREST AND TAX (PBDIT)	25,893.83	2,863.36	3,606.45	3,473.98	5,462.40
PROFIT BEFORE TAX	1,158.23	1,280.43	2,369.78	2,500.98	4,106.81
TAX	316.65	275.87	615.89	617.21	1,054.08
PROFIT AFTER TAX	841.58	1,004.56	1,753.89	1,883.77	3,052.73
DIVIDEND	99.06	125.49	125.35	126.69	122.53
COOPERATIVE EDUCATION FUND	1.62	2.05	3.04	3.84	10.53
DONATIONS	1.00	1.00	1.00	1.00	1.00
RETAINED PROFIT	739.90	876.02	1,624.50	1,752.25	2,918.67
NET PROFIT	161.58	204.56	303.89	383.77	1,052.73

Source: IFFCO Annual Report 2018 - 2023

The above table depicts the Subsidy issued for the farmers and affiliated cooperatives are more than that as compared to Sales over the year. It mainly

shows that IFFCO concentrates on farmer's concessions for agricultural growth. Profit after tax in the year 2022-23 is 3052.73 Cr Rupees which compared to the previous year 2021-22, Profit increased 61%. The Actual tax paid is calculated as Profit before tax minus Profit after tax. Hence, 1054.08 Cr Rupees IFFCO paid the highest tax payer to India in the Cooperative sector. In the year 2021, IFFCO got the highest taxpayer award from the Customs Department.

Table-2**Production and sales performance (Rs in crores)**

YEAR	2018-19	2019-20	2020-21	2021-22	2022-23
TOTAL PRODUCTION (in Lakh MT)	81.49 (85.23)	91.42 (95.62)	89.58 (93.69)	87.03 (91.03)	95.61 (100)
TOTAL SALES (in Lakh MT)	115 (89.84)	133 (103.91)	136 (106.25)	123.51 (96.49)	128 (100)
UREA (in Lakh MT)	45.62 (93.48)	48.75 (99.90)	46.75 (95.80)	43.61 (89.36)	48.8 (100)
NPK/DAP (in Lakh MT)	35.87 (76.63)	42.67 (91.16)	42.83 (91.50)	43.42 (92.76)	46.81 (100)

Source: IFFCO Annual Report 2018–2023

The above table shows the overall annual production and total sales position. It's mainly contributing to Urea and NPK/DAP sales. During the year 2020-21, 136 LMT sales i.e. 103.91% increased sales as compared to the previous years. NPK/DAP fertilizer concentrates rapid growth over the years.



Source: IFFCO Annual Report 2018–2023

Table-3

SALE OF NANO UREA (LAKH BOTTLES)			
YEAR	DOMESTIC	INTERNATIONAL	TOTAL
2021-22	212.13	3.06	215.19
2022-23	325.34	1.19	326.53
% CHANGE	(+) 53.37	(-) 61.11	+) 51.74

Source: IFFCO Annual Report 2018 – 2023

The above table shows the Sale of Nano Urea, commencing business in the year 2021 through inventions. However, Domestic Sales growth is in progress. While International sales are in a negative response. IFFCO more concentrates on International sales by promoting marketing strategies.

7. Diversified activities of Selected unit.

1. IFFCO Tokio General Insurance Company Limited - Incorporated in the year 2000. The joint venture between IFFCO and Tokio Marine Group. Which is one of the largest insurance groups in Japan. IFFCO holds 51 percent of the company and the remaining 49 percent is held by Tokio Marine Group.

2. IFFCO E-Bazar Limited - Wholly owned by IFFCO. The full commercial operations started in April 2016. The main objective is to provide a modern retail experience to Indian farmers by delivering agricultural inputs & other services under one roof.

3. IFFCO Kisan SEZ Limited - IKSEZ is a wholly owned subsidiary of IFFCO and is based on a multi-product Special Economic Zone. It is spread across 2,777 acres in Nellore, Andhra Pradesh, and has a well-developed infrastructure for setting up industrial units with the availability of power, water, internal and peripheral roads, street lighting, office space, security, and other amenities.

4. IFFCO Kisan Sanchar Limited - IFFCO collaborated with the giants Bharti Airtel and Star Global Resources Ltd. and created IFFCO Kisan Suvidha Limited (Formerly IFFCO Kisan Sanchar Limited). This association commenced making the farmer's life better through a wide array of solutions.

We are geared to revolutionize the agricultural world with technology while uplifting farmers with our services like mobile advisory, IFFCO Kisan Agriculture App, and Kisan call center.

5. IFFCO-MC Crop Science Private Limited - IFFCO-MC Crop Science Pvt. Ltd. (IFFCO-MC) was incorporated on 28th August 2015 as a joint venture between Indian Farmers Fertiliser Cooperative Limited (IFFCO) and Mitsubishi Corporation, Japan with equity holding in the ratio of 51:49 respectively. The unique business model of the Company is farmer-centric and transparent wherein IFFCO-MC products are available to farmers at the printed MRP which is distinctly in variance with the industry practice.

6. IFFCO Kisan Finance Limited - promoted by IFFCO, is a Non-Banking Financial Company (NBFC), focused on meeting the financial needs of farmers ethically manner. IFFCO holds 36.33% shareholding in the company. Moreover, Rs. 546 C disbursed loans to farmers.

7. National Commodity & Derivatives Exchange Ltd - National Commodity & Derivatives Exchange Limited (NCDEX/ the Exchange) is a professionally managed online, commodity Exchange, with diverse product offerings setting a benchmark for both agriculture and non-agri commodities derivatives segment. NCDEX was incorporated on April 23 2003 as a public limited company and commenced operations on December 15, 2003. Recognized stock exchange under the Securities Contracts (Regulation) Act, 1956 under the regulation of the Securities and Exchange Board of India (SEBI).

8. Sikkim IFFCO Organics Limited - IFFCO joint venture Sikkim State. We are proud of the fact that we are India's first joint venture with a state government. The shareholding pattern of this JV between IFFCO and the State of Sikkim is 51:49. formed with the idea of providing agro-inputs and promoting Organic Farming across India in general and Sikkim to be specific.CN IFFCO Private Limited

9. CN IFFCO PVT LTD - IFFCO and Congelados de Navarra (CN Corp.), a leading frozen food company in Spain, established a joint venture called "CN IFFCO Private Ltd" in February 2019, to set up a vegetable processing. The project is in Samrala, located in the Ludhiana district of Punjab. IFFCO holds a 40% Shareholding Company.

10. Aquaagri Processing Private Ltd - IFFCO E-Bazar took a major stake of 50% shareholder in the company. AquaAgri was created with the motive of restoring nature and promoting seaweed cultivation. Through our endeavors, we facilitate cultivators in the coastal communities to gain the benefits from seaweed cultivation.

11. IFFCO Kisan Logistics Limited - Wholly owned by IFFCO 100% shareholding. It operates the captive barge jetty at Kandla, Gujarat as a Special Purpose Vehicle (SPV) for handling raw materials and finished products of fertilizers. The Company handled 4.13 MT of cargo and earned a Profit of Rs.8072 C in the F.Y 2022-23

12. Indian Potash Limited - IPL is primarily engaged in the trading of imported Pottasic, Phosphatic, and Nitrogenous Fertilizers in India. IFFCO holds 34% of the shareholding IPL Company. IFFCO's demand for Potash for its complex fertilizer plant at Kandla is also sourced from IPL.

13. New Age Financial Advisory Private Limited - IFFCO and Brahaspati Merchandise Pvt. Ltd has jointly incorporated New Age Financial Advisory Pvt. Ltd. (NAFA) to undertake financial advisory and investment banking business in India. IFFCO shareholding 50% business. NAFA subscribed to 9.99% of APT Biotech Limited engaged in the production of Bio-fertilizers.

8. IFFCO Global Footprints - It has expanded its presence in the global market through strategic acquisitions and joint ventures. Today IFFCO is present in 5 Countries including India, Oman, UAE, Jordan and Senegal, Egypt. IFFCO has made strategic investments in several joint ventures.

1. Jordan India Fertiliser Company (JIFCO) - IFFCO and Jordan Phosphates Mines Company Ltd (JPMC), Jordan had formed a Limited Liability Joint Venture Company, namely Jordan India Fertiliser Company (JIFCO) on March 6, 2008 in Amman, Jordan under the 'Free Zone' system to set up a Phosphoric Acid Plant of 1500 tonnes per day P₂O₅ capacity at Eshidiya in Jordan. IFFCO and JPMC together will buy back the entire production of Phosphoric Acid from the Plant. The project cost is estimated at around US\$ 767 million.

2. Oman India Fertiliser Company (OMIFCO) - Oman India Fertiliser Company SAOC (OMIFCO) has been established, as the result of an initiative by the Government of Oman & republic of India, to construct, own, and operate a modern world-scale two-train ammonia-urea fertilizer manufacturing plant at the Sur Industrial Estate in the Sultanate of Oman.

3. Kisan International Trading FZE (KIT) - functioning in Dubai on April 17, 2005. Wholly Owned Subsidiary of Indian Farmers Fertiliser Cooperative Limited (IFFCO), Commodities traded like Rock Phosphate, Ammonia, Phosphoric Acid, Urea, Sulphur, NP fertilizers etc.,

4. Industries Chimiques du Senegal (ICS) - Indorama Corporation and IFFCO's joint venture business. IFFCO's shareholding is 6.78%. In the year of 1980s, ICS played an important role in the feedstock security of Phosphoric Acid for IFFCO's Kandla Plant.

5. Indo-Egyptian Fertiliser Company (IEFCO) - IFFCO joint venture company with an Egyptian Fertilizer company called the Indo-Egyptian Fertilizer Company (IEFC). The project configuration consists of a phosphoric acid plant with a capacity of 1,500 tons per day (100% P₂O₅) and a sulfuric acid plant with a capacity of 4,500 tons per day, including power generation and related offsite facilities.

9. Innovations and best practices of IFFCO:

Selected IFFCO associates & subsidiaries will be placed on Innovation activities. They are as follows

1. Discovering Nano Urea:

IFFCO Nano Urea is a nanotechnology-based revolutionary Agri-input that provides nitrogen to plants. Scientist at Nano Biotechnology Research Centre (NBRC) at Gujarat, Kalol plant. Nano Urea is a sustainable option for farmers towards smart agriculture and combat climate change. It is developed and patented by IFFCO. These fulfill the plant's nutrient requirement as a fertilizer since Nano Urea is bioavailable to plants because of its desired particle size of about 20-50 nm and more surface area (10,000 times over 1mm urea prill). Hence, Nano Urea increases its availability to crops by more than 80% resulting in higher Nutrient use efficiency.

2. Green SIM:

Green SIM is an initiative by the Indian Farmers Fertilisers Cooperative Ltd (IFFCO) in association with Bharati Airtel and the International Crops Research Institute for the Semi-arid Tropics (ICRISAT) to provide information on agriculture to farmers. The venture consists of low-cost mobile phones that are distributed through IFFCO centers bundled with Airtel SIM cards. These

“Green SIM cards” entitle farmers to receive from IFFCO everyday on issues such as mandi prices, farming techniques, weather forecasts, dairy farming, animal husbandry, rural health initiatives, and fertilizer availability and send 5 voice messages per day.

3. Discovering Nano DAP:

The Indian Farmers Fertilizer Cooperative Limited (IFFCO) has pioneered the world’s first commercial release of Nano Di-Ammonia Phosphate (DAP). It comprises 8% nitrogen and 16% phosphorus, whereas the conventional granular bag contains 18% nitrogen and 46% phosphorus. A 500 ml bottle of Nano-DAP equals a 50kg bag of regular DAP. The Nano-DAP bottle costs ₹600 (without subsidy), while the conventional DAP is priced at ₹1,350 per bag (including fertilizer subsidy).

10. Experiencing ICT in Agriculture:

1. IFFCO Chatbot – AI-driven Oracle Cloud technology:

IFFCO empowering the farmers with Oracle Chatbot. It helps the Customers, visitors, and stakeholders to ask whatever questions related to IFFCO. The voice-based enabled Chatbot is the 1st of its kind in the agriculture industry in India. It aims to provide Chatbot services to all 35,000 Cooperative Societies and nearly 5Crores of farmers to solve queries.

2. IFFCO TOKIO General Insurance Company Limited:

IFFCO-TOKIO was established as a joint Venture Company in the year 2000 with Tokio Marine Asia. Corporate office located at Gurugram, Haryana. It holds 51% and 49% shareholding. The company completed 22 years of successful operations and is amongst the top private General Insurance Companies in India. Some of the services offer 1.Buy a Policy 2. Policy renewal 3. Policy Copy download and 4. Online Payments.

Crop Insurance - Pradhan Mantri Fasal Bima Yojana (PMFBY) provides insurance coverage to all farmers for their crops as notified by the State Governments against financial loss and adverse weather conditions, natural calamities, yield losses, Post-harvest losses, etc.,

“Sankat Haran Bima Yojana”- IFFCO has formulated new services of benefit to farmers by providing free insurance cover to farmers along with each bag of IFFCO fertilizer purchased.

3. IFFCO e-Bazaar – Digital Market Platform:

IFFCO e-Bazar started operations in April 2016 to provide a modern retail experience in rural India to deliver Agri inputs and Services to the farming community under one roof. Agri e-commerce store platform “www.iffcobazar.in” is this platform initiative of ‘Digital India’. The products being made available to the farmers are seeds, fertilizers, bio-fertilizers, pesticides, biostimulants, sprayers, and other Agri implements. There are 12 different languages available.

4. IFFCO Kisan Suvidha Limited:

Activity in Rural Telecom related Services. The corporate office is located in New Delhi. IFFCO, together with Telecom major Bharti Airtel and Star Global Resources Ltd., has promoted IFFCO Kisan Suvidha Ltd (IFFCO Kisan) with a Shareholding of 72.99%. The company has been serving farmers across India through Agri-advisory services and BIS certified “IFFCO KISAN” cattle feed brand with a pan-India distribution Network. The Mobile application provides the latest Agri-technology, weather information, farm-based satellite services, and buyer-seller module with the latest mandi prices. Over 4 Million farmers connected and 2 Million Subscribers in rural India.

Kisan Call Centre - The services were re-launched on 1st May 2014 by IFFCO Kisan Sanchar Limited. This initiative was aimed at answering farmer's queries on a telephone call in their language/dialect. Call Handling by Farm Tele-Advisors (FTAs) at Kisan Call Centres. The FTAs, although experts themselves, are considered as Level 1 (L1) support of Kisan Call Centres.

5. IFFCO NCDEX - National Commodity & Derivatives Exchange Limited (NCDEX) is a nation-level public limited company incorporated on April 23, 2003, under the Companies Act 1956 under the regulations of SEBI technology-driven online commodity.

11. Recent trends:

1. IFFCO becomes 1st Cooperative train “Green Pilots” to boost the use of drones in the fertilizer sector ten days workshops to train farmers for spraying fertilizers and insecticides over the crops. 36 participants including farmers, entrepreneurs, FPOs, Cooperatives, etc. from the states of Delhi (1), Haryana

(15), Uttar Pradesh (11), and Gujarat (9) completed the training course. Use of drone technology 15-minute flight of an agri-drone can spray in an area of 2.5acres.

2. IFFCO started exporting the World's 1st Nano urea invented and manufactured indigenously in India to the US.

Awards and Accolades:

- ❖ IFFCO Ranked “No.1 Cooperative” in the line-up of 300 top Cooperatives of the world in the 2022 edition of the Annual World Cooperative Monitor (WCM) report. The report is published by the International Cooperative Alliance (ICA).

Awards for Innovation and Creativity:

- ❖ FAI Award for Transfer of Improved Farm Technologies- Karnataka State Marketing Office (Winner)
- ❖ FAI Award for Production Promotion and Marketing of bio-fertilizers/Organic Fertilizers /City Compost- Uttar Pradesh State Marketing Office (Winner)
- ❖ FAI Award for Promotion and Marketing of Micronutrients in India for 2021-22- Chhattisgarh State Marketing Office (Joint Winner)

12. Conclusion:

India is the 3rd largest distributor of fertilizer worldwide globally. Moreover, 54 Corporate compete at the National Level, and International 300 or more International Corporate compete in the Fertilizer business. IFFCO ranked 1st cooperative among 300 cooperatives in the world and stepped up to 65th position in overall turnover ranking 125th financial position reported by the 10th Annual World Cooperative Monitor (WCM) year 2021. It signifies IFFCO contributing GDP and economic growth of the Nation. This study concluded that the overall position of IFFCO is very stable and has a major focus on efficient supply chain management and technology. The above institution doing several diversified activities for the sustainable development of the institution and the farmers and also doing new innovative practices for the support of farmer's agricultural and economic development. IFFCO adopted ICT technology as impetus and commitment role in agriculture to the next generation.

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1. Introduction:

Agriculture and allied activities are characterised by the declining profitability and rising risk associated with and that is being considered as some of the major challenges in improving the livelihoods of the rural population in India. Mainly small and marginal farmers constitute the largest group of cultivators (about 85%) in Indian agriculture; having smaller than or about two hectares of operational holdings. The vulnerability to these households is largely attributed to lower scale of operation, lack of information, poor access to cheaper credit, weak participation in the consumers' markets and consequently, exploitation by intermediaries in procuring inputs and marketing of their produce.

A variety of approaches have emerged over the years to address these problems. Agricultural cooperatives, formed under the Co-operative Credit Societies Act, 1904, have long been the dominant form of farmer collectives; however, the experience with cooperatives point to many limitations, except few successful exceptions in the field of dairy farming. In recent years, collectivization of producers, especially small and marginal farmers, into producer organizations has emerged as one of the most effective pathways to address the many challenges of agriculture. Hence, on the recommendations of a high-power committee, the Government of India introduced the Companies (Amendment) Act 2002, which paved the way to Producer Companies (PCs).

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2. Agrarian crisis:

The inability of small farmers to negotiate with the market has been portrayed in several media including the movies. With declining state support on remunerative prices, extended at best to only a few crops and largely controlled by large farmers, and ‘restricted’ markets and opportunities for farmers to get a better share of the consumer rupee in most commodities, farmers continue to lose the battle with the market. They have not been witnessing increased incomes and this has been reflected in the large number of farmer agitations across the country from 2017 onwards. Paradoxically, the sector as a whole has witnessed growth with India leading the world in production of many commodities and the increased revenues of agri-business companies or more recently agri-tech and other agriculture start-ups. India’s tryst with cooperatives is over a century old, with initiatives led by both state and civil society. The celebrated work of Shah on catalysing cooperation and making farmers’ cooperatives work has enlisted design principles for better functioning of cooperatives. The external environment has changed significantly with the liberalisation of the Indian economy in the 1990s and the consequent overall decline in the functioning of healthy producer collectives. While cooperatives have succeeded well in Gujarat (milk) and Maharashtra (sugar), their functioning in most states have been less than impressive and farmers’ collectives have been embroiled in regional politics and excessive state interference. Following the recommendations of the Alagh Committee (1999), which was set up with a mandate to frame a legislation that would ‘accommodate the spirit of a cooperative with the operational flexibility of a private company,’

Farmer Producer Companies (FPCs) have emerged as an alternative to state-sponsored or state-led cooperatives since 2003.

3. Solution discovered:

FPOs have been an integral part of discussions in several forums on agrarian and rural studies, rain-fed areas, apart from initiatives at the national and state level to deliberate on appropriate policy and ecosystem support for FPOs. These are reflective of the shift in understanding of farming or agriculture as a ‘value-led enterprise’, as articulated in the Doubling Farmers’ Income (DFI) report, whose last volume was released in early 2019. Accordingly, farmers are to be empowered with improved market linkages and FPOs seem integral

to this strategy. The set of 72 articles reviewed until March 2018 show that the literature has a mix of case studies (28), conceptual reviews (23), empirical analysis (10), policy briefs/guidelines (4), research reports and round table discussion reports (7). Currently, farmer organisations in India have various legal forms—as a Producer Company (under Companies Act, 2013), as a Cooperative (under Cooperative Societies Act), as a Non-profit entity (under Companies Act, 2013) or as a Trust (under Indian Trusts Act, 1882). Many of the new generation collectives have focused on crop-based agriculture.

4. Genesis of FPOs:

The Primary Agricultural Cooperative Society (PACS) is one of the oldest forms of producer organizations in India. In addition to these, there are many other forms of producer organizations catering to specific or multiple function(s) such as self-help groups (SHGs), Federation of SHGs, Common Interest Groups (CIGs), Joint Liability Groups (JLGs), Farmers' Club etc. However, failure of collectivization of farmers through co-operatives in agriculture sector, growing agrarian crisis and simultaneously rapid growth in private sector through corporatization led to beginning of new thinking of bringing best attributes of co-operatives and the corporates together. In the year 2000, the concept of producer companies was recommended by a committee chaired by Prof. Y. K. Alagh.

To deal with the numerous uncertainties in agriculture among smallholder farmers, organizing farmers to form producer cooperatives, collectives, and producer organizations have been well understood globally and in India for a long time. Producer organizations in the form of producer cooperatives exist for over a hundred years in India. The Primary Agricultural Cooperative Society (PACS) is one of the oldest forms of producer organizations in India. In addition to the cooperatives, there have been many other forms of producer organizations catering to specific or multiple function(s) such as self-help groups (SHGs), Federation of SHGs, Common Interest Groups (CIGs), Joint Liability Groups (JLGs), Farmers Club, Producer Organizations, and Producer Companies.

5. Government Initiatives:

The Government of India, the National Bank for Agriculture and Rural Development (NABARD), Ministry of Rural Development, Ministry of

Agriculture, Small Farmer Agribusiness Consortium (SFAC), and state governments have been investing largely on these organizations in the recent decades. One of the earliest large-scale efforts to form producer companies was undertaken by the District Poverty Initiative Project, Madhya Pradesh partly supported by the World Bank. It organized farmers on single commodities to bargain better in markets, local seed production and serve as an external agricultural input delivery entity of the government.

A Producer Organization is a generic name that represents different forms of community organizations/enterprises such as large cooperatives, PACS, SHG, Federation of SHGs, CIG, Farmers Club, Producer Company, etc. However, a Producer Company is a special case of producer enterprise that is registered under Section IXA of the Companies Act, 1956.

In the recent years, the international development agencies such as World Bank, IFAD, FAO, UNDP, Rabo Bank, Pro CIF, Techno serve, ICCo, etc have been gradually investing in farmer producer organizations especially in the producer companies. Some of the Indian Banks such as Yes Bank and HDFC have given special focus to support FPOs. Many of the Non- Government Organizations (NGOs) in the country had been facilitating formation of producer organizations and in the recent years and some of them have graduated to facilitate formation of producer companies on behalf of the state governments and development funding agencies.

NABARD with a nation-wide district level reach through its state level regional offices across the country has once again been given the mandate by the government to establish producer organisations with viable organizational structure and governance. companies in the country. From its own internal resources, NABARD started to support producer organizations through its Producer Organization Development Fund (PODF). Subsequently with the Government of India special fund, viz., PRODUCE Fund it has been systematically deepened its support to establish producer companies in the country on a mission mode. Additionally, it has created separate independent units viz., NABKISAN and NABFINS for providing credit support to FPOs.

DEAR-NABARD supported an action research project during 2009-11 on building a community based, community paced, community owned and community managed enterprise system. The focus of which was to find the optimal design positions of key variables; viz., size, scope, technology,

management and ownership for a producer organization to be sustainable. Subsequently, it supported an all India study during 2011-13 on the status and performance of producer companies. Based on these research studies, various design and policy issues of community enterprise systems, collectives, producer companies and farmer producer organizations have been published as articles, manuals and reports since 2010.

There have been many rounds of discussions by Agricultural Finance Corporation, Access Development Services, IIM Bangalore, IRMA, NABARD, SFAC, FAO, and NRLM at different levels to diagnose the issues and resolve them corrective policy measures to make producer organizations viable in the short term and sustainable in the long term. Please see the link for reports: <http://www.ximb.ac.in/rtd> The focus of these previous RTDs have been to deal with the operational issues especially hurdles of registration, working capital requirements, need for professional managers, legal provisions to make producer companies equivalent to cooperatives, tax provision to reduce the cost burden on farmer members and producer companies in their infancy. The key issues had been fairly identified, agreed upon by the various stakeholders as well as represented at the highest level of policy making. These key issues were also briefly discussed and ratified in this round table discussion and a summary of the same is included as part of this round table.

Currently, there are more than 10,000 FPOs in India registered under different legal structure. Majority of them are registered as a company under the Companies Act, while second largest category are under Cooperative Societies Act of respective states. Some are also in the form of Society or Trust. The Producer Companies are designed on ‘mutual assistance principles’ and ‘patronage’ basis, to bring together desirable aspects of the cooperative and corporate sectors for the benefit of primary producers, especially small and marginal farmers. In several case studies/literatures, success stories have been documented demonstrating the benefits realized by the farmer-members from the FPOs in the form of reduced input cost and market linkage as aggregation allows better bargaining power for the FPOs. Advisory services and value addition services offered by the FPOs have also benefitted the farmers in timely decision making. However, there exists many challenges for the long-term growth and viability of FPOs or when the scale of operation increases. Majority of the FPOs are new and small in terms of number of

producer-members and their own equity capital, which makes them less attractive for funding by the financing agencies. Lack of understanding about business plan, lack of funding support for many FPOs, less importance towards hiring of skilled persons with managerial abilities, poor governance structure, difficulty in regulatory compliances, and marketing difficulties need proper attention to provide enabling ecosystem for the FPOs.

6. FPOs as a Subject of Research:

Nayak (2010, 2012, 2013, and 2014) discusses five internal organization design variables viz., Size, Scope, Technology, Management, and Ownership. There are indeed positive winds of change among organizations in the industrial production and service sectors across the world that show gradual change in their internal organizational design from long term sustainability perspective (Nayak& Panda 2016). In the primary agricultural sector; depending on the context of the producers in terms of socio-economic conditions, time, geography and product-service basket, optimal design of a farmer producer organization (FPO) may be arrived; where optimal point for different variables may lie at different points of the spectrum under different contexts.

Literature on design thinking on cooperatives in India is not only about twenty-five years old; it is quite scant. Catalyzing cooperation: design of self-organizing organization by Shah (1996) seems to be the only significant work on the subject during these years. The model of an ideal cooperative is built on three key dimensions viz., Member-User, Governance Structure and Operating Systems. This has also been referred to as key areas of research in the 2015 IRMA producer collectives workshop. This book also refers to four design principles viz., choose an appropriate purpose central to members, get the right operating system, ensure patronage cohesive governance, and secure, retain and continually nurture member allegiance. These design principles were also reiterated by Raju, K V during the online discussions (Jan 2016). Raju emphasizes the member focus in design in terms of member interest, participation and ownership in the producer collective for it to be a 'going on' concern.

All working in the domain of cooperatives, collectives, and community enterprise systems, experience the significance of member interest and their participation for success of these organizations. Among the various

development schemes whether for drought proofing, poverty alleviation or overall improvement in quality of life implemented by the government in India, we find that the strongest factor for sustainability is the factor of people's participation (Nayak, 2010). Participation can be further reduced to frequency of interactions in terms of business transactions and social transactions for a producer organization as seen in successful dairy cooperatives or in successful SHGs in the Indian experience. Nayak (2014) highlights the significance of designing farmer producer organization that facilitates greater frequency of interactions among members. Further, based on action research on recreating sustainable community enterprise system Nayak (2013, 2014) defines "Sustainability is a dynamic state of deep relationship and love among all the actors and actants in a micro ecosystem; arising out of deep sense among the actors on the reality of inter-connectedness and of the need for inter- dependence among the various constituents in the ecosystem"

The foundation of people participation in any cooperative or producer organization however seem to rest on 'TRUST' or 'SOCIAL CAPITAL' This is a common sense and has been brought out in a variety of literature across the world. From game theoretic analysis in competitive environment, to evolutionary biologists' perspective on survival of life on earth, to theological studies; all reiterate the significance of trust. Ostrom, Elinor (1990) in *Governing the Commons* and Nayak (2009, 2012, 2013, 2014, 2015) on recreating sustainable community enterprise systems emphasize the criticality of this dimension for self-governing cooperative systems. Kenmore, Peter (RTD 2016) reiterated the need to build trust given the high uncertainties among smallholder farmers across the world. Nayak, Sashmi (RTD 2016) and Peppin S (RTD 2016) reverberated the significance of trust in people's organization.

Therefore the key issue for designing a sustainable cooperative or a farmer producer organization appears to be: How should we design the organization for building and retaining 'trust' or 'social capital' within the organization and outside the organization? Accordingly, the design issues of the national round table discussion were chosen. During the online discussions (Dec 2015 – Jan 2016) on the subject, Dutta, Shankar and Kanitkar, Ajit with their respective field experiences reiterated the need to discuss design issues of producer companies. Venkataramanan, R, Mukhopadhyay, Khan, A R and Ashok, M V

had already extended their keen interest on the proposal to discuss the design issues with various stakeholders viz., scholars, practitioners and policy executives in India. Bhanwala, Harsh was particularly keen on understanding the optimal membership and cluster size for farmer producer organizations. Indeed, the best thing that this round table discussion provided was to get the pioneers viz., Tushaar Shah, Yoginder Singh Alagh, A Vaidynathan, Vijay Vyas, many leading scholars and practitioners to share their thoughts and perspectives on the issues of designing sustainable farmer producer organizations in India.

Although there has been very scant literature on design issues of cooperative in India until around the end of the twentieth century; the interest and literature on cooperative design has picked up momentum from early 2000s. Interestingly, from the beginning of the 21st century, there has been a global resurgence in research on cooperative logic, social enterprises and solidarity economy after almost three hundred years of competitive logic of industrial revolution that show signs of global un-sustainability. viz., size of membership and geographic cluster, scope of product basket, services, and activities base, technology of agricultural production and processing, management systems, processes, and governance mechanisms, and ownership structure and sense of belongingness, market landscape, institutional architecture of cooperatives/farmer producer companies in a district, and convergence of various development schemes in a Gram Panchayat level cooperative/farmer producer company.

Among these eight design issues, the issues of ownership and management have been discussed the most during the last about two decades. The issue of Ownership in farmer producer companies was taken up by the Alagh Committee in 2001. The dysfunctional managerial interference from local politicians in dairy cooperatives in Gujarat was the stimulant to the legislation of cooperatives as a producer company under section IXA of Companies Act, 1956 with equity participation of only producer members along with the voting rights of one member one vote policy. Producers can include farmers, fishermen, forest produce gatherers, artisan and craftspeople who engage directly with nature to produce or gather something. In his writings, Alagh (2015) and (RTD, 2016) however laments that the spirit of ownership by producers and interest of producer members as the basis of producer companies seems to get diluted over the years. He expressed concern over the

attempt of private enterprise to use these people's cooperatives for their own profit sake. However, the nature of ownership that farmer producer cooperative/companies are to be owned by the producers only for better cooperative action is indeed clear among the various stakeholders.

Among several suggestions, on issues of management, Vaidynathan (2012) recommends creating sanctions and incentives for implementing some key elements of reform and open up spaces for exploring healthier forms and practices, such as (a) Training of personnel (b) Motivate and facilitate efficient and well managed societies to introduce structural and managerial reforms to become models of true cooperatives that promote thrift, manage loans and repayments efficiently, and use surpluses for the collective benefit of their members.

Though diversity is basis of sustainability as the scope to agriculture and small holder farmers, the logic of diversity is usually thrown out of window when it comes producer organization that are primarily to serve the interest of the producers. The success of Amul has been reiterated to suggest single product strategy for producer cooperative or company. Yes, the three principles of member interest, operating systems, governance structure (Shah, 196, 2015) are well worked for Amul and its financial performance has been good since its inception. However, recent data (Nayak 2014) shows that nearly 10% of members have withdrawn from Amul. More than 70% of members have less than five cows, and Amul has been procuring milk from non-members outside Gujarat but the milk collected seem to be reported as contribution from members. Nayak (2013) however argues that 'economies of scope' or 'diversity of product basket' is the only way to design for high interactions and higher number of business transactions among members for non-dairy, non-fishery based agriculture based producer organization.

Drawing on the experiences of several producer organizations across the country, Nayak (2011) argues that limiting market landscape is important for nascent FPOs including producer companies and cooperatives to reduce the characteristic distance between small and marginal producers and market to be able to reduce transaction costs and increase net income to the producers. Nayak (2011) also argues that for long term sustainability, an FPO should not break the basic principle of sticking to the interest of the producer members and change itself to be a mere product company arising out of distant commodity market compulsions.

Nayak (2013, 2014) suggests three-tier architecture of producer companies at GP level that engages in multiple produce-service activities and basic value addition and local marketing. Block level PC to engage in higher value addition of perishable produce and district level PC to undertake marketing of surplus produce from the district to large commodity buyers. This will also help adopt a saturation strategy of GP level FPOs in a block and district subsequently. Mohanty, Amulya (RTD 2016) and Mondal, Ashis (RTD 2016) suggest the need to aggregate FPOs at some higher level at block level and district level for scale and better negotiating power.

Lack of convergence in the development schemes appears to have been the main cause of ineffective coordination and poor efficiency in people's institutions, collectives and producer organizations. Convergence of resources at the GP level FPO and district level saturation model in the three-tier institutional architecture may be a way out from present chakravayuh for smallholder farmers and Indian agriculture. Contradictions in individual policies of the government(s) if any could be resolved and the wise decisions can be adopted if people were to choose at the grass root if these programmes were converged into a GP level FPO.

7. Way Forward:

Structural weakness of Indian agriculture in terms of size and scale of operations was rectified in earlier years by formation of farmers cooperatives in the areas of finance, marketing and other farm services. However due to the inherent incompatibility between the social and political system in the country has posed several challenges on the performance of these cooperative/collective farmer organisations. Changing ecosystem and development pathways has provided the scope to organize farmers into an innovative structure with inclusive nature of governance. Concerted efforts by both the government and research institutes to support the FPOs by earthing out the pertinent issues about the FPOs on organizational efficiency, financing, governance and market outreach (including foreign trade) and seeking the best course of action would help in development of agricultural sector.

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An analysis of the contribution of the Central Cooperative Bank towards the growth and empowerment of self- help groups in the Periyanaicken Palayam Block, Coimbatore District

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Abstract:

This study aims to analyze the significant role played by the Central Cooperative Bank in promoting and developing Self Help Groups (SHGs) with in the Periyanaicken Palayam Block of Coimbatore District. SHGs have emerged as vital entities in empowering individuals, particularly women, by fostering financial inclusion, skill development, and social cohesion. The Central Cooperative Bank's support of these SHGs is essential in nurturing their growth and enhancing their capabilities. The research investigates the various financial and non-financial services provided by the Central Cooperative Bank to the SHGs. It examines the impact of these services on the SHGs' economic sustainability, empowerment of members, and their ability to engage in entrepreneurial activities. Additionally, the study delves into the challenges faced by the SHGs and the Bank's efforts to address these obstacles effectively. The primary data collected from the members of SHGs and Bank records have also been collected to make a mixed-method approach to insights from interviews with SHG members and bank officials employed for comprehensive analysis. The findings highlight the crucial role of the Central

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Cooperative Bank in fostering a supportive ecosystem for SHGs, empowering local communities, and driving socio-economic development in the PeriyanaickenPalayam Block. Self Help Groups (SHGs) form the basic constituent unit of the microfinance movement in India. SHGs play a crucial role in the social and economic empowerment of poor people in rural areas. SHGs provide enough opportunities for the overall development of women in rural areas. The study reveals that the SHG activities helped build self-confidence, self-independence, and social welfare among the group members. The Central Cooperative Bank has an important role for the developed SHG members, particularly in rural areas.

Keywords:

Self-Help Groups, District Central Cooperative Bank, Business of SHGs, Empowerment.

1. Introduction:

Self Help Groups (SHGs) are informal and small associations comprised mainly of economically disadvantaged individuals who come together to utilize the economic benefits provided by the Government through cooperation and individual responsibility. India has a significant number of SHGs, with approximately 70 Lakhs of them across the country, and Tamil Nadu alone has 21454 SHGs, ranking second in the nation. The SHG-Bank Linkage Programme (SBLP), launched by NABARD in 1992, plays a crucial role in this regard. The involvement of SHGs with banks has proven beneficial in overcoming the challenge of high transaction costs associated with providing credit to the poor. By sharing some banking responsibilities, such as loan appraisal, follow-up, and recovery, with the members, SHGs facilitate easier access to credit for the underprivileged. Additionally, the voluntary nature of the association and the strong rapport among members allow them to bypass hurdles like collateral requirements, excessive documentation, and physical distance, which typically hinder formal financial institutions' ability to serve the poor. SHGs consist of like-minded individuals with a common objective of achieving socio-economic development. These groups have a membership ranging from 12 to 25 members, primarily composed of the impoverished population. The members are usually at least 18 years old and preferably married. To ensure broad representation, only one member of a family can enroll in the SHG, and they must be a President. In summary, Self Help Groups are grassroots-level organizations that empower the disadvantaged and foster financial inclusion by working in collaboration with

banks, offering a viable solution to the challenges faced by the formal financial system in serving the economically vulnerable sections of society.

2. The Significance of Self-Help Groups (SHGs):

Self-Help Groups (SHGs) play a vital role in instilling confidence among rural women who lack a regular source of income and heavily rely on their husbands to meet their basic needs. These SHGs act as a catalyst for mobilizing financial resources among their members, leading to collective socio-economic development. Moreover, they foster a culture of savings and thrift, enabling the efficient utilization of local resources. By harnessing the individual skills of its members for the greater good of the group, SHGs contribute to the overall socio-economic progress of the village. Additionally, participation in SHGs cultivates a sense of responsibility and leadership among its members.

SHGs in Coimbatore District

S.NO	Location	Number of SHGs
1.	Anaimalai	170
2.	Annur	134
3.	Karamadai	259
4.	Kinathukadavu	123
5.	Madukkarai	70
6.	Periyanakeyanpalayam	159
7.	Pollachi North	200
8.	Pollachi South	52
9.	S.S Kulam	35
10.	Sultanpet	187
11.	Sulur	113
12.	Thondamuthur	67
13.	Valparai	30
Total		1599

3. Statement of the problem:

The present study is designed to delve into the personal profiles of women participants within Self Help Groups (SHGs) operating in the study area. This

investigation aims to understand key demographic characteristics, such as age, educational background, occupation, and household composition, which can she delight on the diverse backgrounds and circumstances of the SHG members. Moreover, there search will focus on exploring the socio-economic benefits that these women derive from their participation in the selected SHGs. By analyzing changes in their income levels, livelihood opportunities, and overall well-being, the study seeks to gauge the extent to which SHGs have contributed to their socio-economic empowerment and enhanced quality of life. Furthermore, the study will closely examine the role played by cooperative banks in the promotion and support of SHGs. It will explore the mechanisms through which cooperative banks facilitate the formation and growth of SHGs, provide financial resources, and offer technical assistance. Additionally, the research will investigate how cooperative banks encourage and strengthen accountability among SHG members regarding financial transactions and decision-making processes.

4. Objectives of the study:

- To examine the demographic characteristics and background of female participants engaged in Self Help Groups (SHGs) with in the research region.
- To investigate the socio-economic advantages and positive outcomes experienced JJBYS members actively involved in the chosen Self Help Groups.
- To assess and detail the active contributions of cooperative banks in fostering the establishment and growth of SHGs, while also promoting transparency and responsibility among the SHG members.

5. Methodology:

The current research is a combination of both primary and secondary data. To collect primary data, a comprehensive interview schedule was formulated, enabling the collection of essential information. The survey sampling technique was adopted, selecting ten SHGs operating under the control of the Cooperative Bank in Periyanaickenpalayam Block as the study sample. A total of 50 SHG members were interviewed to investigate the advantageous services provided by the Cooperative Bank in fostering the growth and

development of the SHGs. In addition to the primary data, secondary data was obtained from the Periyanaickenpalayam Central Cooperative Bank Branch, which contains valuable information regarding the members of the SHG groups. This combined approach of using primary and secondary data aims to offer comprehensive and in-depth understanding of the role played by the Cooperative Bank in supporting and empowering the SHGs in the study area.

6. Analysis of Data:

Analysis and Interpretation:

Table-I
Personal Profile of Respondents

S. No	Characteristics	No. of Respondents	Percentage
1.	Age(in Years)		
1.	20-30Years	9	18
2.	30-40Years	12	24
3.	40-50Years	21	42
4.	Above50Years	8	16
2.	Community		
1.	BC	21	42
2.	MBC	14	28
3.	SC/ST	10	20
4.	Others	5	10
3.	Education Qualifications		
1.	None	3	6
2.	School	12	24
3.	Secondary	20	40
4.	College	15	30
4.	Marital Status		
1.	Married	44	88
2.	Unmarried	6	12

Source of Data: Data Collected from Self Help Group Members

The table presents the personal profile of respondents based on various characteristics. The details collected from a sample of individuals who are part of Self Help Groups (SHGs) sponsored by Cooperative Bank in the Periyanaickenpalayam Block of Coimbatore District.

Age (in Years): The majority of the respondents (42%) fall in the age group of 40-50 years, indicating that this age bracket is well-represented among the SHG members. However, the sample also includes a significant number of respondents in the age group of 30-40years (24%) and above50 years (16%).The data analysis was conducted on a group of 10 self-help group members sponsored by Cooperative Bank in the Periyanaickenpalayam block of Coimbatore District. A total of 50SHG members were randomly selected and interviewed using a structured interview schedule. The study exclusively focused on female participants.

Community: The majority of the respondents (42%) belong to the BC category, followed by MBC (28%) and SC/ST (20%) categories. This suggests that BCs are more actively involved in the SHGs compared to other communities.

Educational Qualifications: The data shows that a significant portion of the respondents (40%) have completed their secondary education, and 30% have attended college. This indicates that a considerable number of SHG members have received at least a basic level of formal education.

Marital Status: The vast majority of the respondents (88%) are married, while a smaller proportion (12%) are unmarried. This suggests that the SHGs primarily comprise married individuals.

Table-2

Socio and Economic Profile of the Respondents

S. No.	Characteristics	No. of Respondents	Percentage
1. Occupation			
1.	Self-Employed	14	28
2.	Employees	4	8
3.	Housewife	25	50
4.	Entrepreneur	7	14

S. No.	Characteristics	No. of Respondents	Percentage
2. Monthly Income of the Family			
1.	Below 25,000	8	16
2.	25,000-50,000	4	48
3.	50,000-75,000	2	24
4.	Above 75,000	6	12
3. Monthly Expenses of the Family			
1.	Below 20,000	6	12
2.	20,000-30,000	8	16
3.	30,000-40,000	15	30
4.	Above 40,000	21	42
4. Monthly Savings of Family			
1.	Below 10,000	31	62
2.	10,000-20,000	8	16
3.	20,000-30,000	5	10
4.	Above 30,000	6	12
5. Family Size			
1.	1-3 Members	10	20
2.	3-5 Members	26	52
3.	Above 5 members	14	28
6. Type of Family			
1.	Nuclear	38	76
2.	Joint	12	24
7. Social Participate			
1.	Panchayat	8	16
2.	Cooperatives	12	24
3.	Politics	9	18
4.	Nil	21	42

Source of Data: Data Collected from Self Help Group Members

The table provides the socio-economic profile of the respondents who are members of Self Help Groups (SHGs). The data is collected from a sample of individuals from the Periyanaickenpalayam Block in Coimbatore District.

Occupation: The majority of the respondents (50%) are housewives, indicating that SHGs are significantly contributing to the empowerment and involvement of homemakers. A not able percentage of respondents are self-employed (28%), and a smaller proportion are entrepreneurs (14%).

Monthly Income of the Family: A significant portion of the families (48%) falls in the income bracket of 25,000 to 50,000, suggesting that a considerable number of SHG members belong to the middle-income category. There are also some families (12%) with a higher income above 75,000.

Monthly Expenses of the Family: A significant proportion of families (42%) have monthly expenses above 40,000, indicating that they may have higher financial commitments. On the other hand, there are also families (12%) with relatively lower expenses below 20,000.

Monthly Savings of Family: The majority of the families (62%) have relatively lower monthly savings, below 10,000. This could indicate financial challenges and limited disposable income. However, it's encouraging to see that some families (12%) manage to save higher amounts above 30,000 per month.

Family Size: Most families (52%) have a family size of 3-5 members, which is typical for an average-sized family. There are also families (28%) with more than 5 members, which might indicate larger extended families.

Type of Family: The majority of the families (76%) are nuclear families, while a smaller proportion (24%) are joint families. This suggests that the nuclear family system is more prevalent among the SHG members.

Social Participation: The data shows that a considerable number of respondents (42%) do not participate in any of the mentioned social activities. However, some respondents are actively engaged in Panchayat activities (16%), Cooperatives (24%), and Politics (18%), which indicates their involvement in community affairs.

7. Socio Empowerment of SHG members:

Table-3

SHG's Group Activities

S. No.	Characteristics	No. of Respondents	Percentage
1.	Garments Manufacturing	5	10
2.	Craft Works and Gift Items	21	42
3.	Goat Form	4	8
4.	Canteen	9	18
5.	Beauty Parlour	11	22
	Total	50	100

Source of Data: Data Collected from Self Help Group Members

The table illustrates the various group activities undertaken by the members of the Self-Help Group (SHG). It shows that 42 percent of the respondents engage in craftwork and gift items, while 22 percent of the respondents are involved in beauty parlor services. Only 8 percent of the respondents are engaged in the goat farming business.

8. Empowerment of Women through SHG's:

Self Help Groups (SHGs) play a significant role in empowering women. One of the key benefits is the enhancement of members' confidence and self-esteem. Through SHGs, women gain valuable knowledge about banking and financial matters, enabling them to become more financially literate and independent. Moreover, these groups equip them to tackle new challenges that arise in their lives. All the 10 SHGs surveyed in this study reported that their members experienced increased confidence through their participation. The mutual financial support and camaraderie among the members foster the social and economic empowerment of women in the village.

Table-4
Social benefits derived by women SHG's

S. No.	Social Benefits	Yes	No
1.	Source of Income	50	0
2.	Social Belongingness	35	15
3.	Banking Knowledge	40	10
4.	Decision-Making Skills	35	15
5.	Self Confidence	45	5
6.	Self-dependence	40	10

Source of Data: Data Collected from Self Help Group Members

The table presents the responses of Self Help Group (SHG) members regarding the social benefits they have gained from their participation in the groups. The data is based on the number of respondents who answered "Yes" or "No" to each of the social benefits.

Source of Income: 100% of the respondents (50 out of 50) confirmed that SHGs have provided them with a source of income.

Social Belongingness: 70% of the respondents (35 out of 50) expressed that they feel a sense of social belongingness due to their involvement in SHGs. 30% of the respondents (15 out of 50) stated that they do not feel a sense of social belongingness through SHGs.

Banking Knowledge: 80% of the respondents (40 out of 50) reported that they have gained banking knowledge as a result of their participation in SHGs. 20% of the respondents (10 out of 50) stated that they have not gained banking knowledge through SHGs.

Decision-Making Skills: 70% of the respondents (35 out of 50) indicated that their decision-making skills have improved through their involvement in SHGs. 30% of the respondents (15 out of 50) mentioned that their decision-making skills have not improved through SHGs.

Self-Confidence: 90% of the respondents (45 out of 50) reported that their self-confidence has increased due to their participation in SHGs. 10% of the respondents (5 out of 50) stated that their self-confidence has not improved through SHGs.

Self-Dependence: 80% of the respondents (40 out of 50) expressed that they have become more self-dependent through their involvement in SHGs. 20% of the respondents (10 out of 50) mentioned that their self-dependence has not improved through SHGs.

9. Role of Central Cooperative Bank in Developing SHGs.:

The Central Cooperative Bank plays a crucial role in the development and promotion of Self Help Groups (SHGs). One of its primary functions is to encourage the formation of SHGs and instill a culture of saving among their members. Over time, the bank facilitates access to loans for these groups to support various entrepreneurial and business endeavors. The table below provides an overview of the loans offered by the Central Cooperative Bank to the members of Self Help Groups.

Table-5
Bank Linkage with SHG's

S.No	Characteristics	No. of Respondents	Percentage
1. Savings amount paid by Members			
1.	100-200	22	44
2.	200-300	13	26
3.	300-400	5	10
4.	Above 400	10	20
2. Period of Amount Collected			
1.	Weekly Once	40	80
2.	15Days Once	7	14
3.	Monthly Once	3	6
3. Amount Paid to Bank			
1.	Below 5000	11	22
2.	5000-10000	26	52
3.	10000-15000	13	26

S.No	Characteristics	No. of Respondents	Percentage
4. Period of Amount Paid to Bank			
1.	Monthly Once	50	100
2.	2 Months Once	-	-
5. Bank Approach to Avail of Loan			
1.	Public Bank	4	8
2.	Private Bank	2	4
3.	Cooperative Bank	44	88
6. Loan Availed from Central Cooperative Bank			
1.	Below 1Lakhs	12	24
2.	1Lakhs-2Lakhs	23	46
3.	2Lakhs-3Lakhs	8	16
4.	Above 3Lakhs	7	14

Source of Data: Data Collected from Self Help Group Members

Savings Amount Paid by Members:

Period of Amount Collected:

From the study, it was found that a significant majority of respondents, representing 80% of the total, respondent have deposited their savings every week. Additionally, 14% of the participants follow-weekly savings routine, depositing money once every 15 days. Another 6% of respondents prefer a monthly approach, saving their money once a month. This data highlights the diverse saving habits of the participants, with a majority leaning towards more frequent and consistent contributions to their savings accounts, while others choose less frequent intervals for their financial planning.

Amount Paid to Bank:

The respondents, representing 22% of the total, make savings deposits below 5000 units, indicating a more conservative approach to saving. On the other hand, a majority of 52% of participants fall within the range of paying an amount between 5000 and 10000 units, demonstrating a moderately sized

group that maintains a balanced approach to their savings. Further more 26% of the respondents contribute an amount ranging between 10000 and 15000 units, suggesting a relatively smaller yet substantial group of individuals who are more committed to saving higher sums. The data showcases a diverse range of saving habits among the respondents, reflecting varying financial priorities and strategies.

Period of Amount Paid to Bank:

100% of respondents pay the amount to the bank monthly once. No respondents reported paying the amount every 2 months.

Bank Approach to Avail of Loan:

The data revealed that a small portion of respondents, comprising 8% of the total, sought to avail of loans from Public Banks. Similarly, an even smaller percentage of 4% of participants opted for loans from Private Banks. On the contrary, a significant majority of 88% of respondents chose to approach Cooperative Banks to obtain their loans. This finding indicates a prevalent preference among the surveyed individuals for Cooperative Banks, potentially due to factors such as better terms, personalized services, or community-based trust. The data underscores the diverse choices made by respondents when it comes to seeking financial assistance, with Cooperative Banks emerging as the most popular option for obtaining loans.

Loan Availed from Central Cooperative Bank:

The survey findings indicated that a considerable number of respondents, accounting for 24% of the total, opted for loans below 1 lakh, reflecting a significant portion of individuals seeking relatively smaller loan amounts. Additionally, a substantial majority of 46% of participants availed of loans ranging from 1 lakh to 2 lakhs, highlighting a prevalent trend of borrowing within this mid-range bracket. Furthermore, 16% of respondents sought loans between 2 lakhs to 3 lakhs, representing a smaller but notable segment of borrowers requiring slightly higher amounts. Lastly, 14% of the surveyed individuals availed of loans above 3 lakhs, indicating a relatively smaller yet noteworthy group of individuals pursuing larger loan sums. The data showcases the diverse loan requirements of the respondents, with different segments of the population availing of loans at various levels, contributing to a comprehensive overview of borrowing patterns in the survey.

10. Role of Cooperative Bank's Satisfaction level of respondents:

Cooperative Banks play a crucial and active role in promoting Self Help Groups within the block. These banks provide essential guidance and supervision to the SHGs under their purview. The officials from cooperative banks regularly visit each group to monitor their activities, ensuring that the groups function effectively. Through this regular interaction and monitoring, the cooperative banks help instill a sense of responsibility among the members of the Self Help Groups. To assess the satisfaction level of group members regarding the services provided by cooperative banks, a study was conducted. The following table presents the satisfaction levels of the respondents.

Table-6

Levels of Satisfaction of SHGs with service provided by Central Cooperative Banks

S. No	List of Services	Satisfied	%	Dissatisfied	%
1.	Approach of Members	46	92	4	8
2.	Service rented by bank officials	41	82	9	18
3.	Loan Formalities	45	90	5	10
4.	Sanctioning Amount of Loan	44	88	6	12
5.	Rate of Interest	47	94	3	6
6.	Repayment Installment	42	84	9	16
7.	Mode of Repayment	39	78	11	22
8.	Terms and Conditions	48	96	2	4
9.	Corruption	38	76	12	24
10.	Timely Available of Additional Loan	48	96	2	4
11.	Penalty for Overdue	43	86	7	14
12.	Government Official Support	40	80	10	20
13.	Attitude of Employees	42	84	8	16

Source of Data: Data Collected from Self Help Group Members

The table represents the satisfaction levels of Self Help Groups (SHGs) with the services provided by Central Cooperative Banks. Each row in the table corresponds to a specific service, and the columns show the number of respondents who are either satisfied or dissatisfied, along with the percentage for each category.

Approach of Members:

The approach of members garnered a high level of satisfaction among 92% of the respondents, while 8% expressed their dissatisfaction with it.

Service Rendered by Bank Officials:

The service rendered by bank officials received favorable feedback from 82% of the respondents, indicating a significant level of satisfaction. However, 18% of the respondents expressed their dissatisfaction with the service provided by bank officials.

Loan Formalities:

The loan formalities proved to be satisfactory for the majority of respondents, as 90% expressed their contentment with the process. Nevertheless, 10% of the respondents reported dissatisfaction with the loan formalities, suggesting that there is room for improvement in this aspect of the lending process.

Sanctioning Amount of Loan:

The sanctioning amount of the loan received positive feedback from a significant portion of the respondents, with 88% expressing their satisfaction with the approved loan amount. However, 12% of the respondents expressed their dissatisfaction with the sanctioning amount, indicating that a portion of the borrowers may have expected or needed a higher loan amount. It may be worth exploring ways to address the concerns of the dissatisfied respondents and ensure that the loan amount meets the expectations and requirements of a broader customer base

Rate of Interest:

The rate of interest on the loans garnered a high level of satisfaction, with 94% of the respondents expressing contentment with the interest rates offered. However, a small proportion of the respondents, accounting for 6%, reported their dissatisfaction with the rate of interest. Addressing the concerns of the dissatisfied respondents and maintaining transparency in interest rate policies can be essential to ensure continued customer satisfaction and trust in the lending process.

Repayment Installment:

There payment installment process received positive feedback from a significant majority of the respondents, with 84% expressing their satisfaction

with the process. However, a notable 16% of the respondents reported their dissatisfaction with their payment installment process. Addressing the concerns of these dissatisfied respondents and potentially identifying areas of improvement can be crucial in enhancing overall customer experience and ensuring smoother and more convenient loan repayment procedures for all borrowers.

Mode of Repayment:

The mode of repayment garnered a satisfactory response from 78% of the respondents, indicating a significant majority expressed contentment with the available repayment options. However, a notable 22% of the respondents reported their dissatisfaction with the mode of repayment. It is essential for financial institutions to closely examine the reasons behind this dissatisfaction and explore ways to address their concerns. Offering a diverse range of flexible and user friendly repayment methods can help improve customer satisfaction and ensure that borrowers have convenient options to meet their loan obligations efficiently. By continuously seeking feedback and adapting to the evolving needs of their customers, financial institutions can enhance the overall repayment experience and build stronger relationships with their borrowers.

Terms and Conditions:

The terms and conditions of the loan received overwhelmingly positive feedback, with an impressive 96% of the respondents expressing satisfaction with the stated terms and conditions. However, a small but notable 4% of the respondents reported their dissatisfaction with the terms and conditions. It is crucial for the lending institution to carefully assess the concerns raised by these respondents and consider whether any adjustments or clarifications are needed to address potential ambiguities or issues. Clear and transparent communication of terms and conditions is vital to ensuring that borrowers fully understand their obligations and rights. By actively listening to customer feedback and making necessary improvements, the institution can further enhance customer satisfaction and foster a trusting and fruitful relationship with its clientele.

Corruption:

The absence of corruption received positive recognition from a majority of the respondents, with 76% expressing their satisfaction with the perceived lack of

corrupt practices. However, a significant 24% of the respondents reported their dissatisfaction, expressing concerns about the presence of corruption. Addressing these concerns is crucial to fostering an environment of trust, fairness, and integrity. Efforts to combat corruption, promote transparency, and implement effective anti-corruption measures can help ensure that the institution or organization operates ethically and responsibly. By actively working to eliminate corruption and establishing a culture of accountability and transparency, the institution can strive to meet the expectations of its stakeholders and build a reputation as a reliable and ethical entity.

Timely Availability of Additional Loan:

The timely availability of additional loans received overwhelmingly positive feedback with an impressive 96% of the respondents expressing satisfaction with the prompt access to further financial assistance. However, a small but notable 4% of the respondents reported their dissatisfaction with the timely availability of additional loans. Addressing the concerns of these dissatisfied respondents and exploring ways to streamline and expedite the loan processing and approval process can be instrumental in enhancing the overall customer experience. By ensuring quick and efficient loan disbursement, the institution can better cater to the diverse financial needs of its customers and strengthen their trust and loyalty. Continuous efforts to improve loan accessibility and responsiveness to customer demands can lead to a more robust and customer-centric financial service experience.

Penalty for Overdue:

The penalty for overdue payments garnered a favorable response from a significant majority of the respondents, with 86% expressing their satisfaction with the existing penalty system. However, a noteworthy 14% of the respondents reported their dissatisfaction with the penalty for overdue. Addressing the concerns raised by these respondents and reevaluating the penalty structure may be essential to strike a balance between incentivizing timely payments and understanding the challenges faced by borrowers. Implementing a penalty system that is fair, transparent, and takes into account individual circumstances can contribute to fostering a positive borrower-lender relationship. Engaging with customers to understand their concerns and working towards finding solutions that align with their needs can enhance overall satisfaction and compliance with the loan repayment process.

Government Official Support:

The government official support received positive feedback from 80% of the respondents, indicating a significant majority expressed satisfaction with the assistance provided. However, a notable 20% of the respondents reported their dissatisfaction with the government's official support. Addressing the concerns of these dissatisfied respondents is crucial to ensuring that government services are effective and responsive to the needs of the public. By actively seeking feedback, identifying areas for improvement, and implementing measures to enhance the quality and efficiency of support services, the government can work towards increasing overall satisfaction and trust among its citizens. Transparent and accountable governance, coupled with open channels of communication, can foster a constructive relationship between the government and its constituents, promoting a sense of collaboration and shared responsibility in achieving societal goals.

The attitude of Employees:

The attitude of bank employees received positive feedback from a significant majority of the respondents, with 84% expressing their satisfaction with the demeanor and conduct of the bank staff. However, a notable 16% of the respondents reported their dissatisfaction with the attitude of bank employees. Addressing the concerns raised by these dissatisfied respondents and investing in employee training and development can play a crucial role in improving customer interactions and overall service quality. By fostering a culture of customer-centricity and emphasizing the importance of courteous and respectful behavior, the bank can enhance customer satisfaction and loyalty. Regular feedback mechanisms and performance evaluations can also help identify areas for improvement and motivate employees to deliver exceptional service. Striving to maintain a positive and friendly atmosphere within the bank can contribute to building lasting relationships with customers and enhancing the bank's reputation in the financial industry.

11. Findings:

The following is the finding of the field survey on cooperative bank-sponsored SHGs at Periyanaickenpalayam Block in Coimbatore District

- The study reveals that, out of 50 members of SHG, a major proportion was female groups, 100 percent belongs to female groups.

- The majority 88 percent of the respondents were married, and only 12 percent of the respondents were unmarried.
- The occupation background of the SHG members reveals that majors are it, 50 percent of respondents are occupied, housewives. Only 8 percent of the respondents are occupied employees in private companies.
- Out of 50 members majority income belongs to Rs.25000 to Rs.50000. Only 16 percent of the members' monthly income was below Rs.20000.
- 42 percent of the respondents are doing business activities of craftwork and gift items, and only 8 percent of the respondents were doing goat form.
- The study reveals that SHG activities are motivates banking knowledge and helped them being self confidence and self-dependence.
- Bank linkage with SHGs, Majority of the group members paid to the bank monthly once, and 46 percent of the respondents availed of loans from Rs.1Lakh to Rs.2Lakhs.
- Concerning the services of the cooperative bank towards the SHG members, the study reveals that the majority of the members are satisfied with the services of the cooperative bank.
- The study shows that the cooperative bank sponsored SHG is functioning successfully. It has helped to a great extent the empowerment of women in different ways like social, economic, and political.

12. Conclusion

Self Help Groups (SHGs) are the foundational building blocks of India's microfinance movement, playing a vital role in empowering impoverished communities in rural regions. These groups offer significant opportunities for the holistic development of women residing in these areas. The research highlights that engagement in SHG activities contributes to the enhancement of self-confidence, self-reliance, and societal well-being among the members. Particularly in rural settings, the Central Cooperative Bank assumes a crucial role in supporting the progress of these empowered SHG members.

Assessing the impact of sustainable development goals on primary agricultural Cooperative Credit Societies in Dindigul district, Tamil Nadu

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Abstract:

Cooperatives are community-based autonomous societies that are member-owned, managed, and controlled. PACCS can potentially contribute to the Sustainable Development Goals (SDGs) at the micro level. This study explores the profound influence of SDGs on PACCS in Dindigul District, Tamil Nadu, and India. PACCS, pivotal in this context, provides multifaceted support to farmers, encompassing financial aid, marketing assistance, and community development initiatives. The study's objectives include an in-depth examination of the agricultural landscape, assessing the role of PACCS in addressing farmers' challenges, and evaluating PACCS activities' alignment with SDGs. A comprehensive methodology is employed with random sampling from Malayakoundanpatty PACS, Sengurichy PACS, Uluppakudi PACS, and Bodikamanvadi PACS. The study collects data from both primary and secondary sources, emphasizing members' perceptions to assess the sustainable development goals of PACCS services. The impact of SDGs on PACCS is scrutinized, considering their role in rural development, poverty alleviation, sustainable agriculture, financial inclusion, and social equality.

In conclusion, the study highlights the vital link between PACCS and SDGs in achieving global sustainability objectives. Policymakers and stakeholders are urged to collaborate in addressing challenges and implementing strategies that enhance the effectiveness of PACCS in contributing to sustainable development. The findings provide valuable insights for policymakers, researchers, and practitioners working towards the integration of SDGs into the fabric of agricultural cooperatives for lasting socio-economic and environmental benefits.

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Keywords:

Primary Agricultural Cooperative Credit Societies, Sustainable Development Goals, PACS-SDG

I. Introduction:

Cooperatives are community-based autonomous societies that are member-owned, managed, and controlled. Here, the Primary Agricultural Cooperative Credit Societies (PACCS) are the village-level institutions on which the cooperative structure is built. PACCS can potentially contribute to the Sustainable Development Goals (SDGs) at the micro level. This study explores the profound influence of SDGs on PACCS in Dindigul District, Tamil Nadu, and India. Dindigul District in Tamil Nadu, India, boasts a diverse agricultural landscape shaped by its geography, which includes plains, hills, and valleys within the Western Ghats. The region experiences a tropical climate with a significant reliance on monsoon rains for agricultural activities. The economy centers on cultivating crops such as paddy, millets, pulses, oilseeds, sugarcane, and cotton.

The district practices a mix of irrigated and rain-fed agriculture, utilizing infrastructure like dams for water-intensive crops. Livestock farming, including dairy and poultry, plays a vital role in farmers' livelihoods and the rural economy. Traditional and modern farming methods coexist, with an increasing integration of technology and current agricultural inputs.

However, Dindigul faces challenges typical of agricultural regions, including water scarcity, land degradation, and pest infestations. Farmers also grapple with issues related to market access and price fluctuations. Primary Agricultural Cooperative Credit Societies (PACCS) play a crucial role in addressing these challenges by providing financial support and services. These cooperatives facilitate credit, marketing, and input supply, contributing significantly to the overall development of the agricultural sector. Understanding this agricultural context is pivotal for evaluating the impact of Sustainable Development Goals (SDGs) on PACCS. It allows for a comprehensive assessment of how SDGs align with the unique needs and challenges faced by the local farming community in Dindigul District, providing valuable insights into the potential influence of these goals on the sustainable development of the region's agriculture.

II. Primary Agricultural Cooperative Credit Societies (PACCS):

Primary Agricultural Cooperative Credit Societies (PACCS) offer multifaceted support to farmers, contributing significantly to their well-being and the overall development of the agricultural sector. Here is a summary of the key aspects:

1. **Financial Support:** PACCS provides farmers timely and affordable credit, enabling investments in crucial agricultural inputs. This support enhances cash flow management and boosts overall productivity.
2. **Reducing Dependency on Informal Lenders:** By offering formal financial services, PACCS helps farmers reduce reliance on informal moneylenders, protecting them from exploitative interest rates and promoting financial inclusion.
3. **Pooling of Resources:** Operating on a cooperative model, PACCS allows farmers to pool resources, creating a collective entity with increased financial strength and bargaining power in the market.
4. **Marketing Support:** Some PACCS assist farmers in marketing their produce at fair prices, ensuring reasonable returns, and promoting sustainable agricultural practices.
5. **Input Supply:** PACCS facilitates the supply of agricultural inputs through bulk purchasing and distribution, negotiating better deals for members, and reducing overall production costs.
6. **Community Development:** PACCS contributes to the socio-economic development of rural communities by fostering a sense of community and cooperation. The cooperative nature encourages mutual support among farmers.
7. **Government Support Channels:** As intermediaries, PACCS assists farmers in accessing government subsidies, grants, and other support for agricultural development.
8. **Risk Mitigation:** Through cooperative structures, PACCS provides a platform for farmers to collectively address risks, including natural disasters, market fluctuations, and crop failures.

- 9. Promoting Sustainable Practices:** PACCS is vital in promoting sustainable and environmentally friendly agricultural practices, aligning with global efforts toward agricultural sustainability.

PACCS is a comprehensive support system for farmers, addressing financial, social, and environmental aspects while contributing to the overall resilience and sustainability of the agricultural sector and rural communities.

III. Objectives of the Study:

- ❖ To examine and understand the agricultural landscape in the Dindigul District.
- ❖ To assess the multifaceted role of Primary Agricultural Cooperative Credit Societies (PACCS) in addressing challenges farmers face in Dindigul District.
- ❖ To evaluate the alignment of PACCS activities with Sustainable Development Goals (SDGs) and their impact on addressing global sustainability challenges.

IV. Methodology of the Study:

A study has been conducted in the Dindigul district of Tamil Nadu, and sustainable development goals services of PACS are provided to members. The Study examined the sustainable development goals and benefits of these PACS and the quality of services PACS delivers to its members. Using random sampling, Malayakoundanpatty PACS, Sengurichy PACS, Uluppakudi PACS, and Bodikamanvadi PACS were analyzed. Members' perceptions of services were collected to assess the sustainable development goals of services provided by PACS. For this purpose, a sample of 40 members was selected, i.e., ten members from each PACS. Necessary information was collected from primary and secondary sources.

V. The impact of the Sustainable Development Goals (SDGs) on PACCS:

The alignment of Primary Agricultural Cooperative Credit Societies (PACCS) with Sustainable Development Goals (SDGs) is crucial for addressing global sustainability challenges. SDGs, encompassing poverty, hunger, and environmental degradation, serve as a comprehensive framework for evaluating the impact on PACCS, ensuring alignment with international sustainability agendas.

PACCS's role in rural development and poverty alleviation is pivotal, directly linking to SDGs focused on improving the livelihoods of marginalized communities. Assessing the impact aids in measuring progress toward poverty reduction and enhancing rural development. In agricultural sustainability, SDGs related to responsible consumption and environmental conservation find relevance in PACCS supporting farmers. The assessment ensures that agricultural practices promoted by PACCS align with sustainable development principles.

Emphasizing financial inclusion and economic growth, SDGs recognize the importance of PACCS in providing financial services to farmers. Evaluating the impact gauges the effectiveness of financial inclusion initiatives in rural areas. PACCS's contribution to social and gender equality aligns with SDGs targeting these aspects. The assessment helps identify disparities, ensuring the benefits reach all community members, regardless of gender.

SDGs emphasize efficient resource utilization, and PACCS, through bulk purchasing and sustainable practices, influences resource use efficiency. Assessing impact ensures alignment with responsible consumption and production patterns. Government policy alignment is critical, and evaluating the effect ensures that PACCS harmonizes with national development policies and strategies aligned with SDGs.

An assessment provides insights into the challenges PACCS faces, highlighting improvement opportunities. This information is essential for refining strategies and policies to enhance the effectiveness of both PACCS and SDGs. Regular monitoring and evaluation allow for ongoing progress assessment, facilitating adaptation of strategies and interventions as needed to achieve SDGs through PACCS activities. Contributing to global reporting and accountability mechanisms associated with SDGs, assessing the impact allows stakeholders to understand the significant contributions made by agricultural cooperatives to sustainable development on a broader scale.

VI. Challenges and overcome the challenges:

Primary Agricultural Cooperative Credit Societies (PACCS) face various challenges and overcome them to align with sustainable development goals (SDGs). Here are some common challenges:

1. **Limited Financial Resources:** Bodikamanvadi PACCS does not have sufficient financial resources to implement sustainable practices and initiatives. Limited funds hinder their ability to invest in technologies or infrastructure aligned with the SDGs. Bodikamanvadi PACCS could explore ways to rise additional funding through partnerships, grants, or government support to improve the financial capacity of members. It can implement sustainable practices and initiatives aligned with the SDGs.
2. **Lack of Technological Infrastructure:** Adequate technology infrastructure is a challenge. The SDGs often call for modern technologies for efficient and sustainable agricultural practices. The lack of such infrastructure hinders Malayakoundanpatty PACCS's adoption of these technologies. Facilitates adoption of modern agricultural technologies by providing training and resources. Collaborate with technology providers, NGOs, or government agencies to introduce cost-effective and user-friendly solutions.
3. **Insufficient Awareness and Education:** A significant barrier is a lack of awareness and education among Sengurichy PACCS members about the importance and benefits of aligning with the SDGs. A clear understanding is critical to practical implementation. Sengurichy PACCS can conduct awareness campaigns and educational programs for members on the importance and benefits of aligning with the SDGs. This includes workshops, training sessions, and dissemination of information through various channels.
4. **Market Access Challenges:** Uluppakudi PACCS faces difficulties providing farmers access to broader markets. The SDGs emphasize fair trade and market access, and overcoming these challenges is essential to farmers' economic sustainability. Establish and strengthen market linkages for farmers associated with Uluppakudi PACCS. It can partner with agricultural marketing agencies' e-commerce platforms or form farmer-producer organizations to improve market access and ensure fair trade practices.
5. **Climate Change and Environmental Hazards:** The impact of climate change and environmental hazards poses a threat to agricultural activities. Malayakauntanpatty PACCS struggles to align with SDGs related to environmental protection and climate action in the face of unpredictable

weather and natural disasters. Implementing climate-resilient agrarian practices, training farmers on climate-smart agricultural techniques, developing contingency plans to address climate change-related challenges, and promoting sustainable resource management.

6. **Dependency on Traditional Practices:** Resistance to change and dependency on traditional farming practices can impede alignment with SDGs that promote modern, sustainable, and environmentally friendly agricultural techniques. Advocate for the adoption of sustainable farming practices within the community. Provide incentives for eco-friendly initiatives and showcase success stories to encourage others to follow suit.
7. **Policy and Regulatory Barriers:** Existing policies and regulations are not conducive to implementing sustainable practices. Sengurichy PACCS faces obstacles or lacks the necessary policy support to align with specific SDGs.
8. **Social and Cultural Factors:** Social norms and cultural factors affect Uluppakudi PACCS farmers' willingness to adopt new practices. Overcoming deeply entrenched traditions or beliefs that counter the SDGs is challenging. Engage with policymakers and advocate for supportive policies and regulations that promote sustainable practices. Collaborate with agriculture authorities to create an enabling environment for Uluppakudi PACCS aligned with the SDGs. Ensure that standard methods and benefits are inclusive and accessible to all community members, regardless of gender or social status. It can promote gender equality in decision-making processes and the distribution of resources.
9. **Limited Access to Training and Capacity Building:** Inadequate access to training programs and capacity-building initiatives hinders the adoption of sustainable practices. Malayakauntanpatti PACCS faces challenges in educating farmers about new and innovative farming techniques. Strengthen training and capacity-building programs for Malayakauntanpatti PACCS members and farmers. Providing workshops, training sessions, and extension services to improve knowledge and skills related to sustainable agricultural practices. Recognize and respect local cultures and traditions while introducing new practices. Engage the community in decision-making processes and ensure the adopted initiatives resonate with their values.

- 10. Complexity of SDG Targets:** The SDGs' multifaceted nature, including economic, social, and environmental aspects, is more relevant to the Bodikamanvadi PACCS. Integrating these diverse goals into their operations requires a comprehensive and well-coordinated effort. Develop a long-term strategic plan that aligns with the SDGs and includes specific, measurable, achievable, relevant, and time-bound (SMART) goals. Continually review and adapt the project based on evolving needs and challenges.
- 11. Economic Pressures:** Economic pressures like fluctuating market prices and unpredictable farmers' income streams hamper Sengurichy PACCS's ability to invest in sustainable practices. Short-term financial concerns take precedence over long-term sustainability goals. Foster partnerships with NGOs, research institutes, and other stakeholders working on sustainable development. Cooperation can provide additional expertise, resources, and support to PACCS initiatives aligned with the SDGs.

Addressing these obstacles requires a collaborative effort involving governments, non-governmental organizations, and the local communities to create an enabling environment for PACCS to align with and contribute to SDGs effectively.

VII. Recommendations:

- 1. Policy Alignment:** Ensure that national and regional policies explicitly align with SDGs, emphasizing the incorporation of sustainable practices in agricultural and rural development policies.
- 2. Incentive Structures:** Introduce financial incentives such as subsidies, grants, or preferential loan terms to motivate PACCS actively contributing to SDGs, particularly in sustainable agriculture, financial inclusion, and community development.
- 3. Capacity Building:** Invest in capacity-building programs for PACCS members, focusing on sustainable agricultural practices, financial literacy, and effective cooperative governance to empower alignment with SDGs.
- 4. Financial Support:** Establish dedicated funds for PACCS aligned with SDGs, offering low-interest loans, grants, or subsidies to facilitate the

adoption of sustainable practices and foster rural community development.

5. **Partnerships with NGOs and International Organizations:** Foster strategic partnerships between PACCS and NGOs or international agencies with expertise in sustainable development, leveraging additional resources, know-how, and support for SDG-aligned initiatives.
6. **Monitoring and Reporting Mechanisms:** Implement robust monitoring and reporting mechanisms, including reporting frameworks, regular audits, and technology utilization, to track and ensure transparent progress in aligning PACCS with SDGs.
7. **Policy Dialogue and Consultation:** Engage in ongoing policy dialogues with PACCS representatives, agricultural experts, and sustainable development practitioners to better understand specific challenges and needs, facilitating effective integration of SDGs.
8. **Promotion of Climate-Resilient Agriculture:** Introduce policies promoting climate-resilient agricultural practices, supporting PACCS initiatives related to water conservation, organic farming, and other climate-smart practices aligned with SDGs.
9. **Digital Infrastructure and Innovation:** Invest in digital infrastructure and innovation to enhance PACCS' technological capabilities, including the development of digital platforms for financial transactions, market linkages, and information dissemination on sustainable practices.
10. **Tailored Support Programs:** Design flexible support programs catering to the unique needs of PACCS, allowing them to choose initiatives aligned with specific SDGs based on their community and agricultural context.
11. **Gender Mainstreaming:** Integrate gender mainstreaming policies to ensure equal participation of women in PACCS activities, promoting women's leadership roles, providing gender-sensitive training, and addressing barriers to participation.
12. **Education and Awareness Campaigns:** Launch education and awareness campaigns to inform PACCS members about the significance of SDGs and how their activities contribute to broader sustainable

development objectives, enhancing grassroots understanding and commitment.

- 13. Advisory Services:** Establish advisory services or extension programs to provide ongoing guidance to PACCS on integrating SDGs, offering technical expertise, facilitating knowledge transfer, and assisting in overcoming challenges.

VIII. Conclusion:

In the agricultural landscape of Dindigul District, Tamil Nadu, the diverse geography, tropical climate, and reliance on monsoon rains shape the cultivation of crops like paddy, millets, pulses, oilseeds, sugarcane, and cotton. Facing challenges such as water scarcity and market fluctuations, the district relies on a mix of traditional and modern farming practices. Livestock farming, including dairy and poultry, is integral, and the Primary Agricultural Cooperative Credit Societies (PACCS) play a crucial role in providing financial support to farmers. PACCS support farmers through financial services, reducing reliance on informal lenders, pooling resources, offering marketing support, facilitating input supply, and engaging in capacity-building activities. They contribute to community development, government support channels, risk mitigation, and the promotion of sustainable practices.

The assessment of Sustainable Development Goals (SDGs) on PACCS is crucial due to their alignment with global sustainability agendas. PACCS directly contribute to SDGs related to rural development, poverty alleviation, agricultural sustainability, financial inclusion, social and gender equality, efficient resource utilization, and more. This alignment ensures progress towards broader international sustainability objectives. Challenges faced by PACCS in aligning with SDGs include limited financial resources, lack of technological infrastructure, insufficient awareness, market access challenges, climate change risks, resistance to change, policy barriers, social and cultural factors, limited access to training, economic pressures, and the complexity of SDG targets.

To overcome these challenges, recommendations include policy alignment, incentive structures, capacity building, financial support, partnerships with NGOs, monitoring mechanisms, policy dialogues, promotion of climate-resilient agriculture, digital infrastructure investment, tailored support

programs, gender mainstreaming, education campaigns, and advisory services. In conclusion, the integration of SDGs into PACCS is vital for addressing global sustainability challenges, and overcoming obstacles requires collaborative efforts and strategic initiatives. Policymakers must ensure policy alignment and provide support mechanisms, while PACCS should focus on capacity building, financial support, and sustainable practices to enhance their impact on local communities and contribute significantly to achieving SDGs.

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Health cooperatives towards achieving health and wellbeing under SDG

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Abstract:

Good health is one of the humanity's most valued assets. Healthy people do the most relevant activities in their lives like growing up, learning, working, raising a family, contributing to the community etc. At global level, health has been a key issue strengthening universal peace, eradicating poverty and hunger, achieving gender equality and ensuring that no one is left behind. Thus, SDG 3 is right at the centre of the sustainable development. Cooperative organisations have a key role to play in facilitating Sustainable Development Goals (SDGs). The primary objective of the paper, is to explain how the various principles of cooperation are well suited towards achieving the SDG. In addition, this paper also highlights achievements of the health cooperative in few states of India. This paper also highlights the benefits and challenges faced by health cooperatives in achieving SDG. Cooperative actors are particularly well placed to facilitate action in this regard at various levels, in specific features including the values of democracy and solidarity, as well as the principles of cooperation among cooperatives and concern for community.

Key words:

Health, health cooperative, sustainable development goals, democracy, solidarity.

I. Introduction:

Cooperatives are well thought-out to be the best organizational intervention to overcome the socio-economic barriers in the development process. Cooperative organisations, as value and principle based, people centred

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businesses, have a growing role to play in facilitating present and future SDG implementation and growth. The principles of cooperation are well suited to achieve the SDG. After explaining the theoretical links between cooperative values and principles and featured SDGs, it is proposed to discuss the role of health cooperative in relation to the SDGs. Finally, through analysis of local cooperatives at the grassroots level, it is demonstrated that the major role that these cooperatives have been playing to foster sustainable development towards health. It is concluded that the cooperatives are particularly well placed to facilitate action at various levels, due to the specific features of the cooperative model, namely the values of democracy and solidarity, as well as the principles of cooperation among the cooperatives and concern for community. A strong partnership between and within cooperative organisations can be instrumental in improving the emerging role for the cooperative movement as a pivotal actor in SDG implementation in relation to health and wellbeing.

II Understanding health care cooperatives:

Health cooperatives are essentially organisations that group together users living in a geographical area or a community with the aim of managing their members health care provision. Health cooperative movement is an international reality, with a presence in numerous countries in different forms but always with one shared goal: to improve citizens' health and health care professionals working conditions.¹

According to ICA and B20 figures, some 100 million households worldwide enjoy access to health care thanks to cooperatives. The presence of this enterprise model has been confirmed within the health systems of 76 countries, registering more than 3,300 health cooperatives with an overall turnover of 15 billion dollars. These figures include organisations with a range of origins and structures, whether doctor cooperatives, cooperatives managing hospitals and health care facilities and institutions dedicated to disease prevention, health promotion and staff and patient training. They also include cooperatives dedicated to the distribution of pharmaceutical products and those providing health insurance². Irrespective of the form employed, all healthcare cooperatives typically have one shared goal: to bring together

¹ (Health cooperatives : a reliable enterprise model for health and wellbeing, 2018)

² (Health cooperatives : a reliable enterprise model for health and wellbeing)

health professionals and users so as to reconcile misalignments between health care supply and demand. They generally aim to engage all stakeholders involved in healthcare, to jointly manage costs and risks and to achieve the utmost quality in care provision.

III Cooperative model well suited to sustainable development:

As key stakeholders such as the United Nations, the International Labour Organisation (ILO) and the International Co-operative Alliance have argued, that the cooperative model is very well placed to address the challenges posed by transitions to sustainability, including those such as poverty, gender inequality or economic and social exclusion. Three main lines of thought can support this argument. Firstly, the original cooperative values and principles stand in a close and harmonious relation to the aims and objectives set out in the 17 SDGs and 169 indicators. Second, in a similar way, cooperatives can act along what Simel Esim, Manager of the Cooperatives Unit at the ILO in Geneva, has termed as ‘triple-bottom line’: as social organisations, environmental actors, and economic actors, cooperatives often meet these goals simultaneously.³ Third and in addition to the triple bottom line, cooperatives also address challenges of governance, by fostering member economic participation and facilitating education and training, the ways in which they can solve common problems and enable people to take charge of their own development. In the following brief theoretical section, this paper first, outlines the cooperative values and principles that are deeply interlinked with the SDGs, before establishing the interrelation of the triple bottom line to the sustainable development goals, providing a useful starting point to support concrete examples of cooperatives’ contributions to the SDGs subsequently outlined in the Paper.

IV The cooperative values and principles: adopted for sustainable Development:

What makes the cooperative model well suited to sustainable development? The first clear relation is at the very root of the definition provided by the International Co-operative Alliance, which defines a cooperative 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.’⁴

³ (Jeffrey Moxom, 2022)

⁴ (International cooperative Alliance, 2015)

A key component implicit is that in their very DNA, cooperatives meet a diversified set of needs, which go beyond profit generation or shareholder return. The wide range of needs identified, whilst not specifically clarifying an environmental aim in this case, continues to acknowledge that people, in order to voluntarily achieve well-being, require more than simple economic well-being. The emphasis on the commonalities suggests that one's need does not necessarily lead to the detriment of another, and links strongly to the cooperative value of solidarity.

The cooperative movement has indeed considered the role of environmental protection as having an implicit recognition within its values and principles. The most recent addition to the cooperative principles, 'Concern for community', was adopted at the Manchester Congress in September 1995, and included strong debate over the links between the cooperative movement and environmental protection.⁵ The principle reads; "While focusing on member needs, cooperatives work for the sustainable development of their communities..." Cooperatives, therefore, have a tangible relation to the communities within which they are based.

In addition, two more features that solidify the case for sustainability include cooperative longevity (permanence and resistance to short-termism) and cooperation among cooperatives. With respect to longevity, permanence is a concept that links to the discussion of concern for community – as cooperatives are not driven to pack up and move to an alternative location in times of economic hardship.⁶ Though recent critiques of larger cooperatives (such as Mondragon) have focused on the case of expansionism and non-member subsidiaries, it is indeed clear that cooperatives have a strong resilience in the face of economic crisis. Moreover, cooperation among cooperatives is a further cooperative principle that makes the cooperative movement uniquely suited to solving problems linked with sustainability, such as climate change, which supersede national governance structures. Exchanges between organisations that share the same cooperative values and principles are more likely to take into account concern for the community and thus sustainability concerns; and it is frequent that they cooperate together to that end through sharing of experience or joint trainings.⁷ By supporting the

⁵ (Hoyt, 1996)

⁶ (Archerd, 1996)

⁷ (past trainings conducted by the Swedish cooperative organisations)

growth of the cooperative movement through this principle, cooperative federations can help the values of equality, honesty, openness, social responsibility and caring for others to become instrumental in the debate on SDG implementation. We argue that these values and principles are closely interlinked with the objectives of the SDGs.

V The sustainable development goals:

The sustainable development goals were negotiated in the light of the missed targets of their immediate predecessor, namely the Millennium Development Goals (MDGs). The SDGs, through a large number of indicators, cover all components of economic activity (agriculture, industry, housing, health, education, production, consumption etc.), and address a wide range of key global concerns (poverty, equality, employment, gender, climate change, peace etc.). Cooperatives can contribute to all SDGs, both because they are involved in the very diverse economic sectors concerned, and because their impact contributes substantially to the global objectives pursued. Of course, a number of SDGs and their indicators may be more particularly well suited to the cooperative identity, for example SDG1 on reducing poverty (in line with their endeavour to meet members' social and economic needs), SDG 8 on decent work (supported by cooperatives' democratic and member-based approach, coupled with their concern for community), SDG 12 on responsible production and consumption and SDG 17 (upheld among others by the principle of cooperation between cooperatives).⁸

In spite of its inclusive nature, SDGs emphasize on individual thematic areas, including health. The “Health Goal” or SDG-3 aims toward “ensuring healthy lives and promoting well-being for all at all ages.” It is interwoven with nine other goals and underpinned by 13 targets covering a wide spectrum of health issues pertinent to the global as well as the Indian In spite of its inclusive nature, SDGs emphasize on individual thematic areas, including health. The “Health Goal” or SDG-3 aims toward “ensuring healthy lives and promoting well-being for all at all ages.” It is interwoven with nine other goals and underpinned by 13 targets covering a wide spectrum of health issues pertinent to the global as well as the Indian context, fostering equity and inclusive growth and acting as a fulcrum for most of the other goals. While retaining focus on maternal and child health and infectious diseases, SDG-3 also

⁸ (ICA, 2018)

stresses on noncommunicable diseases (NCDs), mental health, injuries, pollution-related morbidity and mortality, health systems' strengthening, and alignment with global health frameworks for policy support and reforms.

The center piece of SDG-3 is “Universal Health Coverage” (UHC), which signifies that all people should have access to quality health services, when in need, without facing any financial hardship. UHC encompass a range of preventive, promotive, curative, rehabilitative, and palliative services across the primary, secondary, and tertiary levels of care, throughout the life course, and for all citizens. In addition, it also emphasizes on the need for investing in research and development for vaccines and medicines and increasing allocation for financial and human resources.

VI Health cooperatives in India:

Yeshasvini Rural Cooperative Health Scheme:

The cooperative farming community is the strength of our economy. The poor farmers' allegiance to cooperative societies in the rural areas has been the strength of the cooperative sector an area where the limitations of the public or private sector are quite apparent. The health care of the cooperative farmers is very important because these farmers cannot afford costly medicines. The right of the farmers to get cheap and best treatment is very important for the success of agricultural operations. Devising a health care scheme for the cooperative farmers in which the cooperative institutions are the active players while forging partnerships with the public and private bodies can be a novel way to respect the rights of the patients through accessibility to cooperatives. Based on this thinking the Government of Karnataka introduced a health care scheme called Yeshasvini Cooperative Farmers' Health Care Scheme on 14th November, 2002. At present any member who is a member of cooperative society in Karnataka can get the necessary treatment and have access to expensive medical procedures by paying Rs. 120 per annum. The public-private partnership model can be seen from the fact that the plan administration relies on various actors, the Government of Karnataka for partial subsidy benefit, the Karnataka State Cooperative Department for communication of the plan, cooperative societies enrolling members, cooperative banks to assist in premium collection, Family Health Plan Ltd for the administration of claims and a network of hospitals to deliver the benefits. The Government provides a quarter of monthly premium paid by members of

the cooperative societies, which is Rs 10 per month. The network of hospitals under the scheme covers private hospitals too where the facilities are of high quality. This is itself an attraction for enhancing the membership of the scheme. The incentive of getting treatment in a private hospital with the government paying half of the premium attracts more members to the scheme. The Government has given key access to cooperatives as the Department of Cooperatives has been entrusted with the duty to popularise the scheme through its network of cooperatives. The Secretary of the primary cooperative society is the main person who motivates the farmers to become members of the scheme.⁹

A review of the functioning of the scheme indicates that there is no discrimination with the patients under this scheme in the hospitals. This itself indicates that the rights of the patients who are the farmers are not neglected which is quite heartening. The services provided by the hospitals are generally satisfactory though there is still need for lot of improvement in this area. The farmers considered the hospitals as ‘temples’ in which they had complete faith.

This fact clearly indicates the triumph of the cooperative spirit when it is nurtured well with the collaboration of other agencies which have faith in the cooperative principles and values. The scheme though targeted to the poor has not been without deficiencies. The poor farmers are not covered for all health-related issues but only for out-patient care and expenses connected with surgery. This shows that the principle of ‘right to health’ of the poor farmers has not been given due prominence as this right can be guaranteed only if all health-related issues are governed by this scheme. Some of the members of cooperatives are rich and they are also availing the same facilities as the poor farmers. A policy decision to render services to the poor members of cooperatives rather than services to all the members will not only enhance the reach of the scheme but will also remove partiality and introduce equitable standards of governance. In the recent years the cooperative officials have not been given ample professional opportunities of training. This is mainly because cooperatives have not been able to effectively collaborate with other non-cooperative bodies in those functional areas of training which have wider relevance. The secretaries of the primary level cooperative societies must be

⁹ (Verma, cooperative health care model in India- current trends)

well trained so that they take more initiatives to popularise the scheme. This scheme has been limited to only members of agricultural cooperative societies. Widening the admit of the scheme to cover the members of all types of cooperatives in the rural areas will be very important in this regard. In this respect the other types of cooperatives must contribute some premium amount so that the financial viability of the scheme is not affected.

Self-Employed Women's Association [Sewa]:

Most of India's work force is engaged in the informal economy and are poor, vulnerable and illiterate. It is well known that women are the poorest and most vulnerable, and their work is always at the cost of health as they are exposed to various health hazards. Can through formation of cooperatives their work and health-related problems be addressed in an effective manner? SEWA which is a union of 2,50,000 women workers of the informal economy has very successfully ventured in this area and has built up its own reputation. SEWA has today grown to include a bank with 1,30,000 depositors and more than 80 cooperatives of various kinds, all owned and managed by themselves. SEWA has been working hard to improve its members' health or health security. SEWA has identified and trained health workers who are performing the function of doctors in their unique way in their own communities. SEWA's midwives and health workers have formed their own cooperatives which are run democratically and are sustainable both in financial terms and activity-wise. These cooperatives make drugs available to SEWA members at low cost through outlets run by local women. The health expenditure of the women is brought down by these cooperatives as the accessibility of poor women to these cooperatives helps them in solving the health-related problems. These cooperatives' partnership with the government can be seen from the fact that they have been entrusted to run RCH diagnostics and screening camps, especially village-based mobile RCH clinics under the programme of Ministry of Health and Family Welfare. The partnership has resulted in widening the levels of services to women and their families thus enhancing their level of accessibility.¹⁰

The cooperatives are also playing an important role in developing health education amongst the rural women. Providing health education and information through cooperatives is a way of empowering them so that they

¹⁰ (Verma, Cooperative Health Care Model in India -current trends)

can take control of their lives without depending on others. The cooperatives being empowering institutions can best empower the rural women through health education. Analysis of SEWA's health and social security systems for the poor shows that SEWA has very well developed an initiative to protect poor women from burgeoning medical costs and other risks. Each member has the option to join the programme by paying Rs. 60 per annum and is provided limited cover for risks arising out of sickness, maternity needs, accidents, floods, etc. SEWA started out this scheme in partnership with a public sector company. The cooperatives are playing an important role in educating the rural community on understanding the concept of insurance.

Developing wide linkages in the case of SEWA's health programmes is very important. Regular interactions with the professional doctors and training of the health workers in collaboration with other bodies are the measures which need to be taken in this respect. Operationalising more government programmes will provide more accessibility to the rural women. In the case of medical insurance, the scope of the scheme should be enlarged and the coverage must be increased. Design of the products catering to the lower income group at a reasonable cost is the biggest challenge, and in this respect the partnerships should be forged with the government /private bodies which must catalyse the new products for poor and low middle class at low costs.

VII Cooperative Hospitals in Kerala:

In Kerala medical cooperatives were set up under the government patronage. However, at present the hospitals are grappling with various problems. They are facing tough competition from the public sector health services, and the emergence of private hospitals. The hospitals face numerous problems in different areas of their operations. These areas are casualty and emergency services, outpatient services, diagnostic services, nursery, pharmacy, transport, etc. The political reasons like lack of autonomy, government interference, etc have their own significance. The vast potentiality of the health care industry in the state of Kerala is enormous. The cooperative hospitals must visualise ways to forge partnerships with government, private sector, NGO's, etc. The hospitals must constitute governing bodies which must include representatives of all sectors. In the operational areas the

¹¹ (Verma, Cooperative Health Care Model in India-current trends)

hospitals must develop partnerships with the private sector. The hospitals must develop comprehensive health care programmes. As Kerala is cooperatively more developed state as compared to other states, the successful cooperatives must pour in financial resources and pool expertise from all quarters to revitalise the hospitals. In the wake of increasing accessibility of the poor to the cooperatives the cooperative hospitals must strengthen their programmes focusing on rural poor. The cooperatives in Kerala in general have played an important role in poverty-alleviation in the recent times.

VIII Benefits of health cooperatives:

Access to affordable health care: Health cooperatives help members access health care services at reduced costs, making health care more affordable and accessible.

Collective bargaining power: By pooling resources and negotiating with health care providers, cooperatives can secure better deals for their members, including discounts on medical services and medications.

Community support: Cooperatives promote a sense of community and mutual support among members, fostering a network of like-minded individuals focussed on improving health outcomes.

Preventive care: Many health cooperatives emphasize preventive health care, encouraging members to adopt healthier lifestyle offering wellness programs.

Customized health plans: Cooperatives can tailor health insurance and services to the specific needs of their members, ensuring a more personalized approach to health care.

Financial protection: Health cooperatives provide a safety net for members in times of medical emergencies, reducing the financial burden of health care expenses.

Health education: These organizations often prioritize health education, empowering members with knowledge to make informed decisions about their well-being.

Rural access: Health cooperatives can be vital in rural areas where healthcare infrastructure is limited, as they can bridge the gap and bring the medical services closer to communities.

Transparency and Accountability: Cooperatives typically have democratic governance, ensuring that decisions are made in the best interest of members, enhancing transparency and accountability.

Advocacy: Health cooperatives advocate for policy changes and improvements in the health care system, benefiting not only their members but the broader community as well.

IX Challenges faced by health cooperatives:

Limited awareness: Many people in India are unaware of the concept of health cooperatives or the concept of health cooperatives and their benefits, which makes it difficult to promote and establish them.

Regulatory hurdles: Navigating the complex regulatory environment and compliance requirements can be challenging for health cooperatives. They often need to adhere to various laws and regulations, which can be time-consuming and costly.

Financial sustainability: Securing funding and maintaining financial sustainability can be a significant challenge. Health cooperatives often struggle to generate enough revenue to cover their operating costs and expand their services.

Infrastructure and resource constraints: Health cooperatives may lack the necessary infrastructure and resources to provide the quality health care services. This includes a shortage of trained medical professionals, equipment and facilities.

Competition with private healthcare providers: Health cooperatives face competition from private healthcare providers, which often have more resources and marketing capabilities. This competition can make it challenging for health cooperatives to attract patients.

Geographic disparities: In a vast and diverse country like India, there are significant geographic disparities in health care access. Health cooperatives may find it challenging to establish and maintain services in remote and underserved areas.

¹² (Verma, Cooperative Health care Model in India - Current Trends)

Socioeconomic factors: India's diverse socioeconomic landscape poses challenges for health cooperatives. Serving populations with varying income levels and healthcare needs can be complex.

Limited collaboration: Collaboration with government health care systems and other stakeholders is often limited. Improved cooperation could help health cooperatives expand their reach and impact.

Quality assurance: Ensuring consistent and high-quality health care services is a challenge for health cooperatives, especially in resource-constrained settings.

X Suggestion:

Addressing these challenges requires a combination of Government support, community engagement and innovative strategies to make health cooperatives more sustainable and effective in providing healthcare services in India. Creating health awareness can also be a very effective strategy of the cooperative organisations. At present, the potentialities of cooperatives have not come to the fore in this area. The role of cooperative promotional organizations becomes very important as a torch-bearer in this respect. Capacity-building of the cooperative officials in the health sector as shown by the evidence in this paper is also very important if a professional touch has to be given in the efforts for creating health awareness at all levels. At present the cooperative training programmes on health are almost negligible. There is no clear-cut strategy for building partnerships with the government and private bodies.

XI Conclusion:

At a time when public-private partnership has emerged as a vital strategy for improving the socio-economic conditions in the country the cooperatives have all the inherent strengths and are quite capable to emerge as key players for improving the health scenario of the country. In rural health the cooperatives can effectively partner with the public sector and the other civil society organisations. It is high time that the cooperative policy-makers should work seriously for devising health policies with a clear-cut vision so that the image-building of the cooperative sector gets a huge boost. The accessibility of poor to health services through the medium of a cooperative can concretise in a big way if cooperative model of health is popularised all over the country.

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Empowering Women in PACCS: Opportunities and Challenges in the Union Territory of Puducherry

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Abstract:

Cooperatives are voluntary associations of individuals with common needs who join hands to achieve common economic interests and emerge as a vital segment of the Indian economy. In this context, the Primary Agricultural Cooperative Credit Societies (PACCS) are the grassroots-level institutions on which the whole cooperative structure is built. Primary agriculture cooperative credit societies can contribute to sustainable development goals through the base level. Cooperatives contribute to gender equality by expanding women's opportunities to participate in local economies and societies in many parts of the world. The main objective of the research paper is to find out the pivotal role of women in Primary Agricultural Cooperative Credit Societies (PACS) and the opportunities and challenges they encounter in the Union Territory of Puducherry. Women's participation in agriculture and rural finance is essential for sustainable agricultural development and rural empowerment. The study employs a mixed-methods approach, combining qualitative and quantitative data to provide a comprehensive analysis, and it explores the historical context, current status, and prospects of women's involvement in PACS, highlighting the socio-economic impact and constraints women face in this sector. The research paper also suggests policy recommendations to enhance the participation of women in PACS and promote gender equality in rural finance.

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Keywords:*PACCS, SDGs, Opportunities, Challenges and Women empowerment***I Introduction:**

Women's empowerment is an essential driver of social and economic development, and it plays a pivotal role in fostering inclusive growth. Across developing countries, agriculture sector is a significant sources of the economic growth, poverty reduction and food security. In the Union Territory of Puducherry, women's empowerment is a subject of significant importance, particularly in the context of Primary Agriculture Credit Cooperatives (PACCS). PACCS playing a pivotal role in the rural and agricultural landscape, serving as financial institutions that provide credit, savings, and other essential services to local farmers and rural communities. In the context of Puducherry, the promotion of gender equality and the active participation of women in PACCS is not only a matter of social justice but also an economic imperative.

Puducherry, nestled on the south eastern coast of India, comprises four distinct enclaves, each with its unique blend of urban and rural communities. While the region boasts a relatively high human development index and literacy rate compared too many parts of India, gender disparities in economic and social spheres persist. Empowering women in PACCS can be a catalyst for addressing these disparities, as these co-operatives are critical for agricultural development, livelihood improvement, and financial inclusion in the region.

This article explores the opportunities and challenges surrounding the empowerment of women within the context of PACCS in the Union Territory of Puducherry. It delves into the potential benefits of such empowerment, including increased access to financial resources, improved decision-making in farming activities, and enhanced social and economic well-being for women in rural areas. Additionally, it examines the hurdles and constraints that women often encounter in their journey towards active participation in PACCS, from traditional gender roles and societal expectations to limited access to resources and education.

By shedding light on the opportunities and challenges, this discussion aims to underline the significance of promoting gender inclusivity in PACCS in

Puducherry and beyond, emphasizing the need for targeted policies and programs to create a more equitable and prosperous agricultural landscape in this unique union territory.

II Cooperatives in India and Puducherry:

In 2018, the Statistical Profile of the National Cooperative Union of India (NCUI) reported that there were 854,355 functioning cooperatives across India, with a membership of 290.06 million individuals. These cooperatives have contributed to 13.3% of direct employment and 10.91% of self-employment in the country. Cooperatives in India, including those in the union territory of Puducherry, play a vital role in the socio-economic development of the region. Puducherry's cooperatives, spanning sectors like agriculture, dairy, fisheries, and credit, have significantly contributed to the territory's overall growth.

In Puducherry, cooperatives have played a pivotal role in enhancing the lives of their members by providing access to resources, technology, and a collective marketing platform. Since its integration with the Indian Union in 1954, Puducherry actively embraced the cooperative movement, achieving rapid growth in fulfilling its objectives. The focus on 'Cooperation' remained a consistent priority in all Five Year Plans. According to the 2016-2017 data, there are 507 cooperatives in operation in the Puducherry region, with a total membership exceeding 6 lakhs (6,33,540).

III PACCS in India and Puducherry:

The Primary Agricultural Cooperative Credit Society (PACS) plays a pivotal role in the Indian and Puducherry agricultural landscape by serving as a financial institution tailored to the needs of local farmers. These cooperative societies are designed to provide affordable credit and financial services to their members, who are predominantly small and marginal farmers. PACSs act as intermediaries between their members and formal banking institutions, facilitating access to credit, crop insurance, and various government-sponsored agricultural schemes. By pooling resources and promoting collective financial strength, PACSs contribute significantly to rural development, fostering economic empowerment and stability within farming communities. The cooperative structure encourages collaboration, ensuring that farmers receive the necessary financial support and guidance to enhance their agricultural practices and improve overall livelihoods.

IV Women Empowerment and SDGs:

Gender equality is a fundamental right crucial for addressing contemporary challenges such as economic crises, healthcare deficiencies, climate change, violence against women, and escalating conflicts. Women are disproportionately affected by these issues, yet they also possess the ideas and leadership needed for solutions. Gender discrimination hinders not only women but also impedes global progress. The 2030 Agenda for Sustainable Development, with its 17 Sustainable Development Goals (SDGs), serves as a comprehensive roadmap endorsed by world leaders in 2015. It outlines a path toward sustainable progress that leaves no one behind. The attainment of gender equality and women's empowerment is embedded in each of the 17 goals. True justice, inclusion, economies benefiting everyone, and the preservation of our shared environment for present and future generations can only be achieved by securing the rights of women and girls across all these goals.

V Objectives of the Study:

- To know the participation of women in PACCS in Puducherry.
- To identify the opportunities and challenges faced by women in the Primary Agriculture Cooperative credit society

VI Methodology:

This study adopts the descriptive research study, collecting only secondary data. The secondary data were collected from the published articles, journals, newspapers etc.,

VII Women Empowerment through Cooperatives and PACCS:

Women empowerment through cooperatives and PACCS (Primary Agricultural Credit Societies) has been a notable strategy to promote economic independence and social upliftment among women in various parts of the world. Cooperatives allow women to pool resources, share knowledge, and collectively engage in economic activities, ranging from agriculture to small-scale enterprises. PACCS, as financial institutions at the grassroots level, play a crucial role in providing women with access to credit, savings, and other financial services, empowering them to start and sustain businesses.

Additionally, these initiatives often include training programs to enhance women's skills and knowledge in various fields. The collaboration within cooperatives fosters a supportive environment where women can thrive, leading to improved socio-economic conditions for themselves and their communities.

In its presentation, the ILO discussed how cooperatives might help empower women in rural areas by giving them more options for employment and better pay, enhancing their leadership and management skills, and improving their quality of life by providing essential services. Additionally, it covered strategies for boosting rural women's empowerment and participation in cooperatives, such as ensuring that cooperative laws are more gender-responsive; boosting public support for rural women in cooperatives while upholding their autonomy and independence; promoting products made by rural women's cooperatives, such as through public procurement initiatives or solidarity labels; and raising awareness among cooperative leaders and members of the significance of equitable gender relations.

VIII Opportunities for Women in PACCSs in the Union territory of Puducherry:

Financial Inclusion: One of the primary opportunities for empowering women in PACCSs is enhancing financial inclusion. The PACCSs can provide access to credit, savings, and various financial services, enabling women to invest in agriculture, entrepreneurial ventures, and improve their financial literacy.

Women-Centric Initiatives: Several government schemes and programs, such as the MahilaKisanSashaktikaranPariyojana (MKSP), are designed to promote women's participation in agriculture and allied sectors. These initiatives offer training, capacity building, and financial support to women in PACCSs.

Representation in Leadership: Encouraging women to take on leadership roles within PACCSs is crucial. It empowers them by fostering decision-making abilities and improving their influence in the cooperative's operations. Increased representation can lead to more gender-responsive policies and services.

Skill Development: Skill development programs focusing on agriculture, financial management, and entrepreneurship can empower women in PACCSs. These initiatives equip them with the knowledge and skills necessary to succeed in agriculture-related activities and business ventures.

IX Challenges faced by Women in PACCS:

Sociocultural Barriers: Traditional gender norms and societal expectations often limit women's participation in PACCSs and decision-making processes. Overcoming these deeply ingrained barriers is a significant challenge.

Lack of Awareness: Many women in rural areas are unaware of the services and opportunities offered by PACCSs. Bridging the information gap and promoting the benefits of cooperative membership can be challenging, but introducing government schemes exclusively for women might be possible through PACCSs.

Limited Access to Resources: Women often face constraints in accessing resources like land, credit, and technology. These constraints hinder their participation in agricultural activities and cooperative operations.

Financial Insecurity: Women's financial insecurity can act as a barrier to their active involvement in PACCSs. Access to credit and savings mechanisms can help alleviate this issue, but challenges remain in ensuring equal access and control over financial resources.

Gender Disparities in Leadership: The underrepresentation of women in leadership positions within PACCS is a significant challenge. Achieving a more balanced representation in decision-making roles remains a struggle.

X Conclusion:

Empowering women within Primary Agriculture Credit Cooperatives in the Union Territory of Puducherry is a multifaceted endeavor that requires addressing various opportunities and challenges. Financial inclusion, women-centric initiatives, leadership representation, and skill development are critical opportunities that can foster women's empowerment in PACCSs. Simultaneously, overcoming sociocultural barriers, raising awareness, ensuring resource access, and bridging leadership gender gaps are the key challenges that need to be tackled.

Efforts to empower women in PACCSs in the Puducherry union should involve a comprehensive and collaborative approach that combines government interventions, NGO initiatives, and community involvement. recognizing the importance of women's empowerment in cooperatives can contribute significantly to the overall development of the Union Territory of Puducherry, promoting gender equality, and improving the livelihoods of rural women in the region.

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Attitude and Perception of Rural Farmers towards Agricultural Credit through Primary Agricultural Cooperative Society

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Abstract:

The Agriculture has a crucial role in the Indian economy. Institutional and non-institutional sources of agricultural loans exist in India. Institutional credit cooperatives play a significant role in the provision of finance to the agricultural sector. Primary Agricultural Cooperative Societies cater directly to the farmers and meet their agricultural credit needs. In this paper aims to present the overall status of rural agricultural credit in Dindigul district, impact of credit disbursement, role of banking institutions and management in rural finance disbursement and progress, constraints and challenges over the years. The scope of access to rural agricultural credit is variable, which helps assess the degree of diversification of agricultural credit to identify management in credit and financial institution performance. The Dindigul District was purposively selected for the study. For selecting sample PACS and sample respondents for the study was multi state random sampling method was followed. At the first stage Sanarpatty block of the Dindigul District was purposively selected. At the second stage 16 PACS functioning in the block was selected and 388 borrowings members out of 13392 borrowing members. As a result, the results show that banks provide more access than microfinance institutions in the outline of large loans for agriculture, but other side banks provide less compared to microfinance institutions in the outline of small loans for agriculture. This paper deals with the Attitude and Perception of Rural Farmers towards Agricultural Credit by Primary Agricultural Cooperative Credit Societies.

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Keywords:

Primary Agriculture Cooperative Credit Societies, Microfinance, Access to Rural Agricultural credit, Rural Farmers, Rural Finance, Rural Credit, Diversification.

I Introduction:

Agricultural Credit is also an integral part of providing a sustainable livelihood for millions of farmers living in rural India. The Government of India has introduced several policy measures to improve the accessibility of farmers to the institutional sources of credit through primary agricultural cooperative society. The impetus of these policies has been on progressive institutionalization for providing timely and ample credit support to all types of farmers with special focus on small and marginal farmers and weaker sections of the society to enable them to adopt modern technology and improved agricultural practices for increasing agricultural production and productivity. Agriculture is a dominant sector of our economy and credit plays an important role in increasing production. Availability and access to adequate, timely and low cost credit from institutional sources is of great importance especially to small and marginal farmers.

Along with other inputs, credit is essential for establishing sustainable and profitable farming systems. Most of the farmers are small producers engaged in agricultural activities in areas of widely varying potential. Experience has shown that easy access to financial services at affordable cost positively affects the productivity, asset formation, and income of the rural poor. Finance in agriculture is important for the application and development of technologies. Technical inputs can be purchased and used by farmers only if sufficient funds are available with farmers. Most of the time, farmers suffer from the problem of inadequate financial state. The requirements of finance in agricultural sector, very few farmers will have adequate capital of their own to invest in agriculture.

II Statement of the Problem:

Agriculture sector which is most important sector to our country and it makes several changes in financial sector. Farmers always need finance which is essential for agriculture development such as to purchase seeds, fertilizers,

repairing tractor etc. both financial and non-financial institutions provide agriculture credit to the farmers. The agriculture credit offered by various financial institutions may also different in terms of requirement of loan and it also varies on the basis of gender, educational qualification and land holdings. Farmers are to depend on moneylenders and their indebtedness lead to sell their products below the production cost. So, they are not in a position to repay the loan in time. Farmers approach banks and cannot get a loan from the bank for the mere reason of holding small size of land and hence they approach moneylenders and take money at a higher rate of interest and suffer.

III Review of Literature:

The most influential factors agricultural credit helps to adapt modern technology, Agricultural Credit improves your overall quality of life, and Agricultural Credit helps to deal with stress, trauma, lack of information about schemes and reforms Soundarya. M & Dr. Jayapal (2020). Agricultural loans in rural areas depend on many factors such as the purpose for which they are taken, the tenure of the agricultural loans and the interest rates. Farmers take agricultural loan for income generating purpose and use it for future income Sarada Siva Reddy. K. & Dr. Ravishankar (2020). The majority of farmers are mediocre about agriculture finance, so our country is making farmers more aware of agriculture finance, which improves farmers' wealth Shanmugavadivel.D (2015). Solomon Muthambara (2016) found that farmers lack credit facilities from financial institutions and input suppliers. Barriers to farmers' access to credit include lack of favorable repayment terms and high transaction costs on the part of banks, political interference, poor project infrastructure and high utility bills. Annie H. Ongayo, Christopher A. Onyango at..(2016) Observation revealed positive and negative changes in the perception of small-scale farmers towards agricultural extension services. Mariappan K. (2011) found that though farmers want to uphold their accounts in public, private and regional rural banks as well as cooperative banks, but they are badly grasped by local private money lenders. Farmers agreed for more corruption, inadequate scale of finance, time taking process and complicated procedure of loan financing. It was also observed that greater part of farmers is unable to access the credit due to required credit securities Waqar Akram & Zakir Hussain et.. (2008). Tanrivenmis and Bayaner (2006) found that credit limit was insufficient to the farmers. Unattractive credit conditions and inability of the firm to provide inputs to the farmers at low price

was some of the facts found with respect to the firm providing agricultural finance.

IV Objectives of the Study:

- To Study the problems faced by farmers in receiving the agricultural credit provided by PACSDindigul District in Tamil Nadu.
- To identify the attitude of rural farmers towards agricultural credit through PACSDindigul District in Tamil Nadu.
- To analysis the perception of rural farmers towards agricultural credit through PACS Dindigul District in Tamil Nadu.

V Methodology of the Study:

The descriptive research design was adopted to conduct the study. Multi state simple random sampling technique was used for sampling. Both primary and secondary data collection techniques were used to collect the data. Primary data was collected through questionnaires from 388 farmers who are borrowing members of agricultural loans from primary agricultural cooperative societies in Dindigul District, Tamil Nadu. The questionnaires data collected from rural farmers through ODK form (kobotoolbox) on mobile application. The secondary data have books, magazines and websites. The data collected were processed further with help of the Statistical Product and Service Solution (SPSS) to analyze statistical tools namely percentage, mean value and standard deviation of the items in the questionnaire.

VI Sample Size:

The Dindigul District was purposively selected for the study. For selecting sample PACS and sample respondents for the study was multi state random sampling method was followed. At the first stage Sanarpatty block of the Dindigul District was purposively selected. At the second stage 16 PACS functioning in the block was selected and 388 borrowings members out of 13392 borrowing members were selected by using Yamane formula (1967:886), as the study population is known. The list of sample PACS and the sample respondents selected for the study is given in table 1

Table 1**Sample PACCS considered to draw sample respondents - Borrowing Farmers**

S.No.	Name of PACCS in Sanarpatty Block	Total Borrowing Members	Samples Size
1	Sanarpatty	2039	59
2	Anjukulipatty	784	23
3	Kombaipatty	825	24
4	Kanavaipatty	640	19
5	Kosavapatty	975	28
6	Kurumbapatty	643	19
7	Nochiodaipatty	983	28
8	Gopalpatty	855	25
9	Vathalathoppampatty	430	12
10	Thimmananallur	795	23
11	Markkampatty	331	10
12	Veerachinnampatty	711	21
13	Senguruchi	423	12
14	Kambliampatty	1490	43
15	Madoor	782	23
16	Rajakkapatty	686	20
Total		13392	388

VII Results & Discussion:

From the table 2 showed that as much as 63.66 per cent of the borrowing farmers were male and the rest were female. The banking institutions may not formally indulge in sex discrimination against women for the purpose of extending loan, but there may be a number of formalities, which a loan has to complete and rural women, being ignorant, may not have easy access to credit. It is understood that nearly 50 per cent of the borrowing farmers belong to middle age category followed by young age 25.26 per cent and old age 18.81 per cent. Therefore, majority of the farmers are the middle age. Due to the availability of credit facility and government subsidies, the middle age groups of people have motivated. It has increased the farmers towards the agricultural activities. The residence of sample farmers shows that 98.20 per cent of the borrowing farmers belong to rural areas. The majority of the farmers are doing

agriculture activities in rural areas. Because, now days in urban areas the land and used in the infrastructure development, and building construction dams and so on. The years of experience in the agricultural activities highlights that 33.26 per cent of the respondents have 11 – 15 years experience in the field of agriculture, followed by 5 – 10 years experience 28.87 per cent, 16 – 20 years of experience at 17.53 per cent, less than 5 years of experience 14.43 per cent and 5.93 per cent of the farmers have above 20 years in the field of agriculture. The source of borrowed finance inferred that nearly 80 per cent of the farmers are borrowed loans from the primary agriculture cooperative societies, followed by 15.98 per cent of the farmers borrowed from central cooperative bank and less than 5 per cent of the respondents borrowed loans from commercial and private banks. The land types are the fundamentals means of production in an agrarian society without which no agricultural production can take place. It was found that 56.96 per cent of farmers are produced agricultural production from irrigation land followed by 43.04 per cent of farmers produced from un-irrigation land in the rural areas.

The land as an asset which is deciding the socio-economic status of the rural people has profound influence on the access, use and repayment of institutional credit. Farmers are the major players in the agriculture activities. Farmers can be classified in to three categories such as small famers, medium farmers and large farmers. In 45.10 per cent of them are small farmers, 33.25 per cent of them are medium farmers and remaining 21.65 per cent of them are large farmers. Crop pattern refers to the practice of growing crops via both inter- and intra-cropping. The economic makeup of the communities affects the farming pattern. The current year's rainfalls, the cost of crops, as well as modifications in the crop pattern from the previous year's harvest are the elements that determine the cropping pattern. More than 25 per cent of farmers cultivated fruits and vegetables, 15 to 20 per cent cultivated paddy and sugarcane, and less than 10 per cent grow pulses and flowers. In 53.09 per cent of them farmers are cultivating once in the years and 38.92 per cent of them are cultivating twice in the years and only 7.99 per cent of the cultivating thrice in the years. However, majority of them are cultivating once in a year.

Table 2
Social – Economic Profile of the Respondents

S.No.	Variable	Classification of Variable	Frequency	Percentage
			N = 388	
1	Gender	Male	247	63.66
		Female	141	36.34
2	Age of the Farmers	Young (18-35)	98	25.26
		Middle (36-50)	192	49.48
		Old (Above 51)	73	18.81
		51 – 60 Years	47	12.11
		Above 60 Years	26	6.70
3	Residence	Rural	381	98.20
		Urban	-	-
		Semi-Urban	7	1.80
4	Years of Experience in the Field of Agriculture	Less than 5 Years	56	14.43
		5 – 10 Years	112	28.87
		11 – 15 Years	129	33.25
		16 – 20 Years	68	17.53
		Above 20 Years	23	5.93
5	Source of Borrowed Finance	PACS	308	79.38
		DCCB	62	15.98
		Commercial Banks	13	3.35
		Private Banks	5	1.29
		Regional Banks	-	-
6	Types of Land	Irrigation	221	56.96
		Un-Irrigation	167	43.04
7	Types of Farmers	Small Farmer	175	0.45
		Medium Farmer	129	33.25
		Large Farmer	84	21.65
8	Types of Crops Cultivation	Paddy	69	17.78
		Sugarcane	57	14.69
		Pulses	32	8.25
		Fruits	102	26.29
		Vegetables	98	25.26
		Flowers	24	6.19
9	Number of Times Cultivations in the years	Others	6	1.55
		Once	206	53.09
		Twice	151	38.92
		Thrice	31	7.99
10	Income earned by Agricultural activities in the years	Below 10000	48	12.37
		10001 – 15000	59	15.21
		15001 – 20000	142	36.60
		20001 – 25000	102	26.29
		Above 25001	37	9.54

VIII Farmers' Perceptions towards Accessing Agriculture Credit Through PACCS - Main Component Analysis:

Farmers' perceptions of many factors affecting their potential to obtain agricultural loans have been grouped adopting the principles component analysis. It is a way to reduce the amount of data. The term communality refers to the proportion of a specific item's volatility that is caused by a shared component. The credit available for agriculture is related to how farmers perceive it in the relevant field. Each variable's variance is estimated by the extraction communalities using the factor solution constituents as a basis. If the value is less than 5, it means that the variables do not match the factor response well and may need to be excluded from the analysis. The table 3 shows that extraction value of the respondent's farmers perception factors involved in the agricultural credit by the farmers.

Table 3
Farmers Perceptions towards Accessing Agricultural Loan - PACCS

Components	Initial	Extraction
Agricultural loan improves your overall quality of life	1.000	.642
Agricultural credit helps to recover from stress and shock	1.000	.631
Agricultural credit helps in the growth of modern technology	1.000	.664
Agriculture credit increased net income	1.000	.732
Agriculture credit increase production	1.000	.788
Interest rate and charges	1.000	.736
Ability to repaying the debt	1.000	.862
The loan amount is sufficient	1.000	.751
Lack of information about schemes and reforms	1.000	.689
Timing and delay in the process	1.000	.684
Nearest PACCS in residence	1.000	.846

The explicit the variance of the fifteen variables ranging from 0.600 to 0.735. It shows that the 50 per cent variables exhibit the considerable variance from 55 per cent to 85 per cent. However, it was found that inferred that these variables are able to group themselves according to how farmers perceive the aspects associated with agricultural loans to create the dominating factors.

IX Farmers Perception towards Accessing Agricultural Credit by PACCS – Rotated Component Matrix:

The total variance analysis is important to know the rotated sum of square value. The rotated four factors are determined based on the total Eigen value if the factor should be greater than one. The total cumulative variance is explained by the total percentage of variance by each retained four factors. Table 3 gives the individual variance of the predominant factors which emerged out of 11 factors. As could be seen from the table 4, Eigen values are greater than one four factors. From this one, it is confirmed that, the fifteen motivational factors are grouped into four predominant factors. It is also found that the total variance of 11 variables is found to be 71.854 per cent which is greater than the benchmark of 62 per cent. However, it confirms that the factor segment is the meaningful one. The rotated sum of square value indicates the cumulative percentage of variances is 64.892. Hence the factorization is more suitable for the factors influencing towards agricultural credit. The table explains the value of rotated component matrix for the farmer's perception towards accessing agricultural credit.

Table 4

Farmers Perception towards Accessing Agricultural Credit – Rotated Component Matrix

Factors	Components			
	1	2	3	4
Agriculture credit increased net income	.827			
Agricultural loan improves your overall quality of life	.782			
Agricultural credit helps in the growth of modern technology	.768			
Agriculture credit increase production		.712		
Agricultural credit helps to recover from stress and shock		.780		
Interest rate and charges		.742		
Lack of information about schemes and reforms			.852	
Timing and delay in the process			.784	
Ability to repaying the debt			.672	
Nearest PACCS in residence				.686
The loan amount is sufficient				.772

Table 5
Rank Ordering of the Statements of Level of Attitude of Farmers
towards Agriculture Loan

S.No.	Particulars	SA	A	UD	DA	SD	NR	Rank
1	Agricultural loan will help farmers	148 (38.14)	174 (44.85)	35 (9.02)	21 (5.41)	10 (2.58)	388	I
2	Agricultural loans are easily assessable	86 (22.16)	135 (34.79)	67 (17.27)	62 (15.98)	38 (9.79)	388	VI
3	The agricultural credit sytem will remove all the hurdles faced bythe farmers	72 (18.56)	98 (25.26)	53 (13.66)	89 (22.94)	76 (19.59)	388	XI
4	The amount of agricultural credit disbursed per acre is insufficient to cover all production costs	70 (18.04)	118 (30.41)	51 (13.14)	78 (20.10)	71 (18.30)	388	IX
5	Agricultural credit increases production	72 (18.56)	120 (30.93)	51 (13.14)	91 (23.45)	54 (13.92)	388	VIII
6	Agricultural credit sytem encourages farmers to increase the area under cultivation and increase production	93 (23.97)	147 (37.89)	73 (18.81)	42 (10.82)	33 (8.51)	388	V
7	Interest rate is high in agriculture loan sytem	137 (35.31)	163 (42.01)	41 (10.57)	29 (7.47)	18 (4.64)	388	II
8	Agricultural credit sytem is only helpful for rich farmers	79 (20.36)	123 (31.70)	49 (12.63)	78 (20.10)	59 (15.21)	388	VII
9	The illiterate farmers are not aware of the loan procedure	98 (25.26)	159 (40.98)	69 (17.78)	38 (9.79)	24 (6.19)	388	IV
10	Influence is needed to get agricultural loans	37 (9.54)	59 (15.21)	77 (19.85)	130 (33.51)	85 (21.91)	388	XVI
11	Agricultural credit syte m play an important role in transforming traditional agriculture into modern agriculture	64 (16.49)	87 (22.42)	44 (11.34)	102 (26.29)	91 (23.45)	388	XII
12	Delay in availing agricultural credit are due to excessive procedures	48 (12.37)	57 (14.69)	82 (21.13)	119 (30.67)	82 (21.13)	388	XV
13	Most of the farmers do not get timelyagricultural loan from the lending institutions	69 (17.78)	107 (27.58)	48 (12.37)	86 (22.16)	78 (20.10)	388	X
14	Although the agricultural credit sytem is good, usurers work against the success of the agricultural credit sytem	69 (17.78)	72 (18.56)	62 (15.98)	97 (25.00)	88 (22.68)	388	XIII
15	Due to non-availabilityof high prices for agricultural produce, agricultural loans could not be repaid.	118 (30.41)	149 (38.40)	58 (14.95)	36 (9.28)	27 (6.96)	388	III
16	This agricultural credit sytem can solve the food problems of our country	52 (13.40)	69 (17.78)	71 (18.30)	105 (27.06)	91 (23.45)	388	XIV

SA: Strongly Agree; A: Agree; UD: Undecided; DA: Disagree; SD: Strongly Disagree; NR: Number of Respondents

From the table 5 it is clearly indicated that, majority of the farmers felt that agriculture loan will help farmers (Rank I), which was followed by interest rate is high in agriculture loan system (Rank II), due to non-availability of high prices for agricultural produce, agricultural loans could not be repaid (Rank III), the illiterate farmers are not aware of the loan procedure (Rank IV), agricultural credit system encourages farmers to increases the are under cultivation and increase production (Rank V), agricultural loans are easily assessable (Rank VI), agricultural credit system is only helpful for rich farmers (VII), agricultural credit increases production (Rank VIII), the amount of agricultural credit disbursed per acre is insufficient to cover all production costs (IX), most of the farmers do not get timely agricultural loan from the lending institutions (Rank X), the agricultural credit system will remove all the hurdles faced by the farmers (Rank XI), agricultural credit system plays an important role in transforming traditional agricultural into modern agriculture (Rank XII), although the agricultural credit system is good, usurers work against the success of the agricultural credit system (Rank XIII), this agricultural credit system can solve the food problems of our country (Rank XIV), delays in availing agricultural credit are due to excessive procedures (Rank V), influence is needed to get agricultural loans (Rank XVI).

X Conclusion:

The most of the farmers felt that agricultural loans would help them, followed by the high rate of interest in the agricultural credit system, unable to repay agricultural loans due to non-availability of high prices for agricultural produce. This paper points out the attitude and perception of rural farmers towards agricultural credit through PACS. The result of the study shows that increased net income through agricultural credit, lack of information about schemes and reforms, agricultural credit helps in modern technological development; agricultural credit helps to recover from stress, shock, interest rate and charges. The above factors mostly affect the farmers. The above factors are mostly influence the farmers. The least factors influencing the farmers perception towards to access agriculture credit increased farmer's net income. But a less important factor affecting farmers is repayment capacity. Bankers can give some advice to the farmers to overcome the loan tenure. Agricultural loan in rural areas depends on many factors like the purpose for which agricultural loans are taken, tenure of agricultural loans, interest rates

etc. Farmers borrow agricultural credit for the purpose of earning income and use it against potential future income.

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Realizing SDGs by enabling Cooperative Model of Supply chain to enhance the indian edible oil production

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Abstract:

Agriculture plays an important role in the Indian economy. Around 18% of GDP is contributed from Agriculture and 54.6% of the total workforce in India has been engaged with Agriculture alone[1]. Owing to the global advancements, Indian government is taking necessary steps to enhance the productivity of Agriculture and also ensuring the welfare of the small, marginal farmers. While considering the technological advancements, it is also very important to assess the challenges that modern day agriculture is facing. To overcome such challenges, we require cost effective solutions that led us to realize the importance of Post -Harvest Management.

Through Post harvest Management, we preserve the quality, quantity and safety of the commodities and also it ensures food security. Post-Harvest Management and Value Addition are integral to Agri production for reducing post-harvest losses to meet consumer requirements and preserve nutritional quality[2]. Through Agriculture, we are obtaining the essential nutritional supply to our body to lead the life. One among such commodity is Edible Oil. As per the statistics of Ministry of Agriculture, the Edible Oil production of India for the year 2021-22 is 125.35 Lakh MT which is against the Total Consumption is 257.64 Lakh MT. We are having self-sufficiency in edible oil production of approximately up to 45% only. The rest of around 55% in Supply-Demand gap is met through the imports. Amidst this, our major import among the edible oil is Palm Oil which alone constitutes about 57% of the total edible oil imports of India. This wide supply demand gap needed to be reduced[4].

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Keeping in this mind, The Indian government has released the National Mission on Edible Oil – Oil Palm which is aimed at increasing the area under palm oil cultivation and also to raise the domestic production by three times to 11 Lakh MT by 2025-26[6]. The proposed work will address the possible opportunities out of which Cooperative organisations can be deployed to increase the edible oil production and also utilise the supply chain as a cooperative enabled community business model which invariably meets out the Goal no 1: (No Poverty), Goal no: 2 (Zero Hunger: Achieve Food Security and Improved Nutrition and Promote Sustainable Agriculture), Goal no: 8 (Decent Work and Economic Growth) and Goal no: 12 (Responsible Production and Consumption) of total 17 Sustainable Development Goals proclaimed by United Nations Organisation on 2015 which is a shared blueprint for peace and prosperity for people and planet now and into the future[8].

Keywords:

Agriculture, Cooperatives, Primary Agricultural Cooperative Credit Societies (PACS), Agriculture Producers Cooperative Marketing Societies (APCMS), Edible Oil, Sustainable Development Goals, Post-Harvest Management

I. Agriculture:

Agriculture is the backbone of Indian Economy. The strength of the sector lies in the fact that India is the leading producer of commodities such as milk, cereals, tea, sugar cane, fruits and vegetables etc. it has the potential to become food basket for the world considering the scope, increasing demand for food processing.

As per the land use statistics 2018-19, Total geographical area of country is 328.7 Million hectares out of which 139.3 Million hectares is the reported net sown area and 197.3 million hectares is the gross cropped area with cropping intervention of 141.6%. Net area sowed works out to be 42.4% of Total geographical area. The net irrigated area is 71.6 Million hectares.

As per provisional estimates of National Income 2021-22 released by National Statistical Office (NSO) Ministry of Statistics & Programme Implementations, Agri and Allied Sectors contributed approximately 18.6% of India's GVA (Gross Value Added) at current prices during 2021-22.

Year	Contriutuion to GVA
2016-17	18%
2017-18	18.3%
2018-19	17.6%
2019-20	18.3%
2020-21	20%
2021-22	18.6%

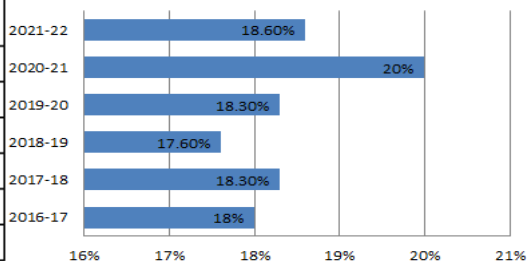


Fig 1.1 Contribution of Agriculture to Gross Value Added over the years

(Source: Provisional estimates of National Income 2021-22 released by National Statistical Office (NSO) Ministry of Statistics & Programme Implementations, Agri and Allied Sectors)

a) Production Scenario: (2021-22):

As per fourth advance estimates for 2021-22, the production of food grains in the country is estimated at 315.72 Million tones which is 5 Million tons higher than the production in 2020-21. The production during 2021-22 is higher by 25 Million tones than the previous 5 years average production of Food grains. As per World Population Review 2023 Live Statistics, India with 1.432 Billion Population surpassed China with 1.425 Billion and also expected to reach its peak population of 1.65 Billion people 2060. Therefore the demand for food in India will likely to be going up in the upcoming years.

In order to provide food to an additional population, India needs not only to increase its production but also focus on reducing food loss waste effectively. India exhibits great production capacity of food grains on the other hand, huge quantities of harvested produce get wasted due to fragmented supply chains and inadequacy of postharvest infrastructure. A strong and dynamic food processing sector plays an important role in reducing the wastage of perishable products and ensuring value addition to agricultural produce. It also leads to diversification and commercialization of agriculture, generation of employment, enhancing income for farmers and creating surplus for their exports.

Therefore an effective Postharvest Management is very important for planning effective utilization of Agricultural and livestock production to meet the additional food requirements of the growing Indian population. It becomes

very essential to check different channels through which crop and livestock produce reaches consumers. Each channel and operation while handling crop and livestock produce at farm level as well as market level causes some post-harvest losses therein will help in making strategies for improving these farming practices and thus reducing postharvest losses.

Post harvest loss adversely impacts food security, nutrition and economic stability of several stakeholders such as farmers, exporters, traders, processors and consumers. The reduction in postharvest losses is not only essential for narrowing demand-supply gap in the food chain but also in reducing economic value losses to the country. The study conducted by ICAR-CIPHET (2015) sponsored by MoFPI indicated substantial postharvest losses of major crops / commodities and livestock produce in India due to improper postharvest management practices. They also reported that these postharvest losses lead to the tune of ₹ 92,651 Crores at that time. The below table represents postharvest losses of various crops (Source: Ministry of Agriculture and Farmers Welfare annual report, 2022-23). Among these crops, we have taken the present scenario, production and demand of Edible oil and how the production can be enhanced through adopting cooperative model.

II. Edible Oil – Indian Scenario:

Edible oils and Fats are essential ingredients for a wholesome and balanced diet and they are vital items of mass consumption. Next to Fruits and vegetables, oil seeds possess maximum postharvest losses. Total oilseeds production in the country during 2021-22 is estimated at a record 37.70 Million tones which is 1.75 million tons higher than the production of 35.95 Million tons during 2020-21. Further the production of oilseeds during 2021-22 is higher by 5.01 million tons than average oil seeds production. Total Kharif oilseeds production in the country during 2022-23 is estimated at 23.57 million tones which is higher by 1.74 million tones than average oil seeds production. Domestic oil production has not been able to keep pace with the growth in consumption. During 2021-22 the production of edible oils was 11.57 million tons from both primary (oilseeds) and secondary sources (Coconut, oil palm, Rice bran oil, cotton seed oil etc.) none of the oilseeds are the major source of vegetable oil in the country.

Among nine major oil seeds, soybean (34%), rapeseed and mustard (31%) and groundnut (27%) contribute to more than 92% of the total oil seeds production

in the country. Rajasthan, Madhya Pradesh, Gujarat and Maharashtra are the major oil seeds producing states contributing more than 77% of oilseeds production in the country. During 2021-22, area production and yield was 29.17 million hectares, 37.70 million tones and 1292 kg / ha respectively. Area under food crops is 126952 hectares out of that oil seeds has been sown at 27453 hectares which is about 21% total area.

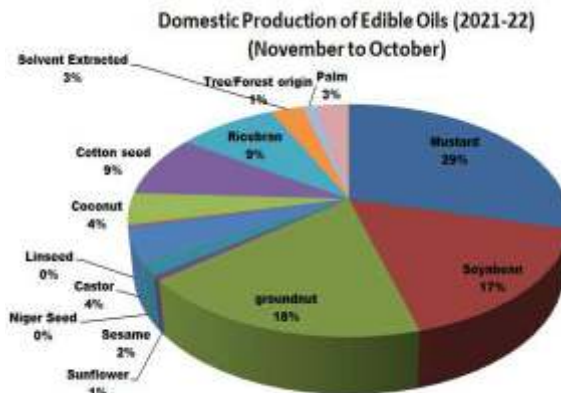


Fig 2.1 Distribution of domestic edible oil production (2021-22)

(Source: Ministry of Agriculture and Farmers Welfare Annual Report, 2022-23)

India is one of the largest importers of edible oils as its domestic production is unable to meet its domestic demand. The country has to rely heavily on imports to meet the gap between demand and supply.

a) Supply – Demand Gap:

Year	Domestic Availability (in Lakh MT)	Import (in Lakh MT)	Total Consumption	% Self sufficiency	% Share of Imports
2017-18	103.80	145.92	249.72	41.6	58.4
2018-19	103.52	155.70	259.22	40	60
2019-20	106.55	134.16	240.71	44.3	55.7
2020-21	111.51	134.52	246.03	45.35	54.67
2021-22	115.71	141.93	257.64	44.90	55.10

Fig 2.2 Supply – demand gap in Indian Edible oil Production

(Source: Ministry of Agriculture and Farmers Welfare Annual Report, 2022-23)

From the table furnished above, it is evident that 55% of demand is met through imports. Out of the total quantity of oils imported, Palm oils (Crude + Refined) constitute around 57% and are imported mainly from Indonesia and Malaysia, while Soya bean oil constitutes around 29% and is imported from Argentina and Brazil. Sunflower oil constitutes around 14% and is imported mainly from Ukraine. India is heavily dependent on imports to meet its edible oil requirements and is the largest importer of vegetable oils in the world followed by China and USA, import growth in respect of edible oil during last decade is about 174%.

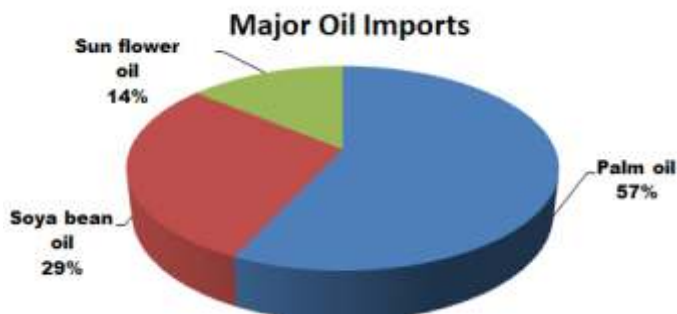


Fig 2.3 Major imported Oil varieties of India

(Source: Ministry of Agriculture and Farmers Welfare Annual Report, 2022-23)

To bridge the gap, the Government of India has announced the National Mission on Edible Oils as a centrally-sponsored project focuses on Oil Palm. The aim of the scheme is to raise the domestic production of palm oil by three times to 11.20 lakh tonnes by 2025-26 and to 28 lakh tonnes by 2029-30. Which is being executed collaboratively by the national and state governments, with a specific focus on the northeast area and the Andaman and Nicobar Islands. With effect from 2018-19, this This scheme comprises of three sub mission namely National Mission on Edible Oils – oil palm has been merged with National Food Security Mission and been implemented as National Food Security Mission (Oil Seeds & Oil Palm). The Mission will bring additional area of 6.5 lakh hectares under oil palm plantation with 3.28 lakh hectares in North Eastern States and 3.22 Lakh hectares in rest of India in the next 5 years from 2021-22 to 2025-26 and by 2029-30 it will be extended up to 16.71 lakh hectares by 2029-30. The expected production will be 75.19 lakh tonnes by 2025-26 and would cross 170 lakh tonnes by 2029-30. This scheme will give special provisions to the marginalised sections of the society such as SC/ST/Women to involved and get benefited.

In this backdrop, not only improving the domestic production of edible oil is important but the reduction in postharvest losses in oilseeds crops is equally important. In case of oil seeds, the post harvest losses of crops such as mustard, cottonseed, soybean, sunflower and groundnut were estimated and it was found to be ranging from 2.87% - 7.51% as per the annual report of MoA&FW which covers different varieties. Harvesting and threshing at farm operations and improper storage conditions at market channels resulted in postharvest losses.

III. Cooperative Model of Edible Oil Production and Distribution:

Cooperatives are people centered enterprises owned, controlled and run by and for their members to realize their common economic, social and cultural needs and aspirations. Cooperatives bring people together in a democratic and equal way whether the members are the customers, employees or residents. As business driven by values, not just profit cooperatives share internationally agreed principled and act together to build a better world through cooperation. Putting farmers, equality and social justice at the heart of the enterprise, cooperatives around the world are allowing people to work together to create sustainable enterprises that generate long-term jobs and prosperity. Cooperatives play a major role in India's economy with 98% coverage in rural India, cooperatives are mainstay of rural economy ensuring sustainable livelihoods and income for people. The below table represent the contribution of Cooperatives to the rural economy.

Total agro credit distributed through cooperatives (2016-17)	13.4%
Short term credit by coop to small and marginal farmers	19.13%
Kisan Credit Card issued by cooperatives	67.3%
Fertilizers distributed	35%
Fertilizers production capacity	24.92%
Sugar production	30.6%
PACS with storage facility	55%
Direct Employment generated	13.3%
Self-employment	10.91%

Table 3.1 Contribution of Cooperatives to the rural economy

(Source: Annual Report, Ministry of Cooperation 2022-23)

In order to enhance the operating performance and also to meet out the global advancements, a separate ministry for cooperation has been formed on July 2021. Since its inception the new ministry has taken 48 new initiatives that aimed to deepen the penetration of cooperatives to the grassroots level. In the 3-tier structure of cooperative administration followed here, the Primary Agricultural Cooperative Credit Societies (PACS) forms the fundamental unit of cooperatives. With respect to PACS, there are new initiatives taken to strengthen such as Computerisation of PACS, Model bylaws, PACS as CSCs etc. for strengthening the procurement, storage and warehousing, processing logistic management etc. it was also felt to recast the supply chain and value chain system through a workable framework for better functioning of these community led member driven business units with a view to strengthen agriculture, agri-business management. If cooperatives are strengthening at the grass root level, it can help revolutionize the whole agro supply chain from production to procurement, storage and warehousing, processing, marketing and distribution of such commodities thereby benefiting the producers and consumers.

IV. Discussion:

PACS are engaged in providing various services at panchayat / village level viz. short term credit to farmers, distribution of agro inputs such as seeds, fertilizers, pesticides, assaying, sorting, grading and storage of agro produce etc. to leverage their deep reach among the farmers it has been decided in consultation with MoA&FW that existing PACS would also form Farmer Producer Organizations (FPOs) so that benefits under FPO scheme which aims at formation and promotion of 10,000 FPOs across the country could be availed by the cooperative sector as well. It would not only improve the reach of various farmer centric services. But would also helps in realizing the vision of Sahkar – Se-Samriddhi by expanding the vibrant cooperative movement in the country.

By properly utilizing such initiatives and opportunities, the Indian edible oil production and the supply chain can be built effectively. As per Statistical Profile of Indian Cooperative Movement-2018 published by NCUI, there are 8.5 Lakh Cooperative societies in the country out of which there are 97,961 PACS available with over 13 Crore members. Such PACS with good operating performance can be shortlisted and its members shall be encouraged to plant

and maintain oilseeds around the area of operation which has the ability to form a Farmer Producer Organization (FPOs) Provision of getting agro inputs, machineries and the remedial measures which affects the growth of crops can be availed through various services offering by PACS.

For the postharvest management stage, timely harvesting, proper collection and stacking may be practiced and also for the effective storage can be done through Warehouse Regulatory Development Authority (WDRA) registered warehouses associated with PACS. The support for cleaning, grading and winnowing can be enabled. In the perspective of Market facilities, the promotion of e-auction and linking farmers to e-NAM and direct linkage also can be established between farmers and oil mills. For the distribution, PACS also can be used as sales shops and also it can be supplied to Agriculture Producers Cooperative Marketing Societies (APCMS). To undertake such big initiatives, a detailed roadmap should be prepared in accordance with the resources available throughout the districts in state wise.

While considering the case of Oil-Palm, the top five states with maximum oil palm production are 1. Andhra Pradesh 2. Telangana 3. Kerala 4. Karnataka 5. Tamilnadu. Among these states, as far as Tamilnadu is concerned, the total area coverage of oil palm (March 2017) was 30,311 hectares against the total potential area of cultivation 205000 hectares. Hence in order to enhance the maximum utilization of potential area, a holistic action plan enabling such cooperative supply chain by implementing Farm level, Market level and Policy advocacy are required. For that the policy makers of both state and union ministries of cooperation should come together to make cooperatively vibrant India.

V. Mapping with Sustainable Development Goals:

The framework proposed here will open up the employment opportunities in a larger scale that leads to the socio economic development of the nation. As projected by United Nations, 17 Sustainable Development Goals has been considering as the measurement of progress of a nation by considering the various social, economic indicators of the development. The framework proposed is matched with the goals and it was found that it was met out with the requirements / guidelines issued with the goals. The relevant matched goals are:

Goal No.	Goal Name	Targets Matched
1	No Poverty	1.1,1.2,1.3,1.a,1.b
2	Zero Hunger	2.1 2.2 2.3 2.4 2.5 2.a 2.b 2.c
8	Decent Work and Economic Growth	8.2, 8.3, 8.4, 8.5
12	Responsible Consumption and Production	12.1 12.2 12.3 12.6 12.7

Table 5.1 Sustainable Goals that are covered under the proposed framework of Indian Edible Oil Production (Author's Mapping)

VI Conclusion:

In this work, we have proposed cooperative enabled supply chain network for Indian Edible Oil production and distribution by highlighting the present scenario of edible oil production, understanding the supply-demand gap, analysing the various factors associated with the edible oil imports. A cooperative enabled supply chain network through PACS could answer the question the practical challenges associated with the production and distribution of edible oil in the country and can promote a socio economic development of the country by creating many employment opportunities through value addition methods.

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Barriers to gender equality for women laborers in advancing their careers in the construction sector

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Abstract:

In recent years, heightened awareness of gender disparities in the construction industry has prompted a focused examination in this study. Analyzing challenges confronted by women in construction, it aims to uncover and analyze both structural and social barriers impeding their empowerment and hindering inclusive career advancement. Through an extensive review of literature, supplemented by quantitative and qualitative data from interviews with actively engaged women in construction labor, the research delineates the refined nature of obstacles faced by women professionals. This includes systemic biases in hiring practices, prevailing gender stereo types, and institutional deficiencies contributing to a gendered imbalance in the construction workforce.

Beyond identification, the study strives to propose practical strategies for overcoming these challenges. Leveraging successful case studies and best practices, it provides actionable insights for policymakers, industry leaders, and organizations dedicated to fostering a more inclusive and diverse construction sector. The suggested solutions involve targeted mentorship programs, educational initiatives, and policy reforms aimed at dismantling structural barriers inhibiting women's career progression.

Ultimately, this research contributes to the ongoing discourse on gender equality in the construction industry, offering a nuanced understanding of the obstacles women encounter and presenting a roadmap for creating an environment that not only empowers women in construction but also drives transformative change towards inclusive professional advancement.

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Keywords:

Construction Sector, women workers, Career Advancement, Empowerment

1. Introduction:

In the dynamic construction sector of Dindigul District, Tamil Nadu, the nuanced role of women workers is shaped by a myriad of factors. Recent statistics underscore the significance of women in the construction workforce, constituting approximately minimal in number. Globally, informal work is a greater source of employment for men (63 percent) than for women (58 percent), and 118 million women workers are engaged in the unorganized sector in India, constituting 97% of the total women workers in India whereas domestic construction and real estate sector, which employs 57 million workers, 50 million of the people employed are men, and only 7 million are women yet their representation remains notably under represented. (The Economics Times, Jan 09, 2023) Cultural dynamics wield considerable influence, molding societal expectations and determining the extent of women's involvement in construction work. Beyond cultural influences, economic implications are profound, with women's participation making a substantial contribution to the local economy. However, existing data reveals concerning disparities in wages and job opportunities when compared to their male counterparts, signaling the need for targeted interventions to address these imbalances. Baruah, B. (2008)

Education emerges as a pivotal determinant, with the educational background of women in construction playing a critical role in skill development and career advancement. Insights into the educational landscape provide statistical indicators that shed light on potential gaps in access to education and training programs. Understanding these gaps becomes crucial for designing interventions that enhance women's participation in construction by addressing educational disparities. Moreover, community dynamics and support systems significantly influence women's decision-making and experiences in the industry, underscoring the importance of considering local social structures in policy formulations. (Gatta, M. (2002)

Government initiatives aimed at promoting women's employment in the construction sector within Tamil Nadu, specifically in Dindigul District, have yielded measurable impacts. Statistical analyses of the effectiveness of these

policies offer valuable insights into the level of institutional support and identify potential areas for enhancement. Furthermore, a focus on health and safety considerations for women workers in construction, supported by statistical data on work place safety

Measures and access to health care, becomes paramount for ensuring their overall well-being and addressing potential vulnerabilities. (Tamilnadu Human Development Report, 2003)

The presence of empowerment programs targeted at women in the construction sector in Dindigul District is a noteworthy aspect of the local landscape. Evaluating the statistical outcomes of such initiatives provides a practical understanding of their impact, serving as a foundation for refining and tailoring interventions to address the unique challenges faced by women in the construction industry in this specific region. Through a meticulous examination of these statistical realities, this research aspires to contribute action able insights for the formulation of informed policies and strategies. The ultimate goal is to foster an environment that not only recognizes but actively empowers women in the construction sector in Dindigul District, thereby promoting a more equitable and inclusive industry landscape.

2. Review of the literature:

This table provides a structured overview of the key concepts of review literature and respective components in study.

The primary conclusions drawn from the study reveal that women tend to be assigned specific roles based on genuine disparities arising from differential access to skills and perceived limitations. This results in job categories predominantly occupied by women, often characterized by lower skill requirements and remuneration. A more explicit form of discrimination identified is the unequal compensation for equivalent work. Pay disparities were influenced by factors such as women not being assigned to overtime or night shifts, where wages are higher. Overall, men experience more frequent promotions, and unlike women, their job responsibilities often undergo substantial changes with these advancements. Additionally, a greater proportion of men receive benefits across all categories compared to women. The presence of unions generally correlates within creased benefits for workers, including women. (Saxena, 1999)

Training plays a crucial role in fulfilling the skill needs of the construction industry and is a key determinant in achieving various objectives. This

includes enhancing occupational safety and health standards and elevating wages and employment terms. Research conducted in India highlighted that the most effective means of improving the remuneration and conditions of employment for construction workers is by providing them with opportunities to acquire skills. In contemporary market dynamics, unskilled workers often face exploitation, while skilled workers can assert control over their rates and conditions of engagement (Vaid, 1999)

An intriguing instance, also originating in India, involves the Tamil Nadu Joint Action Council for Women, which successfully advocated for the inclusion of women in a traditionally male-dominated field. It managed to persuade contractors in the construction industry to hire women masons. Typically relegated to temporary and casual roles involving unskilled tasks like lifting earthloads, cutting soil, mixing cement, and breaking stones, women faced considerable resistance from both contractors and male workers when entering the masonry profession. Despite initial hostility, financial incentives prompted several contractors to hire a group of women who had undergone training provided by this council. This initiative helped break down some of the prejudices against women in these roles, although the women masons still experienced significant wage disparities compared to their male counterparts for equivalent work.

Social Welfare & Women Empowerment Department, Government provided outlined objectives serve a paramount role in advancing the status and well-being of women. The commitment to providing protection and ensuring welfare underscores the need to shield women from discrimination and violence while fostering access to essential services. Addressing gender issues reflects a dedication to challenging societal norms and biases that impede women's progress. Importantly, the objective to recommend to the government signifies an active role in influencing policies, advocating for legal rights, employment opportunities, and health care access. Together, these objectives strive to create a more equitable and supportive environment, advocating for the rights and dignity of women across various facets of life. (SWED-TN, India, 1993). This suggests that the government has undertaken numerous initiatives to safeguard and empower women in their professional journeys. However, persistent societal barriers continue to impede their progress, preventing them from achieving financial independence and advancing in life autonomously.

3. Statement of the problem:

In the construction field, unfair treatment between men and women continues to be a problem, making it hard for women workers to move up in their careers. Even though people are trying to make things fair, there are still big challenges that affect how much women can achieve in their jobs and how much they get paid. Many people still think that construction is mainly for men, and this belief stops women from being hired. Also, women don't always get the same chances to learn new skills, which makes it tough for them to move ahead in their careers. The idea that the construction world is mostly for men also means that women miss out on important opportunities to meet and learn from others who can help them succeed. (Nirupama, P. 2003)

Even when rules are made to be fair, there are still differences in how much men and women get paid, keeping the unfairness going. To fix this, we need to change how people think about these jobs, make sure women get the same chances to learn, and create fair rules that give everyone equal opportunities and pay. This way, the construction industry can use everyone's skills to do even better.

4. Objectives of the study:

- To identify the barriers hinder the career growth among women in the construction sector.
- To suggest the mentorship and support programs.

5. Research Methodology:

5.1 Sample of the Study:

In the study area of Dindigul District, the focus is specifically on women working in the construction sector. The sampling technique employed for this research is Purposive Sampling, meaning participants are chosen based on certain characteristics relevant to the study's objectives. As the total population of women construction workers in the area is considered unknown, statistical methods are utilized with a 10% Margin Error to ensure a reliable representation of the population. The approximate sample size for this study is set at 100 women, selected intentionally to capture a diverse range of experiences and perspectives within the context of the construction industry in Dindigul District. This sampling approach aims to provide an nuanced

understanding of the challenges and opportunities faced by women in construction, shedding light on the intricacies of their professional journeys in this specific geographic setting.

5.2 Tools for Data Collection:

The research design is Descriptive in nature employs both, combining quantitative and qualitative methodologies to comprehensively investigate the experiences of Respondents.

5.3 Descriptive Design:

The quantitative phase adopts a descriptive research design, enabling the presentation and analysis of data in a clear and straight forward manner. This design is chosen to offer a snap shot of the prevalent conditions and characteristics of women in construction within the surveyed population.

5.4 Quantitative Survey and Interview Schedule (100 Participants):

A structured quantitative survey and interview schedule will be administered to a sample of 100 women construction workers. This approach aims to gather numerical data, providing a broad overview of demographics, work conditions, and key challenges faced by women in the construction sector. The survey questions are designed to elicit both quantitative responses and open-ended insights, allowing for an nuanced understanding of the participants' perspectives.

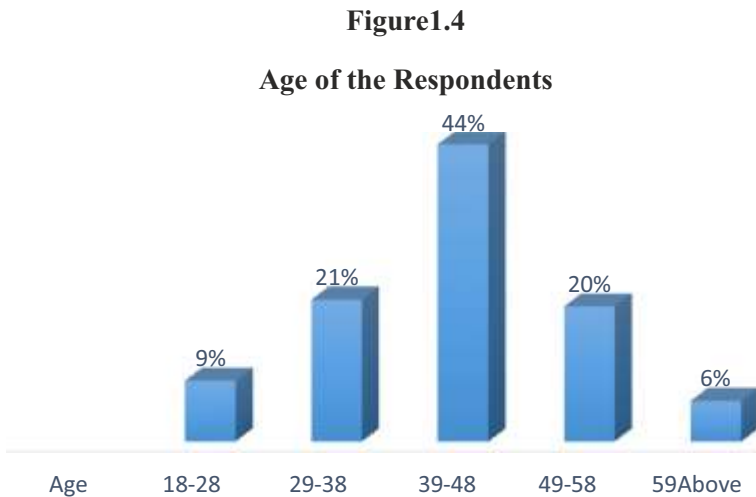
5.5 Qualitative In-depth Interviews and Case Studies (2 Participants):

The qualitative aspect involves in-depth interviews and case studies with three selected participants. This method seeks to delve deeper into the lived experiences of women construction workers, exploring their personal narratives, challenges, and successes. Through open-ended questions and personalized inquiries, the qualitative component aims to uncover rich, context-specific insights that quantitative data alone may not capture.

This methods strategy ensures a comprehensive exploration of the various experiences of women in the construction sector. By combining the statistical rigor of quantitative analysis with the depth of qualitative inquiry, the study aims to provide a holistic understanding of the challenges and opportunities encountered by women engaged in construction work.

6. Major Finding:

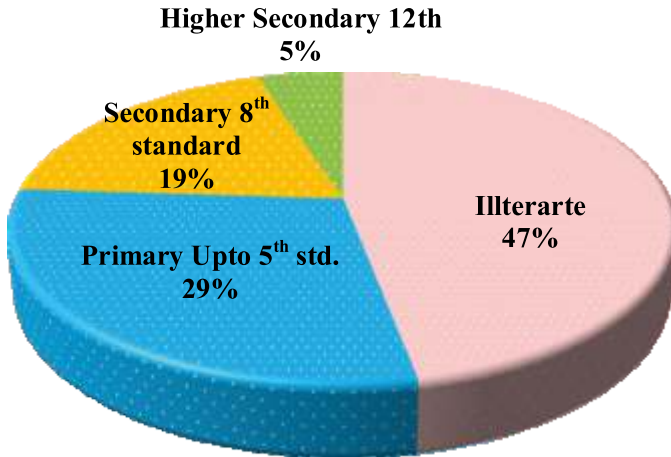
6.1 Age of the Respondents:



The above Figure 1.4 examines that most women construction workers are between 39 and 48 years old, making up 44% of the group. This suggests that many have lots of experience and probably find the job stable and satisfying. They might stick with construction due to family responsibilities and limited job options outside the field. There's also a group of women aged 29-38 (21%) who are likely in the middle of their careers. Those between 49 and 58 years old (20%) heading towards the retirement. Only 9% are younger (18-29 years old), showing that it might be a bit hard for younger women to start in construction. The smallest group (6%) is women aged 59 and above, which could be because the physical demands of construction become tougher as people get older. Understanding these age groups helps create a more supportive and diverse environment in construction.

6.2 Education of the Respondents:

Figure 1.5



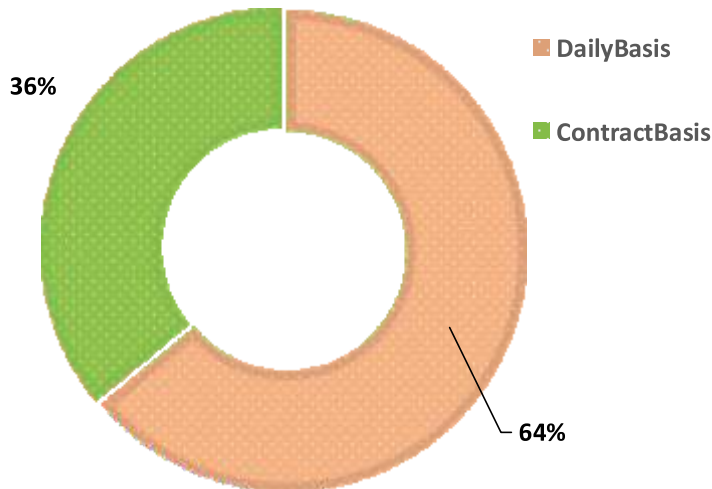
Education of the Respondents

The data from above Figure 1.5 indicates a substantial proportion of women in the construction sector facing low educational attainment, with 47% having completed only primary education up to the 5th grade. Economic barriers and limited educational opportunities contribute to this high illiteracy rate, especially in regions with scarce educational resources. The 29% of women with education upto the 8th grade highlights challenges in continuing beyond primary school, possibly influenced by societal norms or economic factors. Additionally, 5% have reached higher secondary education but dropped out, underscoring obstacles to completing secondary education. To address these issues, initiatives promoting education are crucial. Education not only equips women with valuable skills but also opens doors to better job opportunities, empowerment, and increased awareness of rights. By advocating for

education in the construction sector, we can foster a more inclusive and empowered workforce, breaking down barriers and promoting social change.

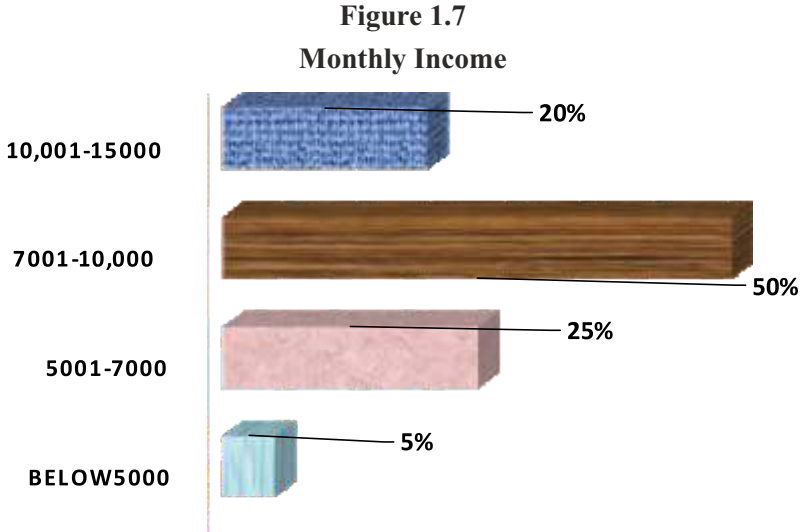
6.3 Employment status:

Figure 1.6 Employment Status



The Figure 1.6 portrays that in the construction world, women have two main types of jobs. About 36% have contracts, but they might face fewer chances because of biases and not being considered for long-term work the prevalence of daily wages can be attributed to the transient and project-specific demands inherent in construction work. Daily wage arrangements are particularly well-suited for tasks that demand specialized skills for short duration's. On the other side, 64% of women work daily jobs, often doing helper tasks for short times. This happens because the construction projects need flexible workers for different tasks, and daily jobs are usually for simpler, temporary roles. So, women often find more opportunities in daily jobs, even though these jobs might not last as long. Making things fairer and breaking gender stereo types can help give women more chances for both daily and long-term jobs in construction.

6.4 Monthly Income:



From the above Figure 1.7 the distribution of monthly income among women workers in the construction sector underscores a range of challenges influencing their earnings in different brackets. For the 5% earning below 5000, financial struggles arise due to limited work days, resulting in fewer opportunities compared to their counterparts. These workers often face lower pay rates, particularly when juxtaposed with their male counterparts in similar roles, and are additionally hindered by the absence of overtime compensation, contributing to financial strain. In the 5001-7000 income range (25% of workers), challenges persist, potentially stemming from fewer workdays or part-time engagements, leading to incomes that may fall short of meeting essential living expenses. The 50% earning between 7001-10,000 grapples with financial constraints, likely due to a combination of limited work opportunities, pay rates below industry standards, and the absence of overtime compensation.

The lack of additional financial incentives contributes to the financial suppression experienced by this significant portion of workers. Even within the 20% earning between 10,001-15,000, challenges persist, reflecting potential issues such as fewer workdays, gender-based pay disparities, and limited access to overtime opportunities.

The income distribution illustrates the multifaceted nature of challenges faced by women workers in the construction sector, ranging from disparities in work

opportunities to gender-based pay inequities. Addressing these issues is vital to establishing fair compensation practices, enhancing financial well-being, and fostering a more inclusive and supportive environment for women in the construction industry.

6.5 No. of working Days:

Table 1.1
No. of Working Days

Employment Details	Components	N=100	Percent
No. of working Days	< 10 days	5	5.0
	11-15 days	12	12.0
	16-20 days	30	30.0
	21-26 days	53	53.0

The above Table 1.1 explains the distribution of working days among workers in the construction sector, as outlined in the provided data, reveals potential negative aspects. Despite the majority of workers operating in the 21-26 days category, suggesting significant engagement in construction activities, the prevalence of workers in the lower brackets (Less than 10 days: 5workers, 11-15 days: 12 workers) indicates a substantial portion of the workforce faces challenges related to irregular or insufficient employment. This disparity in the number of working days could lead to financial instability for those working fewer days, impacting their overall income and livelihoods. Workers with less consistent employment may struggle to meet basic needs, and the variability in working days could contribute to economic uncertainties and job in security within the construction sector. Addressing and mitigating these negative aspects is crucial for fostering a more stable and equitable work environment for all construction workers.

6.6 Wage per day:

Table 1.2
Wage per day

Employment Details	Components	N=100	Percent
Wage per day	<300/day	26	26.0
	350/day	31	31.0
	400/day	43	43.0

The above Table 1.2 depicts the distribution of daily wages among workers in the construction sector, as indicated by the provided data, suggests several potential negative aspects. While 43 workers earn 400/day, signaling a relatively higher wage, a significant portion of the workforce (26 workers) receives less than 300/day. This income disparity may lead to financial challenges for those earning lower wages, impacting their ability to meet basic needs such as food, shelter, and healthcare. The prevalence of workers earning less than optimal wages could also indicate exploitative labor practices or insufficient remuneration within the construction sector. Additionally, the variability in daily wages (ranging from less than 300/day to 400/day) may contribute to economic uncertainties and financial instability for workers, making it difficult for them to plan for the future or invest in personal and professional development. Addressing these negative aspects is essential for promoting fair wage practices and ensuring the economic well-being of all workers in the construction industry.

6.7 Reasons for Joining in Construction Sector:

Table 1.3
Reasons for Joining in Construction Sector

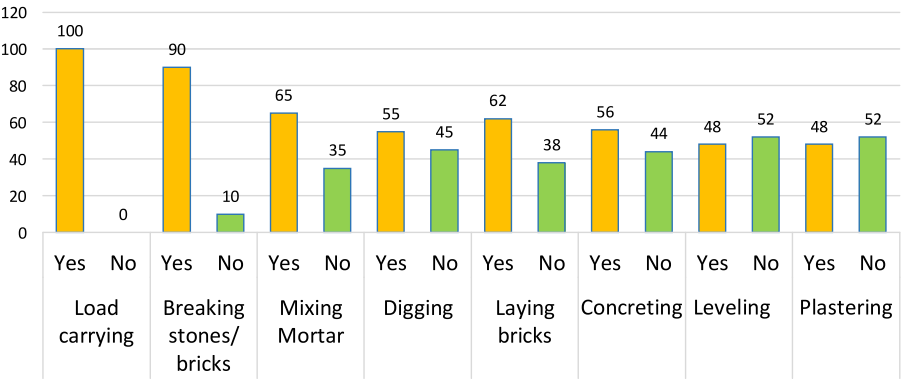
Employment Details	Components	N=100	Percent
Reasons for Joining in construction Sector	Force by Poverty	33	33.0
	No other sources of Income	25	25.0
	Easily available	5	5.0
	Influence of Familymembers	37	37.0

The above Table 1.3 examines the reasons provided for individuals joining the construction sector highlight various challenges and circumstances that may lead to negative aspects within the industry. A significant number, 33 workers, cite being forced by poverty as their primary reason for joining the sector. This underscores the harsh economic realities that drive individuals to accept employment in construction, often as a last resort to meet basic needs. Another concerning factor is the 25 workers who mention having no other sources of income as a reason for entering the construction sector. This indicates a lack of diverse economic opportunities for these individuals, potentially limiting their ability to explore alternative, potentially more stable, forms of livelihood.

Furthermore, the data reveals that 37 workers joined the construction sector under the influence of family members. While familial connections can be positive, dependence on family influence for career decisions might limit individuals' agency in choosing professions that align with their skills and aspirations. The fact that only 5 workers mentioned the ease of availability as a reason suggests that, for some, the construction sector might be perceived as a readily accessible option rather than a preferred or fulfilling choice. This may indicate a lack of diverse career opportunities or awareness about alternative professions. In summary, the reasons for joining the construction sector, particularly being compelled by poverty and having limited alternative income sources, underscore systemic challenges that contribute to individuals entering the industry out of necessity rather than choice. Addressing these root tissues is crucial for fostering a more equitable and empowering work environment within the construction sector.

6.8 Type of Work Performed:

Figure 1.8
Type of Work Performed



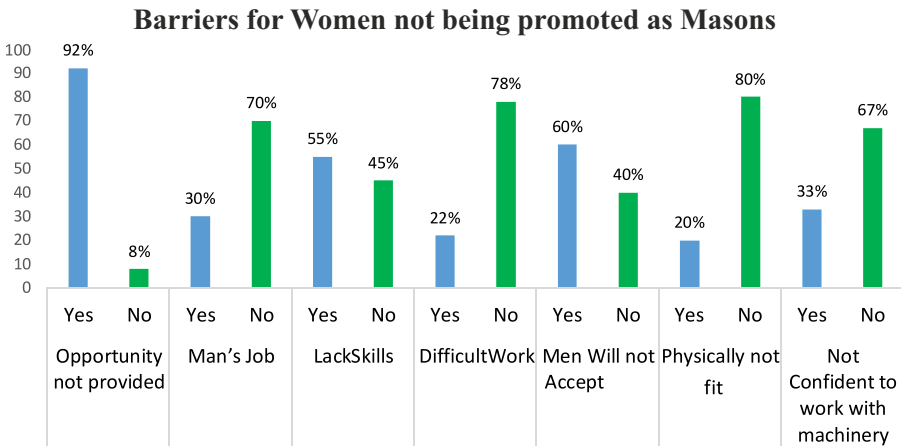
The data from above Figure 1.8 reveals that women workers are actively engaged in various types of work within the construction sector. All respondents (100%) indicated involvement in load carrying, emphasizing the significant contribution of women in this physically demanding task. Similarly, 90% of women reported breaking stones or bricks, showcasing their participation in essential construction activities.

In other areas, 65% of women are involved in mixing mortar, 55% in digging, 62% in laying bricks, 56% in concreting, 48 % in leveling, and another 48% in plastering. While the percentages vary, the affirmative responses highlight that women are actively participating in a range of construction tasks, challenging stereo types and contributing substantially to the work force.

Despite the positive indications, the data also shows that in some activities, such as leveling and plastering, there is a relatively higher percentage (52%) of women who responded negatively. This may suggest certain limitations or barriers that restrict women's participation in specific types of construction work. Identifying and addressing these challenges is crucial for promoting inclusivity and equal opportunities for women in the construction sector.

6.9 Barriers for Women not being promoted as Masons:

Figure1.9



The data on the above Figure 1.9 evaluates the various components related to women's participation in the construction sector paints a nuanced picture of the prevailing attitudes and challenges. A significant majority, 92%,

acknowledged the existence of opportunities for women in the construction sector, reflecting a positive inclination toward inclusivity. However, 8% perceived that such opportunities were not provided, indicating potential limitations in access or awareness.

Concerning, 30% still viewed construction as a "man's job," revealing persistent gender stereotypes. On the positive side, 70% disagreed with this notion, suggesting a gradual shift in perceptions. Additionally, 55% cited a lack of skills as a hindrance to women's participation, underscoring the importance of skill development programs to bridge this gap.

While 78% disagreed with the perception that construction work is inherently difficult, 22% still held this belief, emphasizing the need to dispel misconceptions about the nature of the work. Moreover, 60% expressed concerns about men not accepting women in the construction sector, highlighting the existence of social barriers that need addressing.

On a positive note, a significant 80% rejected the idea that women are physically unfit for construction work. However, 20 % still held this perception, pointing to lingering stereotypes that need to be challenged. Furthermore, 67 % disagreed with the notion that women lack confidence to work with machinery, but 33 % still held this view, indicating potential barriers to women's engagement with technology in the construction sector.

In summary, while there are positive indications and a growing recognition of opportunities for women in the construction sector, addressing persistent stereotypes, enhancing skill development initiatives, and fostering a more inclusive work place culture are crucial steps to ensure equal and equitable participation in the industry.

6.10 Willingness of Women Construction Workers to be trained as Mason:

H_{01} - There is no association between Category of the employment and willingness of women Construction Workers to be trained as Masons.

H_{a1} - There is an association between Category of the employment and willingness of women Construction Workers to be trained as Masons.

Table - 1.4
Chi-Square Tests

**Willingness of Women Construction Workers to be trained as Mason
and Category of the employment**

Category of the employment	Willingness to be trained as Masons			Pearson Chi-Square
	Yes (%)	No (%)	Total (%)	
Daily Basis	73 (73.0)	14 (14.0)	87 (87.0)	$\chi^2 = 6.794$ df=1 p=0.05
Contract Basis	12 (12.0)	1 (1.0)	13 (13.0)	
Total	85 (85.0)	15 (15.0)	100 (100)	

The above bivariate Table 1.4 analysis looks at whether workers want to get trained as masons based on how they are employed, either on a daily or contract basis. The numbers show that more workers on a daily basis (73%) are interested in training, while only 14% are not interested. For workers on a contract basis, fewer (12%) want training, and only 1% do not. Overall, 85% of all workers want training, and 15% do not.

The Chi-Square test, with a calculated χ^2 value of 6.794, indicates a statistically significant association between employment category and the willingness to be trained. With one degree of freedom and a p-value of 0.05, the results suggest that the observed differences in training willingness among daily and contract workers are not likely due to chance.

In conclusion, the analysis underscores a notable difference in the willingness of workers on daily and contract bases to undergo training as masons. This finding emphasizes the importance of tailoring training programs to address specific preferences and needs within each employment category, contributing to a more effective and responsive skill development approach in the construction sector.

6.11 Willingness of Women Construction Workers to be trained as Mason and Education:

- H02 - There is no association between education of the respondents and willingness of women Construction Workers to be trained as Masons.
- Ha2 - There is an association between education of the respondents and willingness of women Construction Workers to be trained as Masons.

Table 1.5 Chi-Square Tests
Willingness to be trained as masons and Education

Education	Willingness to be trained as masons			Pearson Chi-Square
	Yes	No	Total (%)	$\chi^2= 0.091$ $df = 3$ $p= 0.252$
Illiterate	38 (38.0)	9 (9.0)	47 (47.0)	
Primary	25 (25.0)	4 (4.0)	29 (29.0)	
Secondary	17 (17.0)	2 (2.0)	19 (19.0)	
Higher	4 (4.0)	1 (1.0)	5 (5.0)	
Total	84 (84.0)	16 (16.0)	100 (100)	

The above bi variate Table 1.5 The analysis examines the willingness of individuals to undergo training as masons based on their education level. The data is presented in a table, and the Pearson Chi-Square test is applied to assess the relationship between education and the desire for training. Looking at the numbers, the table shows that among illiterate individuals, 38% are willing to be trained, while 9% are not. For those with a primary education, 25% express a willingness to undergo training, with 4% indicating otherwise. In the secondary education category, 17% are willing, and 2% are not. For individuals with higher education, 4% want training, and 1% do not.

The Chi-Square test result is $\chi^2 = 4.091$, with 3 degrees of freedom and a p-value of 0.252. This suggests that there isn't a significant association between education level and the willingness to be trained. In simpler terms, the data

does not strongly support the idea that education level is a major factor in determining whether someone wants training as a mason. In conclusion, the analysis indicates that there is no clear link between education level and the desire for training among individuals

Aspiring to be masons. This finding emphasizes the need to consider various factors beyond education when designing training programs in the construction sector.

7. Case studies:

Case Study - 7.1

Breaking Ground: Inspiring Journey as a Female Mason in Dindigul's Construction Sector

Sudha, growing up in a small village in Dindigul district, TamilNadu, faced financial hardships from a young age. Despite the challenges, she embraced hard work as an opportunity rather than a burden. She found a job as a laborer, where her tasks included carrying heavy loads, breaking stones, and mixing mortar. The physical demands of the work were intense, but Sudha never backed down from a challenge.

As she toiled alongside her male peers, Sudha earned their respect through her dedication and commitment to the job. Her strong work ethic made her stand out, but she also faced the pervasive gender stereotypes that lingered in the construction industry. The industry, traditionally dominated by men, presented Sudha with additional obstacles due to societal expectations and biases.

Undeterred by these challenges, Sudha harbored a dream – a dream to become a mason. Her aspirations went beyond just the prospect of higher pay; she aimed to shatter gender norms and prove that women could excel in roles typically reserved for men. The desire to become a mason wasn't merely a career choice for Sudha; it was a personal mission to break barriers and challenge the status quo.

Sudha's journey was far from easy. She had to confront not only the physical demands of the job but also the skepticism and prejudice surrounding her gender in the construction sector. Her steely resolve and determination, however, kept her going. She continued to prove herself, demonstrating that competence and capability were not defined by gender.

Through her hard work and perseverance, Sudha began to realize her dream of becoming a mason. Each step she took in her career became a testament to her

ability to overcome societal expectations and excel in a field where women were often under represented.

Sudha's story serves as an inspiration, not just for women aspiring to enter non-traditional fields but for any one facing societal barriers. Her journey highlights the importance of breaking gender stereotypes and creating opportunities for individuals based on their skills and merit, rather than preconceived notions about their gender.

Case – 7.2

Breaking Barriers: The Unseen Struggles, Navigating Limited Opportunities and Inequality in the Construction Sector

Maheshwari (name changed), a 28-year-old woman from a rural area in Dindigul district, Tamil Nadu. Maheshwari's upbringing, much like Sudha's, was marked by financial difficulties. Determined to contribute to her family's income, Maheshwari sought employment in the construction sector.

Unlike other women in construction sector, Maheshwari found herself in a situation wheretraining opportunities were scarce. She was assigned menial tasks, often relegated to the periphery of the construction site. Maheshwari's daily routine consisted of tasks such as cleaning, fetching water, and other unskilled chores that were seen as auxiliary to the main construction work.

Despite her willingness to learn and contribute meaningfully, Maheshwari faced minimal involvement in skilled tasks. The male-dominated environment offered little encouragement for her to develop expertise in construction-related skills. The lack of training not only hindered her personal and professional growth but also reinforced gender stereotypes within the sector.

Maheshwari struggled with the absence of respect from her male counterparts. The hierarchical structure within the construction industry marginalized women like her, diminishing their contributions and devaluing their presence on the work site. The pervasive gender bias made it difficult for her to assert herself and gain acknowledgment for her efforts.

Job security was another pressing concern for Maheshwari. As an informal laborer with no formal training, she faced the constant threat of job insecurity. The absence of a stable contractor legal protections left her vulnerable to exploitation and arbitrary dismissals. This lack of security further exacerbated the challenges she faced in supporting herself and her family.

Maheshwari's story underscores the harsh realities that many women in the construction sector endure – limited training opportunities, reduced involvement in skilled tasks, lack of respect, and a precarious job security. Her experience sheds light on the urgent need for gender-inclusive policies and practices within the industry to ensure that women receive fair treatment, equal opportunities, and a supportive environment in which they can thrive professionally.

The above Table outlines the internal strengths and weaknesses, as well as external opportunities and threats, for both Sudha and Maheshwari in their respective journeys within the construction sector.

7.3 SWOT Analysis of the Case Study:

Table 1.6
SWOT Analysis of the Case Study

SWOT Analysis for Sudha's Journey in the Construction Sector			
Strengths	Weaknesses	Opportunities	Threats
Dedication and Work Ethic	Initial Lack of Opportunities	Breaking Gender Stereotypes	Persistent Gender Bias
Resilience and Determination		Inspiration for Others	
Skill Development			
SWOT Analysis for Maheshwari's Struggles in the Construction Sector			
Strengths	Weaknesses	Opportunities	Threats
Willingness to Contribute	Limited	Advocacy for Change	Job Insecurity
Endurance	Training Opportunities	Community Awareness	Continued Gender Bias

The above SWOT Analysis Table 1.6 examine the various aspects of SWOT as follows -

7.3.1 Strengths:

Dedication and Work Ethic Sudha's unwavering commitment to her tasks demonstrated not only her dedication but also earned her respect among her male peers.

Resilience and Determination: Journey was marked by resilience and determination, essential qualities that helped her navigate and overcome societal expectations and prejudices in the challenging, male-dominated construction industry.

Skill Development: Sudha's ability to develop the skills required to become a mason showcased her adaptability and learning capacity, proving that she could thrive in roles traditionally reserved for men.

7.3.2 Weaknesses:

Initial Lack of Opportunities Sudha faced financial hardships and a scarcity of initial opportunities for formal training, which limited her access to skilled tasks within the construction sector.

7.3.3.Opportunities:

Breaking Gender Stereotypes Sudha's successful journey creates an opportunity to challenge and break down gender stereotypes prevalent in the construction industry, potentially inspiring more women to pursue and excel in traditionally male-dominated roles.

Inspiration for Others Sudha's story serves as an inspiration, offering the opportunity to motivate and empower other women to pursue their aspirations in non-traditional fields, contributing to a more inclusive and diverse work force.

7.3.4 Threats:

Persistent Gender Bias The construction industry's deep-rooted gender bias poses a threat to Sudha's continued success and the success of other women aspiring to enter similar roles, potentially limiting their recognition and opportunities. This detailed analysis provides a more understanding of Sudha's strengths, weaknesses, opportunities, and threats within the context of her journey in the construction sector.

7.4 SWOT Analysis for Maheshwari's Struggles in the Construction Sector:

7.4.1 Strengths:

Willingness to Contribute: Maheshwari demonstrated a strong commitment to contributing to her family's income. Despite limited opportunities, her dedication to work in the construction sector showcases her determination.

Endurance: Maheshwari continued to fulfill assigned tasks despite facing adversity. Her perseverance in carrying out responsibilities demonstrates resilience in challenging circumstances.

7.4.2 Weaknesses:

Limited Training Opportunities: Maheshwari lacked access to formal training programs, restricting her ability to acquire essential skills. The absence of training hindered her involvement in skilled tasks within the construction sector.

7.4.3 Opportunities:

Advocacy for Change: Maheshwari's story presents an opportunity to advocate for significant changes within the construction industry. Increased training opportunities and gender-inclusive policies can be promoted as essential components for a more equitable work place.

Community Awareness Maheshwari's experiences can serve as a catalyst for raising awareness within the community. By sharing her challenges, Maheshwari can foster community support for gender-inclusive practices and equal opportunities in the construction sector.

7.4.4 Threats:

Job Insecurity: Maheshwari faces the constant threat of job insecurity due to her lack of formal training. The absence of a stable contractor legal protections makes her vulnerable to exploitation and arbitrary dismissals, jeopardizing her financial stability.

Continued Gender Bias: The hierarchical structure and prevailing gender bias within the construction industry pose a threat to Maheshwari's opportunities for growth and recognition. The industry's existing biases may continue to marginalize women like Maheshwari, limiting their potential

within the sector.

This detailed SWOT analysis underscores Maheshwari's strengths, weaknesses, opportunities, and threats within the context of her struggles in the construction sector. It highlights the importance of addressing limited training opportunities, advocating for change, and fostering community awareness to create a more supportive and equitable environment for women in the industry.

8 Recommendations for enhancing Gender Inclusivity in the construction sector:

8.1 Promoting Training Programmes:

- Establish formal training programs targeting women, offering both theoretical knowledge and practical skills. Collaborate with vocational training institutions and industry experts to design specialized courses tailored to the needs of aspiring female construction professionals. Ensure accessibility by providing financial assistance or scholarships for women seeking training in construction-related fields.

8.2 Encourage On-the-Job Training:

- Integrate on-the-job training opportunities into daily work routines, allowing women to acquire skills in real-world construction scenarios. Establish mentorship programs where experienced workers guide and train women in various aspects of the construction industry. Create a supportive culture that encourages continuous learning through hands-on experiences.

8.3 Leadership Opportunities:

- Implement affirmative action policies to ensure equal consideration for women in leadership roles. Establish leadership development programs specifically designed to identify and nurture the potential of women within the construction sector. Encourage companies to set diversity and inclusion goals, including targets for women in leadership positions.

8.4 Awareness and Sensitization:

- Conduct regular awareness programs highlighting the contributions of women in the construction sector. Organize workshops and seminars to educate employees about the challenges faced by women in the industry

and the benefits of a diverse work force. Implement zero-tolerance policies for gender-based discrimination and harassment, ensuring a safe and inclusive work place for all.

8.5 Mentorship and Support Programs:

- Establish formal mentorship programs connecting experienced professionals with aspiring women in the construction sector. Create networking opportunities, both within and outside the organization, to facilitate the exchange of ideas and experiences among women in the industry. Implement support initiatives such as counseling services and professional development workshops to assist women in overcoming challenges.

8.6 Mandatory Women Supervisor:

- Implement policies requiring a minimum representation of women in supervisory and managerial positions. Offer leadership training programs specifically for women, equipping them with the skills necessary to excel in leadership roles. Encourage mentorship and sponsorship programs to help women advance into supervisory positions.

9. Conclusion:

In conclusion, championing gender inclusivity in the construction sector is pivotal for cultivating diversity and ensuring a flourishing, fair industry. The proposed recommendations provide a comprehensive strategy to augment opportunities for women workers. By establishing formal training programs in collaboration with vocational institutions and offering financial support, barriers to entry are dismantled. On-the-job training, mentorship initiatives, and a nurturing culture foster continuous skill development. Leadership opportunities can expand through affirmative action, diversity goals, and targeted development programs. Raising awareness via workshops combats biases, while zero-tolerance policies safeguard a secure, inclusive workspace.

Mentorship and support programs, coupled with networking opportunities, create a supportive community for women in construction. Mandatory policies for women in supervisory roles, along with leadership training, actively challenge existing hierarchies. In unison, these measures offer a holistic approach to break down gender barriers, recognizing and valuing the potential of every worker, irrespective of gender, contributing to the overall

growth and sustainability of the construction industry.

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Score Card Approach to Measuring Sustainability and Competitive Sustainability Strategies of selected Agricultural Cooperatives in Oromia Regional State, Ethiopia

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Abstract:

Cooperatives are business entities, by nature socially responsible and eco-friendly enterprises. Cooperative revitalization programs in countries such as Ethiopia heavily stress sustainability. The present research paper analyzed the economic, social, and environmental dimensions of cooperatives sustainability and examined the sustainability oriented competitive strategies adopted by sample cooperatives. Since the research intends to analyze the sustainability of cooperatives, field survey method was followed. Multi-stage sampling method was adopted to select study area, cooperatives and respondents. At the first stage, among 18 districts in west shoa zone, Dendi district was selected based on the justification that there is high concentration of agricultural cooperatives. At the second stage, out of 23, six cooperatives were selected. The sample size was 100, and adopting PPS members from each cooperative were selected. The sustainability of cooperatives was analyzed by sustainability score card approach advocated by Measuring Cooperative Difference Research Network (MDCRN), Canada. Moreover, for data analysis and assessment of sustainability level for ranking of cooperatives, Morris Inequality Index was used. Agricultural Cooperatives in the study area are involved in the economic, social, and environmental dimension of cooperative sustainability. The agricultural cooperatives do have better position with economic sustainability, to some extent social sustainability, but they do not have favourable situation in environmental sustainability so that the cooperatives are located at moderate and low level of sustainability condition. With regard to comprehensive cooperative sustainability the same result is seen among sampled cooperatives. It is evident that the sustainability level and ranking are in consonance with the sustainability strategies they

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adopted. Cooperative Sustainability can be achieved only through practicing and adopting appropriate sustainability strategies advocated along with adaptation and mitigation matrix at right time effectively whereby cooperatives may contribute more to the Ethiopian Agricultural Cooperatives Development Strategy and ILO's declaration as "Cooperatives for Sustainable Development".

Keywords:

economic, environmental, score card, social, sustainability

1. Introduction:

1.1. Background and Justification:

Cooperatives are an old idea, but one that is more relevant than ever if we look ahead at the development challenges and opportunities the world faces over the coming decades. As the United Nations are about to agree Sustainable Development Goals which will set a global agenda, there is a real chance to make extreme poverty and deprivation history, to secure social inclusion and to reconcile economic and social objectives. In tackling all of these challenges, cooperatives can play a valuable role in turning the tide. Many of the poor and excluded are reached neither by conventional markets for goods and services nor by government.

Cooperatives and other social economy enterprises have shown that they have the necessary reach.

A recent study by the ILO and the International Cooperative Alliance (ICA) "Cooperatives and Sustainable Development Goals" highlights the contributions that cooperative enterprises are making to sustainable development and their potential to do much more: from creating employment and enhancing gender equality to providing clean energy and financial inclusion to ensuring food security and extending social protection. Many of the working poor, the hungry and the excluded are rural workers, often smallholder farmers. Cooperatives have an outstanding track record in overcoming multiple forms of exclusion in rural areas, but not only there. Cooperatives are present in all sectors of the economy and adaptable to a range of contexts. They respond to the triple bottom line of sustainable development: economic development, social justice, and environmental protection. For all

these reasons, cooperatives are very much enterprises of the future which play an essential role in complementing conventional markets and government action. This is acknowledged explicitly in the outcome document of the Rio+20 Conference ‘The future we want’. The international community should bear this in mind when setting out the strategies and the means through which the Sustainable Development Goals can be realized (ILO, 2014).

Studies have shown that the cooperative enterprises across sectors have continued to grow and prosper during the financial crisis, and this is reaffirmed by the survey results. Among the respondents 68 percent observed that the number of cooperatives has grown in their country or region during the past decade; 63 percent noted that individual membership in cooperatives has increased; and 57 percent perceived the number of people employed by cooperatives as having risen (ICA, 2011).

1.1.2. Statement of the Problem:

Cooperatives of the past were heavily criticized for being inefficient, discriminatory against the poor and women and institutions rife with corruption. Their record of success and sustainability varies across countries and sectors. As late as 1993, a World Bank (WB) review of cooperatives concluded they were not viable organizations due to inappropriate policy frameworks, excessive government interference and insufficient farmer capacity building (Rondot 2004). However, the end of the Cold War, Structural Adjustment Programmes (SAPs) and a dramatically altered political economy have had significant impact on the structure and organization of cooperatives. Moreover, evidence suggests that group projects are increasingly relied upon by national governments, bi- and multi-laterals and non-governmental agencies (NGOs) as the preferred model for rural development project implementation and poverty alleviation (Grootaert 1998; Harris 1997; World Bank 1997). Thus despite their meagre performance, the WB claims that they remain ‘the preferred form of organization, and perhaps the only organization with which rural people are familiar’ (Hussi, 1993).

Inadequate enabling environment for cooperative development in many countries, either due to restrictive laws and regulations stemming from a legacy of state control, or from the absence of a cooperative legal framework - 63 percent of respondents observed that government support to cooperatives had either remained the same or declined in the past decade; Cooperatives’

limited engagement in articulating a global vision for sustainable development - 29 percent of respondents institutions' contributions to sustainable development were reported to be at local and 35 per cent at national level, compared to 19 percent at regional and 17 percent at international level; and Persistent misconceptions on the cooperative business model among employers' organizations, trade unions as well as research institutions, despite positive evidence on cooperatives' contributions. (ILO, 2013)

The success of cooperatives is in essence a function of three overlapping factors: its internal activities and operations; the wider policy environment; and local, national and international markets (Hedlund 1988). Internal organization and structures can be sound; but the wider policy environment can encourage or discourage organization and provide incentives or disincentives for people to work collectively (Grootaert 1998; Harriss 1997). National governments play an important role in formulating policies that encourage the growth and restructuring of cooperatives.

The unpredictable natures of markets in which commodities are traded have enormous impact on the success of cooperatives. Hedlund (1988) insightfully illustrates this point in his historical review of a coffee cooperative in Kenya, when he describes cooperatives as 'two opposing organizational factors'. One is local participation, 'which allows for members' influence and thus facilitates order and continuity'. The second is 'the world market with its uncontrollable development, representing disorder and discontinuity'. For example, though a cooperative can be instrumental in negotiating higher prices for coffee and increasing production, higher exports do not translated into higher incomes for smallholder farmers because of depressed world market prices. This is not a shortcoming of the cooperative, but an outcome of structural issues in the macro environment. Thus it is the precarious balance and management of these two pressures which shape and can ultimately determine the performance of the cooperative.

The legacy of past problems and more recent challenges including conflict, HIV/AIDS, rural poverty, underdevelopment, and unfair trade policies plague modern-day cooperatives in developing countries, threatening their ability to survive as viable commercial enterprises. Newly revived cooperatives are operating in an environment characterized by declining terms of trade, lack of market access, and unjust agricultural trade policies. For example, subsidized commodities from industrialized countries are displacing producers in many

countries, affecting farmers' competitive advantage and ability to serve local or national markets. The new food system is disproportionately, and negatively, affecting the livelihoods of many smallholder farmers. Economically, cooperatives are looked upon to facilitate the integration of small-scale farmers into local, regional and even international markets: they are a link between rural societies and the larger economy. Many restructured cooperatives are still in the nascent stage, thus it is difficult to predict their capacity to overcome these tremendous problems.

Under-capitalization and poor financial, accounting and management skills in cooperatives remain a challenge. In some countries, the government still maintains a paternalistic relationship with cooperatives. In others, cooperatives are heavily dependent on NGOs for credit, training and other technical support. The inherent contradiction between cooperatives' social and economic objectives is a problem (Jiggins 1988, Lele 1981, Braverman 1991) for which the literature does not propose a clear solution. The dilemma is managing the balance between poverty-alleviation, promotion of social welfare, and equity - while building competitive, profit-oriented private sector institutions.

Cooperative revitalization programs in countries such as Ethiopia heavily stress sustainability and provide business skill training for the leadership and management. Cooperatives are business entities, by nature socially responsible and eco-friendly enterprises. Moreover, cooperatives lag behind in advancing a comprehensive sustainability agenda. It is a high time to have an attempt to investigate sustainability of cooperatives by considering three dimensions economic, social, and environmental sustainability. Hence, this research study.

2. Objective(s) (General and Specific):

2.1. General Objective:

- To undertake a comprehensive survey on cooperatives sustainability.

2.2. Specific Objectives:

- To analyze the economic, social, and environmental dimensions of cooperatives sustainability;

- To assess the cooperatives sustainability level by ranking among cooperatives in the study area ; and
- To examine the sustainability oriented competitive strategies adopted by sample cooperatives.

3. Research Questions:

- Are cooperatives sustainable in terms of economic, social, and environmental dimensions?
- What is the cooperatives sustainability level by ranking?
- How do cooperatives adopt sustainability oriented competitive strategies?

4. Review of Literature:

In a general sense, sustainability is the capacity to support, maintain or endure. Since the 1980s, the concept of sustainability has evolved to mean the integration of environmental, economic and social dimensions. Co-operatives here again are the forerunners of modern sustainability. By placing human need at their centre, they respond to today's crises of sustainability and deliver a distinctive form of shared value. According to Todor Ivanov – Secretary-General of Euro Coop, “With concern for the community a founding principle, sustainability underpins everything co-operatives do. By looking beyond the short-term goal of maximising profit regardless of the consequences, many are starting to look to our model of business as an alternative to traditional forms.”

One of the goals of the International Co-operative Alliance's Blueprint for a Co-operative Decade is to “position co-operatives as builders of sustainability”. The co-operative sector needs to explain and show to the world that sustainability is part of its intrinsic nature, and that co-operative enterprises make a positive contribution to sustainability.

As part of this, the Alliance commissioned a scan of co-operatives from different sectors and regions around the world to see how closely linked they are to sustainability. The report concluded that co-operatives embed sustainability into their operating model and values and that the United Nations can and should recognise this. Indeed, in a resolution adopted in December 2001, the UN urged governments to encourage and facilitate “the establishment and development of co-operatives, including taking measures

aimed at enabling people living in poverty or belonging to vulnerable groups to engage on a voluntary basis in the creation and development of co-operatives”.

The International Cooperative Alliance (ICA) held their annual conference in Cape Town during November 2013. One the presentations at this conference included reporting on the results of a partnership project, between Community Research Connections and the Sustainability Solutions Group that investigated the relationship between the cooperative model and sustainable development. This research employed a unique methodology to compare key concepts distilled from seminal literature on sustainability to (firstly) the cooperatives principles and (secondly) websites and annual reports from various cooperatives around the world. As this was a global scan, the study was limited in the manner that it did not visit the cooperatives on-the-ground and thus could not validate whether cooperatives are actually acting in a sustainable manner; however, this work served as an initial step to see if cooperative model inherently leads to thinking and speaking about sustainability. Some of the main observations from the research include: Co-operatives are involved in the social, economic and environmental dimensions of sustainability; the co-operative principles are more closely aligned with the social dimensions of sustainability; similarly, co-operatives websites and annual reports (overall) most strongly related to social aspects of sustainability; in communicating their efforts on sustainability, co-operatives understate their efforts on Principles 1, 2 and 3; a co-operative is sustainable when it is an economically viable business that fully implements the seven co-operative principles with socially responsible, and maintains or regenerates the ecosystem in which they are embedded; co-operative associations lag behind co-operatives in advancing a comprehensive sustainability agenda; of the cooperative principles, concepts related to principle 5 (education, training, knowledge sharing), principle 6 (cooperation among cooperatives), and principle 7 (sustainable community development) were strongly communicated; cooperatives websites highlighted sustainability concepts, whereas in the annual reports, sustainability concepts were discussed in context with items (e.g., items relating business operations) (CRC, ICA 2013).

Perusal of the literature available it is understood that there are few studies undertaken related to sustainability of cooperatives. Moreover, a comprehensive research on cooperatives sustainability by considering economic, social, and environmental dimensions of cooperative sustainability is absent in Ethiopian context, and hence this research study.

5. Materials and Methods:

5.1. Materials (facilities):

The study was undertaken by survey method with both quantitative and qualitative approach whereby primary data were collected from members of cooperatives, KIIs, and FGD participants. For this purpose a Semi-Structured Interview Schedule were prepared and administered as a data collection instrument, and Checklist was used to elicit information from KIIs (Woreda and Zonal Cooperative Promotion Bureau officials) and FGD participants (management committee of selected cooperatives).

5.2. Methodology:

Since the proposal intends to analyze the sustainability of cooperatives, field survey method was followed. Multi-stage sampling method was adopted to select study area, cooperatives and respondents. At the first stage, among 18 woredas in west shoa zone, Dendi woreda was selected based on the justification that there is high concentration of agricultural cooperatives. At the second stage with the justification of more membership, access and availability of data, out of 23, six cooperatives were selected. The sample respondents' size was determined by Yemane Taro (1967) formulae as below:

$$n = \frac{N}{1 + N(e)^2}$$

$$n = \frac{7611}{1 + 7611 (0.1)^2}$$

$$n = \frac{7611}{77.11}$$

$n = 98.70$, by adding and rounding off = 100

95% confidence level and $p = 0.5$ are assumed

The sample size was 100, and adopting PPS members from each cooperative were selected.

Table 1: Sample Cooperatives and Respondents

S.No	Name of the Cooperative	Male	Female	Total	Sample
1	Gabaa Dilbataa	1482	83	1565	21
2	Oolankomii	1477	45	1522	20
3	Waamura Meexxi	1189	51	1240	16
4	Boddaa	1053	61	1114	15
5	Asgorii	1095	80	1175	15
6	Barooda Laga Baatuu	936	39	975	13
	Total	7232	379	7611	100

Source: Dendi Woreda Cooperative Promotion Office, 2016

5.3. Method of data Analysis:

The data were analyzed by using both quantitative and qualitative approach. The sustainability of cooperatives was analyzed by sustainability score card approach advocated by Measuring Cooperative Difference Research Network (MDCRN), Canada with sustainability Indicators which are combined sets of environmental, economic and social performance indicators. For analysis, descriptive statistics like frequency, percentage, and mean was used.

Moreover, for data analysis and assessment of sustainability level for ranking of cooperatives, Morris Inequality Index was used. This index is among the newest formal model used in world. In Morris model using available information for each cooperative, developmental condition (sustainability) of each cooperative according to each of selected index was identified and finally the mean of index sum using development index analyse method was determined simply but in fitted way. Then it dealt with to rank the cooperatives. The calculation manner of this index is as follow:

$$Y_{ij} = \frac{X_{ij} - X_{ij}(\min)}{X_{ij}(\max) - X_{ij}(\min)} \times 100$$

Where, $X_{ij}(\min)$ and $X_{ij}(\max)$ are the lowest and highest values the variable X can attain, respectively. Y_{ij} is Morris Inequality Index for each variable and X_{ij} is amount of variable in each cooperative.

The important point in this model is that the applied indexes must be homodirection. The main developmental index may calculate through this formula:

$$DI = \frac{\sum_{i=1}^n y_{ij}}{n}$$

Where, n is the number of the studied indexes and DI is the main developmental index. Morris Inequality Index ranges between 0 and 100 where it is closer to 100, the more is development range ie., sustainability level.

For analysing coop sustainability, different attributes were studied under each sustainability dimension of cooperatives. To assess coop sustainability level, Morris Inequality Index was used. The results from Morris Inequality Index indicated that economic sustainability of agricultural cooperatives which were estimated based on certain attributes based on 36 statements, was ranging from a minimum of 20% to a maximum of 87%, so that sampled cooperatives were allocated the least and the most economic sustainability index, respectively. The social sustainability of agricultural cooperatives was estimated based on certain attributes based on 25 statements, was ranging from a minimum of 20% to a maximum of 81%, so that sampled cooperatives were allocated the least and the most social sustainability index, respectively. In the same way the environmental sustainability of agricultural cooperatives was estimated based on certain attributes based on 29 statements, was ranging from a minimum of 17% to a maximum of 53%, so that sampled cooperatives were allocated the least and the most environmental sustainability index, respectively. The overall cooperative sustainability of agricultural cooperatives was estimated based on average score percentage of three sustainability dimensions, was ranging from a minimum of 19% to a maximum of 69%, so that sampled cooperatives were allocated the least and the most economic sustainability index, respectively. So, separate index was developed for each sustainability dimension to have level and rank for sampled cooperatives, and arriving at average score percentage the cooperative sustainability level and ranking were given to cooperatives. According to development coefficient (each sustainability dimension and overall coop sustainability), agricultural cooperatives were classified into five levels: sustainable (80-100), slightly sustainable (60-79), moderate (40-59), slightly unsustainable (20-39) and unsustainable (0-19). Ranking was given in the order the cooperatives percentage scored for each sustainability dimension and overall coop sustainability. Sustainability oriented competitive strategies were examined by descriptive statistics based on the responses given by the respondents. The sequence / order of cooperatives can be seen as in the order listed in the sampling table1.

6. Results and Interpretation:

Table 2: Economic Sustainability Dimension of Cooperatives

Coop Level \ Coop	Coop 1	Coop 2	Coop 3	Coop 4	Coop 5	Coop 6	All coops
Low (1-60)	-	-	-	-	-	-	-
Medium (61-120)	0 (0.0)	0 (0.0)	16 (44.4)	01 (02.8)	15 (41.7)	04 (11.1)	36 (36.0)
High (121-180)	21 (32.8)	20 (31.3)	0 (0.0)	14 (21.9)	0 (0.0)	09 (11.1)	64 (64.0)
Total	21	20	16	15	15	13	100

Figures in brackets are percentage to row total

Table 2 reveals the economic dimension of cooperative sustainability of sampled agricultural cooperatives as opined by the member respondents. Coop 1, Coop 2, Coop 4, and Coop 6 are at the high level of cooperative sustainability in terms of economic dimension followed by Coop 3 and Coop 5 at the medium level. As for all cooperatives, majority 64 percent of the respondents opined that their cooperatives are at high level of cooperative sustainability in terms of economic dimension.

Table 3: Social Sustainability Dimension of Cooperatives

Coop Level \ Coop	Coop 1	Coop 2	Coop 3	Coop 4	Coop 5	Coop 6	All coops
Low(1-42)	0 (0.0)	0 (0.0)	16 (43.2)	01 (02.7)	15 (40.5)	05 (13.5)	37 (37.0)
Medium (43-82)	21 (33.3)	20 (31.7)	0 (0.0)	14 (22.2)	0 (0.0)	08 (12.7)	63 (63.0)
High (83-125)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Total	21	20	16	15	15	13	100

Figures in brackets are percentage to row total

Table 3 reveals the social dimension of cooperative sustainability of sampled agricultural cooperatives as opined by the member respondents. Coop 1, Coop 2, Coop 4, and Coop 6 are at the medium level of cooperative sustainability in terms of social dimension followed by Coop 3 and Coop 5 at the low level. As for all cooperatives, majority 63 percent of the respondents opined that their cooperatives are at medium level of cooperative sustainability in terms of social dimension.

Table 4: Environmental Sustainability Dimension of Cooperatives

Coop Level	Coop 1	Coop 2	Coop 3	Coop 4	Coop 5	Coop 6	All coops
Low (1-48)	21 (31.3)	20 (29.9)	01 (01.5)	15 (22.4)	02 (03.0)	08 (11.9)	67 (67.0)
Medium (49-98)	0 (0.0)	0 (0.0)	15 (45.5)	0 (0.0)	13 (39.4)	05 (15.2)	33 (33.0)
High (99-145)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Total	21	20	16	15	15	13	100

Figures in brackets are percentage to row total

Table 4 reveals the environmental dimension of cooperative sustainability of sampled agricultural cooperatives as opined by the member respondents. Coop 3, and Coop 5 are at the medium level of cooperative sustainability in terms of environmental dimension followed by Coop 1, Coop 2, Coop 4, and Coop 6 at the low level. As for all cooperatives, majority 67 percent of the respondents opined that their cooperatives are at low level of cooperative sustainability in terms of environmental dimension.

Table 5: Overall Coop Sustainability of sampled cooperatives

Coop Level	Coop 1	Coop 2	Coop 3	Coop 4	Coop 5	Coop 6	All coops
Low(1-42)	0 (0.0)	0 (0.0)	16 (55.2)	0 (0.0)	12 (41.4)	01 (03.4)	29 (29.0)
Medium (143-285)	21(29.6)	20 (28.2)	0 (0.0)	15(21.1)	03 (04.2)	12 (16.9)	71 (71.0)
High (285-427)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Total	21	20	16	15	15	13	100

Figures in brackets are percentage to row total

Table 5 reveals the overall cooperative sustainability of sampled agricultural cooperatives as opined by the member respondents. Coop 1, Coop 2, Coop 4, and Coop 6 are at the medium level of overall cooperative sustainability followed by Coop 3 and Coop 5 at the low level. As for all cooperatives, majority 71 percent of the respondents opined that their cooperatives are at medium level of overall cooperative sustainability.

Table 6: Economic Sustainability level and ranking of sampled cooperatives

Level of Economic Sustainability	Agricultural Coops (% SCORE / RANK)
Sustainable (80-100)	Coop 1 (87% / 1), Coop 2 (84% / 2)
Slightly Sustainable (60-79)	Coop 6 (69% / 3), Coop 4 (62% / 4)
Moderately Sustainable (40-9)	Coop 5 (42% / 5)
Slightly Unsustainable (20-39)	Coop 3 (20% / 6)
Unsustainable (0-19)	----

Figures in brackets are percentage score and rank of agricultural coops

As per the analysis procedures stated in the method of data analysis the cooperatives are categorized into different levels of economic sustainability. The percentage scored and rank are given to each cooperative under study. Table 6 shows the economic sustainability level and ranking of cooperatives. Coop 1 (87%) and Coop 2 (84%) are at 'sustainable' range which are ranked as first and second respectively; Coop 6 (69%) and Coop 4 (62%) are at 'slightly sustainable' range which are ranked as third and fourth respectively followed by Coop 5 (42%) as 'moderately sustainable' ranked fifth, and Coop 3 (20%) as 'slightly unsustainable' ranked sixth among achieved level of sustainability of all sampled cooperatives.

Table 7: Social Sustainability level and ranking of sampled cooperatives

Level of Social Sustainability	Agricultural Coops(% SCORE / RANK)
Sustainable (80-100)	Coop 6 (81% / 1)
Slightly Sustainable (60-79)	Coop 1 (66% / 2), Coop 2 (62% / 3)
Moderately Sustainable (40-59)	Coop 4 (53% / 4), Coop 5 (41% / 5)
Slightly Unsustainable (20-39)	Coop 3 (20% / 6)
Unsustainable (0-19)	----

Figures in brackets are percentage score and rank of agricultural coops

As per the analysis procedures stated in the method of data analysis the cooperatives are categorized into different levels of social sustainability. The percentage scored and rank are given to each cooperative under study. Table 7 shows the social sustainability level and ranking of cooperatives. Coop 6 (81%) is at 'sustainable' range which is ranked first; Coop 1 (66%) and Coop 2 (62%) are at 'slightly sustainable' range which are ranked as second and third respectively followed by Coop 4 (53%) and Coop 5 (41%) as 'moderately

sustainable’ ranked fourth and fifth, and Coop 3 (20%) as ‘slightly sustainable’ ranked sixth among achieved level of sustainability of all sampled cooperatives.

Table 8: Environmental Sustainability level and ranking of sampled cooperatives

Level of Environmental Sustainability	Agricultural Coops(% SCORE / RANK)
Sustainable (80-100)	-----
Slightly Sustainable (60-79)	-----
Moderately Sustainable (40-59)	Coop 1 (53% / 1), Coop 2 (52% / 2)
Slightly Unsustainable (20-39)	Coop 4 (35% / 3), Coop 5 (34% / 4), Coop 6 (26% / 5)
Unsustainable (0-19)	Coop 3 (17% / 6)

Figures in brackets are percentage score and rank of agricultural coops

As per the analysis procedures stated in the method of data analysis the cooperatives are categorized into different levels of environmental sustainability. The percentage scored and rank are given to each cooperative under study. Table 8 shows the environmental sustainability level and ranking of cooperatives. Coop 1 (53%) and Coop 2 (52%) are at ‘moderately sustainable’ range which are ranked as first and second respectively; Coop 4 (35%), Coop 5 (34%) and Coop 6 (26%) are at ‘slightly unsustainable’ range which are ranked as third, fourth, and fifth respectively followed by Coop 3 (17%) as ‘unsustainable’ ranked sixth among achieved level of sustainability of all sampled cooperatives.

Table 9: Coop Sustainability level and ranking of sampled cooperatives

Level of Coop Sustainability	Agricultural Coops(% SCORE / RANK)
Sustainable (80-100)	-----
Slightly Sustainable (60-79)	Coop 1 (69% / 1), Coop 2 (66% / 2)
Moderately Sustainable (40-59)	Coop 6 (59% / 3), Coop 4 (50% / 4)
Slightly Unsustainable (20-39)	Coop 5 (39% / 5)
Unsustainable (0-19)	Coop 3 (19% / 6)

Figures in brackets are percentage score and rank of agricultural coops

As per the analysis procedures stated in the method of data analysis the cooperatives are categorized into different levels of overall coop sustainability. The percentage scored and rank are given to each cooperative under study.

Table 9 shows the overall coop sustainability level and ranking of cooperatives. Coop 1 (69%) and Coop 2 (66%) are at ‘slightly sustainable’ range which are ranked as first and second respectively; Coop 6 (59%) and Coop 4 (50%) are at ‘moderately sustainable’ range which are ranked as third and fourth respectively followed by Coop 5 (39%) as ‘slightly unsustainable’ ranked fifth, and Coop 3 (19%) as ‘unsustainable’ ranked sixth among achieved level of sustainability of all sampled cooperatives.

Table 10: Cooperative Sustainability Level & Ranking - Score Card Results

Respo nse Coop	Economic sustainability			Social sustainability			Environmental sustainability			overall coop sustainability		
	Scor e (%)	Lev el	Ran k	Scor e (%)	Lev el	Ran k	Scor e (%)	Lev el	Ran k	Scor e (%)	Lev el	Ran k
Coop 1	87	S	1	66	SS	2	53	MS	1	69	SS	1
Coop 2	84	S	2	62	SS	3	52	MS	2	66	SS	2
Coop 3	20	SUS	6	20	SUS	6	17	US	6	19	US	6
Coop 4	62	SS	4	53	MS	4	35	SUS	3	50	MS	4
Coop 5	42	MS	5	41	MS	5	34	SUS	4	39	SUS	5
Coop 6	69	SS	3	81	S	1	26	SUS	5	59	MS	3

S-Sustainable (80-100); SS-Slightly Sustainable (60-79); MS-Moderately Sustainable (40-59); SUS- Slightly Unsustainable (20-39); US-Unsustainable (0-19)

Table 10 shows the comprehensive coop sustainability by dimension level and ranking of cooperatives. As far as economic sustainability dimension is concerned, Coop1 is in the most sustainable condition with sustainable level and Coop 3 is the least with the level slightly unsustainable condition, whereas social sustainability dimension the most sustainable is Coop 6 with sustainable level and the least sustainable is Coop 3 with slightly sustainable level. With regard to environmental sustainability dimension Coop 1 is found to be the most sustainable condition with moderate sustainable level and Coop 3 is in the least sustainable condition with unsustainable level. As for comprehensive coop sustainability, Coop 1 (69%) is at slightly sustainable level with first rank followed by Coop 2 (66%) at slightly sustainable level with second rank, while Coop 3 is at unsustainable level with sixth rank among achieved level of sustainability of all sampled cooperatives.

Competitive Sustainability Strategies adopted by sampled Cooperatives

As part of data collection process the research team wanted to elicit information on sustainability strategies adopted by the sampled cooperatives assuming and believing that cooperative sustainability level is associated with strategies practiced. Based on literatures reviewed five different sustainability strategies viz., safe, credible, efficient, innovation, and transformation have been used to elicit information on sustainability strategies adopted.

Strategy ‘safe’ aims at reducing and managing risks; strategies of the type ‘credible’ are tackling issues of image and reputation; the improvement of productivity and efficiency is possible by implementing the strategy ‘efficient’; the ‘innovative’ strategy aims at differentiating cooperatives’ products and services in the market; and ‘transformative’ strategy aims at creating new markets by shifting existing institutional frameworks.

By administering different statements under each strategy responses were received from the member respondents. In addition KIIs and FGD results are also supplemented hereunder.

As for ‘safe strategy’ respondents revealed that Coop 1, Coop 2, and Coop 4 practice at a high level followed by Coop 5 and Coop 6 at moderate level, and Coop 3 at low level. The overall cooperatives on adoption of sustainability strategy ‘safe’ is 55 percent at high level followed by 32 percent at moderate level.

As for ‘credible strategy’ respondents revealed that Coop 1, Coop 2, and Coop 4 practice at a high level followed by Coop 6 at moderate level, Coop 3 and Coop 5 at low level. The overall cooperatives on adoption of sustainability strategy ‘credible’ is 59 percent at high level followed by 21 percent at moderate level, and 20 percent at low level.

As for ‘efficient strategy’ respondents revealed that Coop 1, Coop 2, and Coop 4 practice at a high level followed by Coop 5 and Coop 6 and Coop 3 at moderate level. The overall cooperatives on adoption of sustainability strategy ‘efficient’ is 61 percent at high level followed by 32 percent at moderate level.

As for ‘innovative strategy’ respondents revealed that Coop 1 and Coop 2 practice at a high level followed by Coop 3, Coop 4, Coop 5 and Coop 6 at moderate level. The overall cooperatives on adoption of sustainability strategy ‘innovation’ is 50 percent at high level followed by 40 percent at moderate level.

As for ‘transformative strategy’ respondents revealed that Coop 1, Coop 2, and Coop 4 practice at a high level followed by Coop 5 and Coop 6 and Coop 3 at moderate level. The overall cooperatives on adoption of sustainability strategy ‘transformation’ are 60 percent at high level followed by 37 percent at moderate level.

The key informants and FGD participants also reported the same results regarding all sustainability strategies with some difference. With regard to safe, efficient, and innovative strategies Coop 3 was in both moderate and low level of adoption ranging from 25 percent to 38 percent at low level and 62 to 75 percent moderate level of adoption. With regard to innovative strategy Coop 5 was also in both moderate (60%) and low (40%) level adoption. Coop 6 was in both high and moderate level of adoption regarding innovative (high 69.2% and moderate 30.8%) and transformative (high 76.9% and moderate 23.1%) strategies.

7. Major Findings:

7.1. Coop Sustainability by dimension:

- Majority 64 percent of the respondents opined that their cooperatives are at high level of cooperative sustainability in terms of economic dimension; majority 63 percent of the respondents opined that their cooperatives are at medium level of cooperative sustainability in terms of social dimension; majority 67 percent of the respondents opined that their cooperatives are at low level of cooperative sustainability in terms of environmental dimension; and majority 71 percent of the respondents opined that their cooperatives are at medium level of overall cooperative sustainability.

7.2. Sustainability level and ranking of sampled cooperatives:

- As for economic sustainability Coop 1 (87%) and Coop 2 (84%) are at ‘sustainable’ range which are ranked as first and second respectively; Coop 6 (69%) and Coop 4 (62%) are at ‘slightly sustainable’ range which are ranked as third and fourth respectively followed by Coop 5 (42%) as ‘moderately sustainable’ ranked fifth, and Coop 3 (20%) as ‘slightly sustainable’ ranked sixth among achieved level of sustainability of all sampled cooperatives.
- As for social sustainability Coop 6 (81%) is at ‘sustainable’ range which is ranked first; Coop 1 (66%) and Coop 2 (62%) are at ‘slightly sustainable’ range which are ranked as second and third respectively followed by Coop

4 (53%) and Coop 5 (41%) as ‘moderately sustainable’ ranked fourth and fifth, and Coop 3 (20%) as ‘slightly sustainable’ ranked sixth among achieved level of sustainability of all sampled cooperatives.

- As for environmental sustainability Coop 1 (53%) and Coop 2 (52%) are at ‘moderately sustainable’ range which are ranked as first and second respectively; Coop 4 (35%), Coop 5 (34%) and Coop 6 (26%) are at ‘slightly unsustainable’ range which are ranked as third, fourth, and fifth respectively followed by Coop 3 (17%) as ‘unsustainable’ ranked sixth among achieved level of sustainability of all sampled cooperatives.
- As for overall coop sustainability Coop 1 (69%) and Coop 2 (66%) are at ‘slightly sustainable’ range which are ranked as first and second respectively; Coop 6 (59%) and Coop 4 (50%) are at ‘moderately sustainable’ range which are ranked as third and fourth respectively followed by Coop 5 (39%) as ‘slightly unsustainable’ ranked fifth, and Coop 3 (19%) as ‘unsustainable’ ranked sixth among achieved level of sustainability of all sampled cooperatives.

7.3. Comprehensive Cooperative Sustainability Level & Ranking - Score Card Results:

- As far as economic sustainability dimension is concerned, Coop1 is in the most sustainable condition with sustainable level and Coop 3 is the least with the level slightly unsustainable condition, whereas social sustainability dimension the most sustainable is Coop 6 with sustainable level and the least sustainable is Coop 3 with slightly sustainable level. With regard to environmental sustainability dimension Coop 1 is found to be the most sustainable condition with moderate sustainable level and Coop 3 is in the least sustainable condition with unsustainable level. As for comprehensive coop sustainability, Coop 1 (69%) is at slightly sustainable level with first rank followed by Coop 2 (66%) at slightly sustainable level with second rank, while Coop 3 is at unsustainable level with sixth rank among achieved level of sustainability of all sampled cooperatives.

7.4. Competitive Sustainability Strategies adopted by sampled Cooperatives:

- As for ‘safe strategy’ respondents revealed that Coop 1, Coop 2, and Coop 4 practice at a high level followed by Coop 5 and Coop 6 at moderate level, and Coop 3 at low level.

- As for ‘credible strategy’ respondents revealed that Coop 1, Coop 2, and Coop 4 practice at a high level followed by Coop 6 at moderate level, Coop 3 and Coop 5 at low level.
- As for ‘efficient strategy’ respondents revealed that Coop 1, Coop 2, and Coop 4 practice at a high level followed by Coop 5 and Coop 6 and Coop 3 at moderate level.
- As for ‘innovative strategy’ respondents revealed that Coop 1 and Coop 2 practice at a high level followed by Coop 3, Coop 4, Coop 5 and Coop 6 at moderate level.
- As for ‘transformative strategy’ respondents revealed that Coop 1, Coop 2, and Coop 4 practice at a high level followed by Coop 5 and Coop 6 and Coop 3 at moderate level.
- The key informants and FGD participants also reported the same results regarding all sustainability strategies with some difference. With regard to safe, efficient, and innovative strategies Coop 3 was in both moderate and low level of adoption ranging from 25 percent to 38 percent at low level and 62 to 75 percent moderate level of adoption. With regard to innovative strategy Coop 5 was also in both moderate (60%) and low (40%) level adoption. Coop 6 was in both high and moderate level of adoption regarding innovative (high 69.2% and moderate 30.8%) and transformative (high 76.9% and moderate 23.1%) strategies. The overall observation on the adoption of strategies revealed that Coop 1, Coop 2, and Coop 4 are practicing sustainable strategies at a high level followed by Coop 5 and Coop 6 at a moderate level, and Coop 3 at moderate and low level depends on the strategy adopted. This evidenced with the findings on sustainability level and ranking found through analysis.

8. Conclusion:

Agricultural Cooperatives in the study area are involved in the economic, social, and environmental dimension of cooperative sustainability. From the foregoing analysis it can be concluded that the agricultural cooperatives do have better position with economic sustainability, to some extent social sustainability, but they do not have favourable situation in environmental sustainability so that the cooperatives are located at moderate and low level of

sustainability condition. With regard to comprehensive cooperative sustainability the same result is seen among sampled cooperatives. It is evident that the sustainability level and ranking are in consonance with the sustainability strategies they adopted. There is a need to identify and develop a new vibrant cooperative economic model, which addresses the economic challenges cooperative stakeholders face, as well as the social and environmental challenges disturbing cooperative sustainability. It can be achieved only through practicing and adopting right sustainability strategies at right time effectively.

9. Recommendations:

By considering the responses been given by the respondents, KIIS, and FGD participants on the sustainability dimensions and strategies adopted by cooperatives, and based on the findings the following recommendations can be forwarded to make cooperatives more sustainable in their business and to improve the sustainability level of agricultural cooperatives in the study area.

- Cooperative principles and values are to be closely well aligned with the economic, social, and environmental sustainability of cooperatives. Cooperatives will be sustainable when they are economically viable business units that fully implement cooperative principles and values as socially responsible enterprises, and maintain or regenerate the ecosystems in which they exist and are embedded.
- Agricultural Cooperatives which are at moderate and low level of sustainability must adopt appropriate strategies to improve to the 'sustainable' level of cooperative sustainability with due attention and care.
- Particularly Coop 3 must take proper measures to implement appropriate sustainability strategy to improve the sustainability level since it is ranked sixth (last coop); Coop 5 and Coop 6 have to focus more on all five sustainable strategies at a high level, while Coop 4 on innovative strategy.
- Regards to economic sustainability of sampled cooperatives, they have to increase member economic involvement through increase in membership base and capital base to improve the business volume whereby increasing

members' income. The cooperatives board must have a system to review financial statements and key ratios periodically, and bank covenants; should compare budgeted figure with actual result attained, which will have the effect on economic sustainability.

- Regards to social sustainability of sampled cooperatives, creation of social fund to undertake social projects and schemes, and CSR activities like supporting members and employees' children education, insurance, medical facilities for employees, and socialization of agricultural activities are advocated.
- Regards to environmental sustainability of sampled cooperatives, they should concentrate more on improving environmental sustainability in terms of organic farming, conservation and protection of environment, agricultural waste management, adhering to environment policy of the government, imparting farmers knowledge on agricultural and ecosystems whereby cooperatives can offer eco-friendly products and services to the community.
- Safe strategy can be adopted by means of training farmers to forecast, assess, manage, and avoid risks involved in agricultural activities.
- Cooperatives must foster credibility by enhancing reputation which is a non-tangible asset creates value and attracts suitable members and employees whereby satisfies customers. Through the value created cooperatives image in the society can be built.
- Cooperatives must evolve efficient strategies like best agricultural practices by learning and adopting from other successful cooperatives, proper utilisation of resources to enhance productivity in all means with socio, eco-efficiency application.
- It is advocated to go with innovative strategies like product differentiation / improvement with socially and eco-friendly product innovation. Sustainable value added agricultural produces, products and services through sustainable supply chain are better to market by cooperatives.
- Cooperatives should evolve with transformative strategy to create new market with institutional change within human needs, mobility of goods, create sustainable standards, product labels, "Coop" brand products and services.

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A study on role of Agricultural Producers Cooperative Marketing Cooperative Societies in promoting Marketing through E-Nam.

R. Sharmila*, Dr. C. Pitchai**

Abstract:

This research paper aims to investigate and analyze the significance of Agricultural Marketing Cooperative Societies (APCMS) in the context of the Electronic National Agriculture Market (e-NAM) platform. The e-NAM initiative has been introduced to modernize and streamline the agricultural marketing system in India. This study focuses on the role played by Agricultural Marketing Cooperative Societies in facilitating farmers' participation in e-NAM, examining the impact accessibility, price realization, and overall agricultural market efficiency.

Keywords:

Agricultural Marketing Cooperatives, e-NAM and Digitalization

I Introduction:

Agricultural marketing is a process, where the product moves from the farm to the final consumer. Meanwhile there are many activities are happening from planning what to produce to, growing and harvesting, drying, grading, packing, transporting, storage, agro-and food processing, distribution advertising and sale. Industrial marketing is different from agricultural marketing, the marketing system should be unique and different which would facilitate to decrease cost. If cost decreases finally the efficiency of business increase or if cost increases the efficiency of the business decrease. That is reason why the marketing system and distribution of the product should be in

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such a manner which decreasing the marketing cost. In India, especially we have to develop agricultural sector, because most of the people are depending on agricultural sector but the income from agricultural sector is less, which bases on GDP and PERCAPITA income from agricultural sector. There are several challenges involved in marketing of agricultural produce. There is limited access to the market information, literacy level among the farmers is low, multiple channels of distribution that eats away the pockets of both farmers and consumers. The government funding of farmers is still at nascent stage and most of the small farmers still depend on the local moneylenders who are leeches and charge high rate of interest. Too many vultures eat away the benefits that the farmers are supposed to get. Although we say that technology have improved but it has not gone to the rural levels as it is confined to urban areas alone. There are several loopholes in the present legislation and there is no organized and regulated marketing system for marketing the agricultural produce. The farmers have to face so many hardships and have to overcome several hurdles to get fair and just price for their sweat. There are several kinds of problems are encountered regarding marketing of agricultural products. The main reason is the mobility of the agricultural products in the market is very less, the penetrating capacity of the products and display are difficult as compared with agricultural products. (Vikram Kumar & et al, 2014) Even the literacy rate of the farmers are very less, the farmers are unable to understand the market conditions in India, they do not have knowledge in scientific manner, even to cultivate and even to display / sell products through internet. After 1991, the LPG policy was introduced, the Globalization also plays a prominent role to develop the Agricultural Marketing .There is a chance to increase the exports of the country from agricultural sector, to earn more income, but it was not happen up to the expected level. Because, Farmers failed to adopt latest technology and better techniques to cultivate, these all things hinder the growth of formers to sell their products in the market. The Main objectives of e-NAM are to promote uniformity in agricultural marketing, remove information asymmetry in the market and promote real-time price discovery.

II Literature Review:

Shreya Bhargav, (2017) in the study, “Agricultural Marketing in Growth of Rural India” discussed this paper mainly focusing on how to market the agricultural products and what are the problems that they are facing at the time

of selling those products. The market information is necessary for the tiller of the soil. How effective marketing information should be developed which will facilitate to the formers to sell their products with better prices.

Prasanta Kumar Swain et al, (2022) this study is based on “Impact of Development of Agriculture Market” this paper examines the impact of the adoption of e-trading through e-NAM in regulated stand-alone wholesale APMC markets in Rajasthan on price realization by farmers in select commodities and its impact on market arrivals as a measure of market development.

Gaikar Vilas, (2017) explained in their study as “Agricultural marketing comprises all operations involved in the movement of farm produce from the producer to the ultimate consumer. Thus, agricultural marketing includes the operations like collecting, grading, processing, preserving, transportation and financing.”

III Objectives of the study:

- To evaluate the involvement of Agricultural Producers Cooperative Marketing Societies in e-NAM.
- To analyze the challenges and opportunities faced by APMCS in the e-NAM ecosystem.

IV Methodology:

It is a descriptive method of study. The present paper is based on the Secondary data. The Secondary data pertaining to the study was obtained from the various journals, books, newspapers and websites.

V Role of AMCS in e-NAM:

The farmers can benefit if they were to find ways for aggregating produce on their own, bypassing the Arhatiya (business representative) and even the local mandi (Marketplace) in the process. The role of Agricultural Marketing Cooperatives in the Electronic National Agriculture Market (e-NAM) is pivotal in modernizing and streamlining agricultural marketing in India. These cooperatives play several crucial roles within the e-NAM framework:

Integration of Farmers: Agricultural marketing cooperatives act as the connecting link between individual farmers and the digital platform of

e-NAM. They facilitate the registration of farmers on the e-NAM portal, helping them access a wider market for their produce.

Market Access: Cooperatives provide a collective strength to farmers by enabling them to pool their produce. This allows for bulk selling on e-NAM, thereby enhancing the bargaining power of small and marginal farmers in accessing larger markets, both regional and national.

Quality Assurance: Cooperatives often implement quality control measures at the local level. This involves grading, sorting, and ensuring adherence to standards set by e-NAM. By doing so, they contribute to the supply of quality produce on the platform, boosting consumer confidence and market demand.

Price Discovery: Agricultural marketing cooperatives play a significant role in educating farmers about prevailing market prices and trends. They assist farmers in understanding the pricing mechanisms on e-NAM, ensuring that farmers get fair prices for their produce through transparent and competitive bidding.

Logistics and Infrastructure: Cooperatives can facilitate better transportation and storage facilities for the aggregated produce. This aids in maintaining the quality of goods until they reach the buyers, reducing post-harvest losses, and improving overall efficiency.

Capacity Building and Training: These cooperatives also engage in training programs to empower farmers with the requisite knowledge about e-NAM operations, digital transactions, market dynamics, and best agricultural practices. This ensures active participation and smooth operations on the platform.

Policy Advocacy: They act as a collective voice to represent the interests of their members. Cooperatives can advocate for policies and changes that benefit farmers and improve the functioning of e-NAM.

VI Challenges faced by e-NAM:

Implementing a platform like e-NAM in the agricultural sector comes with several challenges

Infrastructure and Connectivity: Rural areas might lack the necessary internet connectivity and infrastructure required for smooth operations.

Limited access to technology can hinder the participation of farmers in e-NAM.

Awareness and Training: Many farmers might not be well-versed in using technology or might lack awareness about the benefits of e-NAM. Providing adequate training and education about the platform's usage becomes crucial.

Quality Control and Grading: Ensuring accurate assessment and grading of agricultural produce poses a challenge. Discrepancies in quality evaluation could affect the trust in the system and impact fair pricing.

Resistance to Change: Farmers and traditional traders might be resistant to change. Convincing them to adopt an online platform instead of traditional methods of selling produce might be met with skepticism.

Market Integration: Integrating diverse markets across different regions and states in India poses a challenge due to varying regulations, practices, and local dynamics.

Price Volatility: Fluctuations in market prices can impact the confidence of farmers in the platform. Sudden drops or volatile prices may discourage farmers from using e-NAM.

Payment and Financial Inclusion: Ensuring timely and transparent payments to farmers is crucial. Issues related to delayed payments or lack of financial inclusion might deter farmers from engaging with the platform.

Regulatory and Policy Challenges: Aligning e-NAM with various state-specific agricultural policies and regulations can be complex. Harmonizing these regulations to ensure smooth functioning across different regions is a challenge.

Intermediaries' Role: Traditional intermediaries might feel threatened by platforms like e-NAM, leading to resistance or attempts to circumvent the system, affecting its effectiveness.

VII Opportunities for e-NAM:

The e-NAM (National Agriculture Market) is a significant initiative by the Government of India aimed at digitally integrating agricultural markets across the country. It's designed to create a unified national market for agricultural

commodities to benefit both farmers and buyers. Here are some key schemes and features associated with e-NAM:

Single Market: It aims to create a unified market by integrating multiple agricultural markets (mandis) across states and union territories.

Online Trading Platform: e-NAM provides a digital platform where farmers can sell their produce online, reducing dependency on intermediaries and ensuring fair prices.

Transparent Price Discovery: Through e-NAM, farmers can access real-time information on prices prevailing in various markets, helping them make informed decisions about where to sell their produce.

Direct Payment: It facilitates direct payments to farmers, reducing delays and ensuring they receive fair compensation for their crops.

Quality Assurance: The platform emphasizes quality testing and grading of agricultural produce, ensuring buyers receive goods meeting specified standards.

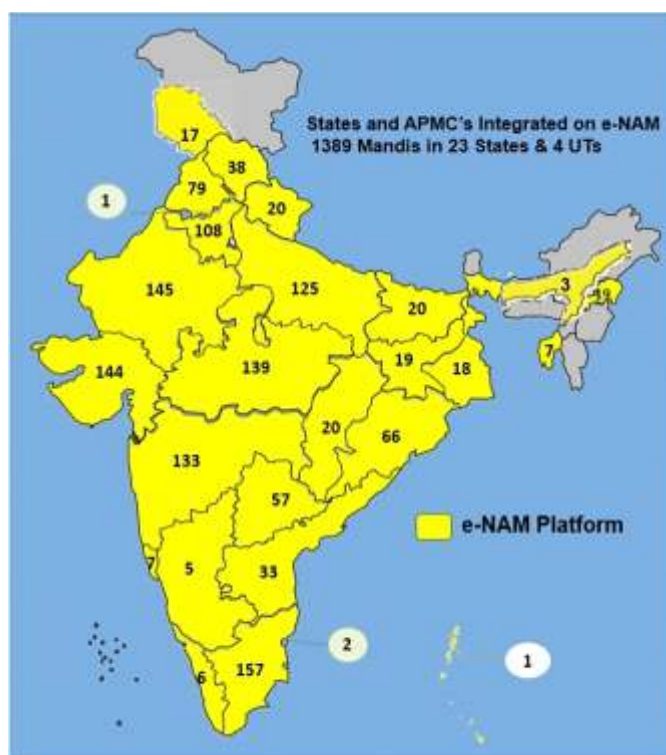
Logistics and Transportation Support: Some schemes associated with e-NAM provide logistics and transportation support to farmers, helping them transport their produce to markets efficiently.

Training and Education: Programs are conducted to educate farmers about the benefits of using e-NAM and to train them in using the digital platform effectively.

Expansion and Integration: The government continuously works on expanding the reach of e-NAM by integrating more markets and commodities into the platform.

VIII APCMS Coverage of e-NAM:

Fig.1: States and APMC's integrated on e-NAM



Source: Data from official website of e-NAM

As per the data available e-NAM, totally there are 1389 Mandis from 23 States and 4 Union Territories are linked with e-NAM and farmers are facilitated by APCMS to market their agricultural produces.

Table 1.1e - NAM Mandi Trading Details

State	APMCs	Commodity	Price in Rest.			Commodity Arrivals	Commodity Traded	Unit	Date
			Min Price	Model Price	Max Price				
HARYANA	GOHANA	PADDY-BASMATI 1121	2761	4900	6100	4145	29653	Qui	21-12-2023
RAJASTHAN	KOTA	PADDY	2300	4101	4387	42245	27079	Qui	21-12-2023
HARYANA	JULANA	PADDY-BASMATI1121	3501	4851	6100	7449	17842	Qui	21-12-2023
HARYANA	ADAMPU R	AMERICAN-COTTON	4350	6300	6789	7864	14405	Qui	21-12-2023
PUNJAB	MUKTSA R	PADDY-BASMATI 1121	3390	4700	4970	20952	14243	Qui	21-12-2023
HARYANA	RATIA	PADDY-BASMATI1509	2500	3581	4561	515	10328	Qui	21-12-2023
RAJASTHAN	UDAIPUR F AND V	COCONUT	10	10	20	10200	10200	No's	21-12-2023
HARYANA	SIRSA	PADDY-DUPLICATE BASMATI	3250	4685	4877	10094	10094	Qui	21-12-2023
TAMILNADU	PALANI	COCONUT	6	6	6	10000	10000	Nos	21-12-2023
TELANGANA	NAWABP ET	PADDY-R.N.R	2067	3357	3557	0	9399	Qui	21-12-2023
HARYANA	MOHNA	PADDY-BASMATI 1121	3181	4701	4722	0	8795	Qui	21-12-2023

Source: Data from official website of e-NAM.

IX e-NAM in Tamil Nadu:

- The Electronic National Agriculture Market is set to be presented in 15 markets in Tamil Nadu
- This year, as indicated by sources from the State's Agriculture Marketing Department.
 - This incorporates:
 - Villupuram
 - Ulundurpet
 - Ambur
 - Udumalaipettai
 - Dindigul
 - Cumbum
 - Vellore
 - Perundurai

As of now, just two of the 270 or more restricted markets in the State are considering electronic exchanging. One electronic market is in Vellore, where the State administration is utilizing its very own software, and the other is in Perundurai where the mandi is Utilizing the Unified Market platform of Rashtriya e-Market Services. A pilot run was directed in these business sectors in the course of the last 4-5 months. While electronic bidding is taking place, there is no sorting or quality testing hardware in either market. The Centre will be giving Rs.75 lakh as cash assistance to each eNAM mandi to set up grading and assaying facilities and other infrastructure, says a key official with the Department. While funds have not reached the State yet, they will soon be transmitted and shortlisting of service providers for the infrastructure has already begun, he adds. It is estimated that each market under e-NAM will require about Rs.1-1.5 crore to be set up with all basic infrastructure facilities, including grading and sorting equipment. To provide grading and as saying services department is looking at looping in AGMARK laboratories. The

eNAM portal was launched in April 2016. Since then about 417 mandis in 13 States have been integrated with it, with Tamil Nadu being the latest. The challenge is in making traders, who have all along been transacting physically and dealing in cash, to move online.

X Conclusion:

A unified platform such as the National Agricultural Market is highly appropriate in the event of fragmented agricultural markets. There is a great deal of room for additional extension and modernization of e-NAM. There is a despite the early challenges to its successful deployment and lower density of e-NAM across the current wholesale regulated markets. The best price for producer's goods and a wide selection of high-quality products for customers will be guaranteed by the integration of contemporary technology with a common agricultural platform.

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Role of APEDA in Sustainable Agricultural Marketing in India

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Abstract:

The trade portal is known as Agri Exchange. The APEDA (Agricultural and Processed Food Products Export Development Authority), Government of India, has made a similar endeavor, where digital trading is the specialty. The webpage has taken shape thanks to the collaborative work of the UNCTAD (United Nations Conference on Trade and Development) and the Ministry of Agriculture. Internationally, agriculture buyers and sellers have been provided a platform to offer, negotiate, and conduct a contract. Aside from that, it is loaded with the most recent facts about India and the world. This study utilized both descriptive and exploratory research designs. In this study, forecasting analysis and the growth rate for the volume and value of selected agricultural commodities imports into India are used. The purpose of this study was to investigate the growth in the quantity of selected agricultural commodity imports as well as estimate the value of these imports in India.

Keywords:

Marketing, Agricultural, Products, APEDA, Trade.

I Introduction:

The Government of India established the APEDA (Agricultural and Processed Food Products Export Development Authority) under the Agricultural and Processed Food Products Export Development Authority act, which was enacted by Parliament in December 1985. The act took effect on 13th February 1986, with the publication in the Gazette of India (About AgriExchange, n.d.).

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The Authority was established in place of the PFEPC (Processed Food Export Promotion Council)(Agriculture In India: Agricultural Exports & Food Industry in India | IBEF, n.d.). The APEDA is in charge of export promotion and development for the scheduled items. APEDA also serves as the secretariat for the National Accreditation Board (NAB) in charge of implementing certifying body accreditation under the NPOP (National Programme for Organic Produce) for organic exports. Organic products for export can only be defined if they are processed, produced, and packed in accordance with the requirements outlined in the document of the NPOP. INDIA Export statistics are statistics on goods, commodities, or services that are sent to another country for sale or trade. Many groups monitor exports(Home | Department of Agriculture & Farmers Welfare | MoA & FW | Government of India, India, n.d.). As a result, they provide country-specific and worldwide trade information, as well as assistance to economic planners in identifying a country's primary strengths and areas for improvement. There are various levels and metrics for evaluating export performance(BASMATI EXPORT DEVELOPMENT FOUNDATION, n.d.).At many levels, export data is gathered and analyzed. The specified objectives are to explore the growth of quantity in selected agricultural commodity imports and to estimate the value of selected agricultural commodity imports in India. The secondary data obtained from Indian government departments are studied, In this study using forecasting analysis and the growth rate for both in quantity and value of selected commodities imports in India.

II Methodology:

Secondary data have been collected and used to forecast and analyze the growth in quantity and value of specified agricultural commodities imports into India under the APEDA. Annual reports from the Ministries of Agriculture & Farmers Welfare, Ministry of Statistics, and Programme Implementation of the Govt of India were used to collect data for the four-year period 2019-2022. Charts and forecasting analysis are used to analyze the collected data. The research designs used in this study are both descriptive and exploratory.

III Result and Discussion:

The data analysis has been split into two sections. The first section deals with the growth of selected agricultural commodities imports into India under the APEDA. The second section examines the estimated value of selected agricultural commodity imports into India until 2024.

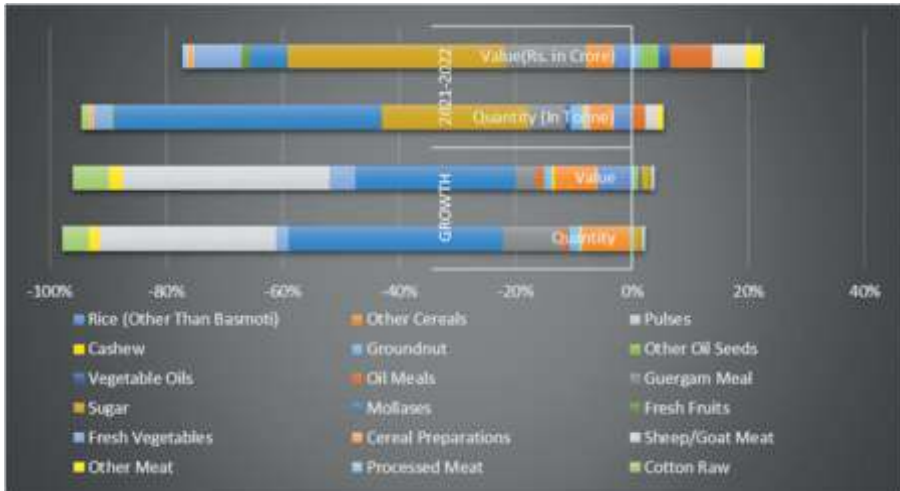
Table 1
Growth of the quantity and value of Selected Agricultural Commodities imports into India

COMMODITIES	2019-2020		2020-2021		GROWTH		2021-2022		GROWTH	
	QUANTITY (IN TONNE)	VALUE (IN CRORE)	QUANTITY (IN TONNE)	VALUE (IN CRORE)	QUANTITY (IN PERCENT)	VALUE (IN PERCENT)	QUANTITY (IN TONNE)	VALUE (IN CRORE)	QUANTITY (IN PERCENT)	VALUE (IN PERCENT)
Rice (Other Than Basmati)	5.64	78.75	4.76	24.67	-0.185	-2.192	2.72	18.56	-0.750	-0.329
Other Cereals	673.06	1221.12	134.79	331.1	-3.993	-2.688	69.43	228.65	-0.941	-0.448
Pulses	2898.08	10221.45	2466.16	11937.59	-0.175	0.144	2047.29	12500.16	-0.205	0.045
Cashew	941.42	9026.34	834.4	7491.21	-0.128	-0.205	766.04	7387.6	-0.089	-0.014
Groundnut	1.95	11.47	1.04	7.95	-0.875	-0.443	0.71	8.87	-0.465	0.104
Other Oil Seeds	410.94	1527.78	506.88	2165.28	0.189	0.294	510.73	3164.26	0.008	0.316
Vegetable Oils	14722.11	68558.16	13540.01	82123.26	-0.087	0.165	10869.48	104162.6	-0.246	0.212
Oil Meals	859.8	1519.48	509.79	1017.61	-0.687	-0.493	1089.82	3868.62	0.532	0.737
Guergam Meal	2.15	25.9	0.37	11.02	-4.811	-1.350	0.15	4.51	-1.467	-1.443
Sugar	1117.73	2473.25	1964	4720.01	0.431	0.476	282.58	973.52	-5.950	-3.848
Mollases	31.72	10.21	1.65	0.92	-18.224	-10.098	0.14	0.56	-10.786	-0.643
Fresh Fruits	993.73	14137.09	1211.83	15764.86	0.180	0.103	1102.46	13717.88	-0.099	-0.149
Fresh Vegetables	150.1	594.82	72.9	225.57	-1.059	-1.637	41.27	122.13	-0.766	-0.847
Cereal Preparations	95.94	1007.66	113.33	1212.15	0.153	0.169	95.23	1088.61	-0.190	-0.113
Sheep and Goat Meat	0.16	13.21	0.01	0.94	-15.000	-13.053	0.02	2.27	0.500	0.586
Other Meat	0.95	32.82	0.5	17.5	-0.900	-0.875	0.66	24.12	0.242	0.274
Processed Meat	0.12	4.52	0.14	5.12	0.143	0.117	0.14	4.69	0.000	-0.092
Cotton Raw	744.33	9371.21	231.36	2861.19	-2.217	-2.275	177.83	3073.85	-0.301	0.069
TOTAL	23649.93	119835.2	21593.92	129918	-	-	17056.7	150351.4	-	-

Source: Indiatat (quantity and Value of Imports of Agriculture Commodities In India, N.D.), Analysed From table 1

Table 1 reveals that India imported 13540.01 tonnes of vegetable oils worth 82123.26 crores; the second highest imported commodity was 2466.16 tonnes of pluses worth 11937.59 crores; and the third highest imported commodity was 1964 tonnes of sugar worth 4720.01 crores in the fiscal year 2020-2021. India imported 10869.48 tonnes of vegetable oils worth 104162.6 crores; the second highest imported commodity was 2047.29 tonnes of pluses worth 12500.16 crores; and the third highest imported commodity was 1102.46 tonnes of fresh fruits worth 13717.88 crores in the fiscal year 2021-2022.

Figure 1



Source: Compute from Table 1

Figure 1 shows that in the fiscal year 2021-2022, India imported 10869.48 tonnes of vegetable oils worth 104162.6 crores; the second highest imported commodity was 2047.29 tonnes of pluses worth 12500.16 crores; and the third highest imported commodity was 1102.46 tonnes of fresh fruits worth 13717.88 crores. Imports of the commodity into India attained the highest growth level in the years 2021-2022, with a 0.532 percent increase in quantity in tonnes and a 0.737 percent increase in value in crores, as shown in Figure 1. Sheep and goat meat had the second highest growth rate in commodity imports into India, increasing by 0.500 percent in quantity in tonnes and 0.586 percent in value in crores. Other meat was the third fastest-growing commodity import into India, increasing by 0.242 percent in quantity per tonne and 0.274 percent in value in crore.

Table 2

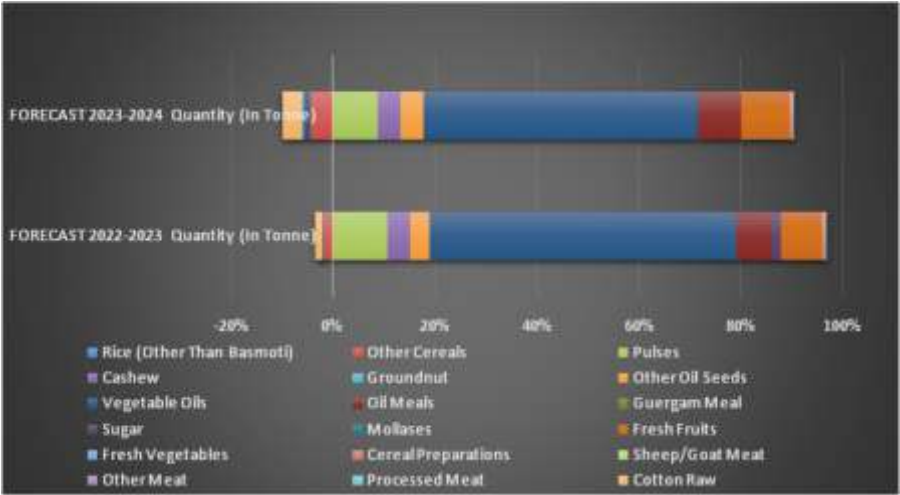
Forecast analysis for Quantity of Selected Agriculture Commodities imports into India

COMMODITIES	2019-2020 QUANTITY (IN TONNE)	2020-2021 QUANTITY (IN TONNE)	2021-2022 QUANTITY (IN TONNE)	FORECAST 2022-2023 QUANTITY (IN TONNE)	FORECAST 2023-2024 QUANTITY (IN TONNE)
Rice (Other Than Basmati)	5.64	4.76	2.72	1.453333333	-0.00666667
Other Cereals	673.06	134.79	69.43	-311.203333	-613.018333
Pulses	2898.08	2466.16	2047.29	1619.72	1194.325
Cashew	941.42	834.4	766.04	671.9066667	584.2166667
Groundnut	1.95	1.04	0.71	-0.00666667	-0.62666667
Other Oil Seeds	410.94	506.88	510.73	575.9733333	625.8683333
Vegetable Oils	14722.11	13540.01	10869.48	9191.236667	7264.921667
Oil Meals	859.8	509.79	1089.82	1049.823333	1164.833333
Guergam Meal	2.15	0.37	0.15	-1.11	-2.11
Sugar	1117.73	1964	282.58	286.2866667	-131.288333
Mollases	31.72	1.65	0.14	-20.41	-36.2
Fresh Fruits	993.73	1211.83	1102.46	1211.403333	1265.768333
Fresh Vegetables	150.1	72.9	41.27	-20.74	-75.155
Cereal Preparations	95.94	113.33	95.23	100.79	100.435
Sheep/Goat Meat	0.16	0.01	0.02	-0.07666667	-0.14666667
Other Meat	0.95	0.5	0.66	0.413333333	0.268333333
Processed Meat	0.12	0.14	0.14	0.153333333	0.163333333
Cotton Raw	744.33	231.36	177.83	-181.993333	-465.243333

Source: India stat (quantity and Value of Imports of Agriculture Commodities In India, N.D.),
Analysed from Table 2

Table 2 shows the volume of the selected commodities from 2019 to 2023. Vegetable oils, pulses, and fresh fruits were the most heavily imported commodities, with a volume of 14722.11 tonnes in 2019-2020, 13540.1 tonnes in 2020-2021, and 10869.48 tonnes in 2021-2022.

Figure 2



Source: Compute From Table 2

Figure 2 shows that the forecast volume for vegetable oils will have the highest import volume in tonnes in the year 2022-2023, contributing to 9191.23 tonnes more in India. Pulses will have the second highest forecast volume in tonnes in 2022-2023, increasing by 1619.72 tonnes in India. Fresh fruits will have the third highest forecast volume in tonnes in 2022-2023, increasing by 1619.72 tonnes in India. The forecast volume in tonnes for commodities in the years 2023–2024 is that vegetable oils will be the highest import volume, increasing by 7264.92 tonnes in India. Fresh fruits will have the second-highest forecast volume in tonnes in 2022–2023, expanding by 1265.76 tonnes in India. Pulses will have the third highest forecast volume in tonnes in 2022–2023, increasing by 1194.32 tonnes in India.

IV Conclusion:

This study concluded that India imported 13540.01 tonnes of vegetable oils worth 82123.26 crores through Agri Exchange and the APEDA in the fiscal year 2020-2021, the second highest imported commodity was 2466.16 tonnes of pluses worth 11937.59 crores, and the third highest imported commodity was 1964 tonnes of sugar worth 11937.59 crores. In the fiscal year 2021-2022, India imported 10869.48 tonnes of vegetable oils worth 104162.6 crores, the second highest imported commodity was 2047.29 tonnes of pluses worth

12500.16 crores, and the third highest imported commodity was 1102.46 tonnes of fresh fruits worth 13717.88 crores. Imports of the commodity into India attained the highest growth level in the years 2021-2022, with a 0.532 percent increase in quantity in tonnes and a 0.737 percent increase in value in crores. Sheep and goat meat had the second highest growth rate in commodity imports into India, increasing by 0.500 percent in quantity in tonnes and 0.586 percent in value in crores. Other meat was the third fastest-growing commodity import into India, increasing by 0.242 percent in quantity per tonne and 0.274 percent in value in crore. This study predicts the forecast volume for vegetable oils will have the highest import volume in tonnes in the year 2022-2023, contributing to 9191.23 tonnes more in India. The forecast volume in tonnes for commodities in the years 2023–2024 is that vegetable oils will be the highest import volume, increasing by 7264.92 tonnes in India.

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Role of Dairy Cooperative in the Union Territory of Puducherry in fulfilling the Gender Equality

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Dr. S. V. Akilandeewari***

Abstract:

Dairying is one of the traditional family activities in India and women have been the substratum of dairy sector therefore, 70 percent of the work in dairying is contributed by women. Dairying has been proven to be a tool for socio-economic of women and also in developing leadership qualities. Many dairy cooperatives encourage women's participations in their governance structure. Dairy sector have been economically empower the women through income generation, financial inclusion, poverty alleviation, social status and create employment opportunities. The study was an attempt to analyze the role of dairy cooperative in the Union Territory of Puducherry in fulfilling the gender equality, and to suggest recommendation to enhance the role and empowering women in achieving gender equality

Keywords:

Dairy cooperatives, Gender equality, Sustainable Development, and empowering women

I Introduction:

Cooperatives are well placed to contribute Sustainable Developments triple bottom line of economic, social and environmental objectives. Cooperatives have the power to help in achievement of the global goals and achieving the Sustainable Development Goals. Right from eradicating poverty to global

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partnership it can contribute in many ways to achieve the SDGs. (Nagaland Post, 2023) Cooperatives are central to realizing the sustainable development goals (SDGs), cooperatives to address all dimensions of reducing poverty and exclusion by identifying economic opportunities for their members, empowering them, providing security and converting individual risks into collective risks by generating income. Cooperatives to promote gender equality through expanding women's opportunities in local economies and empowering them to take leadership role in decision making. (Falendra Kumar Sudan, 2019) Empowering women and strengthening their participation in various area, including the dairy sector.

Dairying is one of the traditional family activities in India and women have been the substratum of dairy sector therefore, 70 percent of the work in dairying is contributed by women. Dairying has been proven to be a tool for socio-economic of women and also in developing leadership qualities. Many dairy cooperatives encourage women's participations in their governance structure.

The study was conducted by Puducherry and it focuses on role of dairy cooperative in Puducherry and fulfilling the gender equality. Dairy is one of the successful cooperative in Puducherry continuously marketing their milk and milk products in quality basis with the brand name of "PONLAIT". Number of dairy farmers particularly women's are benefited by their input services namely cattle feed, veterinary services, training program and AI services. Dairy cooperative would empowering the women members' financial stable, decision making power, good health, and good education for their children. The above backdrop, the study was an attempt to analyze the role of dairy cooperative in the Union Territory of Puducherry in fulfilling the gender equality, and to suggest recommendation to enhance the role and empowering women in achieving gender equality

II Objectives:

- 1) To study the overall performance of the dairy cooperatives and sustainable development in Puducherry.
- 2) To examine the role of dairy cooperatives in gender equality in Puducherry.

III Methodology:

Major objectives of this study is to study the general working Profile of the Ponlait, to analyze the Financial Performance of Ponlait, to arrive at Findings and make appropriate suggestions to improve the overall performance of the selected cooperative society. Data used in this study were primary and secondary the primary data collected through schedule and secondary data collected through annual and audit report, journals, books, focused URLs and all other related sources. Major findings of this study, initiatives can be made by Ponlait to increasing the input services for farmer members, to provide proper training, and to encourage women members through, provide loan and increase milk price.

IV Economic Empowerment through Dairy:

Economic empowerment through dairy sector is a crucial step to achieving the gender equality in the dairy sector. Dairying has been proven to be a tool for socio-economic of women and also in developing leadership qualities. Dairy sector have been economically empower the women through income generation, financial inclusion, poverty alleviation, social status and create employment opportunities.

Here's a brief explanation about economic empowerment through dairying:

1. **Income Generation:** Members of dairy cooperative society to earn consistent income from dairy cooperative society by selling milk. This income provide financial stability to their households as well as improve their livelihood.
2. **Financial inclusion:** Most of the women in dairy cooperatives have access to financial service such as savings accounts, credit facilities, and insurance. This services empower them to make financial decision, and to safeguard their families' future.
3. **Poverty alleviation:** Especially in rural areas where access to alternative income source can be limited. Majority of the people in rural areas where engaged in dairy sector. Dairy cooperatives are continuously provide income by collecting milk through remunerative price however, it will helps to reduce poverty level and positive impact on the overall well-being of families.

4. **Social status:**It helps women become financially independent and contribute significantly to their households' income. It makes women have decision making power and autonomy within their families as well as it improved living standard, better healthcare, and increased education opportunities for their children.
5. **Entrepreneurship Opportunities:** Dairy is one of the sector continuously to provide opportunities for rural women. These ventures not only empower them economically but also contribute to local economic growth.

V Profile of Pondicherry Cooperative Milk Producers Union Ltd.:

Ponlait is a very old milk brand in Puducherry region, the cooperative society impressing the people through production of new varieties of products like paneer, flavored milk, ice-cream, goa and so many byproducts. The brand name Ponlait comes from the name of portmanteau of the word Pondicherry and Lait, which is French for milk.

The Pondicherry Co-operative Milk Producers, Union Ltd. Ponlait had start its functioning from 07.02.1955 as Pondicherry Co-operative Milk Supply Society and was marketing the milk to the urban consumers only. (The Pondicherry Cooperative Milk Producers' Union Ltd, 2022)This is the first registered cooperative society in Pondicherry under the Pondicherry Cooperative Societies Act 1972. The supply society was unable to extend any good deal of input activities to the producing members to encourage milk production and was unable to impress upon the consumers also on the quality aspects. Thus the supply society was able to function only as unorganized middlemen between the much scattered producers and consumers. After the name Pondicherry Co-operative Milk Supply Society was changed into Pondicherry Co-operative Milk Producers' Union Ltd. In 1973. There are 106 societies have been registered and which, 101 societies are currently functioning including 19 Women Milk Producers' Cooperative Societies. There are about 41,221 Milk Producers who enrolled themselves as members in the societies function at village level, of which around 7,525 milk producers are in active participation at present. (The Pondicherry Cooperative Milk Producers' Union Ltd., 2022)

Table 1: Members and Share capital

(In lakhs)

Year	No. of members	Share capital
2016-2017	103	92.19
2017-2018	105	93.86
2018-2019	105	93.86
2019-2020	106	95.42
2020-2021	106	95.42
2021-2022	106	95.42

Source: Annual Report of the PCMP



The above table explained that the number of members increased to 105 in 2016-2017. There was a further increase to 106 members in 2019-2020, and this number of members was maintained in the following two years (2020-2021 and 2021-2022). The share capital, representing the total shares issued by the members, there was an increase in the year 95.42 in 2019-2020 and it was maintained in the following years (2020-2021 and 2021-2022).

VI Socio-economic wise classification of the respondent:

The sample population of (N=980) based on three categorical variables: education, income, and job further categorized by gender.

Table 2: Socio-economic wise classification of the respondent

Variable (N=980)		Gender		Total
		Male	Female	
Education	Illiterate	123 33.7%	214 34.8%	337 34.4%
	School	222 60.8%	371 60.3%	593 60.5%
	Degree	18 4.9%	23 3.7%	41 4.2%
	Post Graduate	2 0.5%	7 1.1%	9 0.9%
Total		365 100.0%	615 100.0%	980 100.0%
Income	Below 2000	8 2.2%	15 2.4%	23 2.3%
	2001-4000	37 10.1%	82 13.3%	119 12.1%
	4001-6000	86 23.6%	151 24.6%	237 24.2%
	6001-8000	93 25.5%	168 27.3%	261 26.6%
	Above 8000	141 38.6%	199 32.4%	340 34.7%
Total		365 100.0%	615 100.0%	980 100.0%
Job	Primary	262 71.8%	441 71.7%	703 71.7%
	Secondary	103 28.2%	174 28.3%	277 28.3%
Total		365 100.0%	615 100.0%	980 100.0%

Source: through the interview schedule

Education: Majority of the respondents are finished “School” with 60.5 percent of the total sample. 34.4 percent of the respondents were illiterates, 60.5 percent completed upto primary school, 4.2 percent finished upto under graduate, and 0.9 percent had post graduate. Taking into account total respondents, 60.3 percent of the women were finished school. The result shows that a large number of females are educated in the total sample.

Income: explains that 2.3 percent of the respondents had a monthly income is below 2000, 12.1 percent were getting a monthly income from 2001-4000, 24.2 percent of the respondents getting a monthly income from 4001-6000, 26.6 percent of the respondents had a monthly income from 6001-8000, 34.7 percent had upto 8000 as monthly income. Majority of the respondents monthly income was above 8000, consisting 34.7% of the total sample.

Job: reveals that 71.7 percent of the respondents were primary job, 28.3 percent of the respondents are in secondary job. Majority of the respondents are in the primary job category, constituting 71.7% of the total sample and higher percentage of female in the primary job category.

VII Dairy Cooperatives in Gender Equality in Puducherry:

“Cooperatives are continuously contributing towards gender equality by increasing in size of women’s opportunities to participate in local economies and societies in many parts of the world”.

Dairy Cooperative in Puducherry playing an important role in promoting gender equality and empowering women in various ways. Dairy cooperatives to provide employment and income generation opportunities for rural women and improves the standard of living of their families. Dairy cooperatives offer training programs for their members, it will enhancing their knowledge and skills in various aspects of dairy farming and processing. This empowers women to take on more significant roles within the dairy industry. Through cooperative network, women gain better access to resources such as credit, technology and veterinary services. Dairy cooperative in Puducherry it provides veterinary services, AI services and cattle feed etc., this facilities improved animal husbandry practices and higher milk yields, leading to increased income for women and it leads to increased self-esteem and self-confidence among women. It also promote their visibility and recognition with in their communities. These initiatives are crucial for promoting gender equality and empowering women in the region.

VIII Suggestion:

The study suggests that, the dairy cooperative in Puducherry take necessary step to attain the SDGs and achieving the 5th goal of gender equality. The following suggestions are:

- Providing health care for dairy animals it will reduce disease-related costs.
- Adopt modern milking system it can reduce waste and increase output, making the dairy cooperative more sustainable.
- The government to introduce a new scheme viz. livestock development scheme, livestock health care schemes for dairy farmers which will increase their economic condition.
- Drawing a special scheme supply and increase livestock population among farmer members.
- Conducting the Women awareness programme to non-members of farmers in village on procuring livestock as women entrepreneur.
- Adopting advanced and innovative market arrangements required to enhance the economic returns to the farmers.

IX Conclusion:

Cooperatives plays a significant role in creating employment and income generation, with more than 100 million jobs worldwide and it provides financial support to millions of farmers involved in milk production and to developing the rural livelihoods. The study established that the dairy cooperative in Puducherry has been successful at empowering women through financial support, decision making power and good education for their children. However, dairy sector need to improve their input services in proper manner. The study suggest the dairy cooperatives to improving animal health and nutrition, increasing additional milk production, improving fodder management, increasing access to new local markets. These initiatives are help to improve the milk production and also to support the dairy farmers.

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Sustainable livelihoods and Economic Growth: The impact of Dairy Cooperatives on members in Dindigul District, Tamil Nadu

V. Durga*, Dr. C. Pitchai**

Abstract:

Sustainable livelihoods are a crucial element for achieving economic growth and poverty reduction. In this context, dairy cooperatives have emerged as a powerful mechanism for promoting rural development, particularly in states like Tamil Nadu in southern India. Dairy cooperatives, such as the Tamil Nadu Cooperative Milk Producers' Federation Limited (Aavin), have played a significant role in enhancing the livelihoods and economic well-being of their members. Dairy cooperatives play a crucial role in improving the economic well-being of their members by creating income opportunities, enhancing resource access, and ensuring equitable pricing, especially in a region where dairy farming holds significant socio-economic importance. This article investigates the impact of dairy cooperatives on the livelihoods and economic growth of their members in the Dindigul district, Tamil Nadu by utilizing the convenience sampling method, data were gathered from 100 respondents from villages. This paper analyses how these cooperatives contribute to achieving Sustainable Development Goals (SDGs) by empowering rural communities and fostering economic growth. Additionally, this paper assesses the challenges and opportunities faced by members of dairy cooperatives in select district, highlighting the potential of these organizations to drive sustainable livelihoods and economic development.

Keywords:

Dairy cooperatives, dairy farmers, livelihood, economic growth, SDGs

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I Introduction:

The dairy sector ensures nutritional and economic security for India and also holds particular significance for rural households, especially in empowering women, as dairy activities are primarily women-centric. A substantial number of rural households now depend significantly on dairy farming as a supplementary source of income. It has become pivotal in providing marginal and female farmers access to employment and income-generating prospects. The cooperative movement within the Indian dairy sector is widely credited for this rapid and consistent growth. Dairy cooperatives play a pivotal role in India's milk marketing and dairy development initiatives. Primary milk cooperatives have emerged as robust supporters of the socio-economic well-being of dairy farmers, surpassing even agriculture in their impact (NDDDB, 2022)¹. Tamil Nadu, a southern state in India, boasts a vibrant agricultural landscape and a rich tradition of dairy farming deeply interwoven into its socio-economic fabric. Within this landscape, dairy cooperatives emerge as catalysts of transformation, nurturing sustainable livelihoods and propelling economic growth for their members. This article embarks on an exploration of the profound impact of these dairy cooperatives in Tamil Nadu, unveiling their instrumental role in realizing the Sustainable Development Goals (SDGs) while empowering rural communities.

In Tamil Nadu, dairy cooperatives stand as beacons of hope, offering their members much more than just economic sustenance. They provide empowerment, preserve dignity, and instill resilience in the face of economic challenges. These cooperatives have successfully elevated dairy farming from mere subsistence to a thriving economic endeavor. As this study delves into the intricacies that underpin the success of dairy cooperatives in Tamil Nadu, the journey of this study will unveil how they generate income opportunities, facilitate resource access, and ensure equitable pricing within a sector of profound significance. Moreover, it will explore their pivotal role in diminishing gender disparities and amplifying the involvement of women in dairy-related activities. Against the backdrop of the United Nations' Sustainable Development Goals (SDGs), particularly those focusing on poverty alleviation, gender equality, and economic growth, the dairy cooperatives in Tamil Nadu offer invaluable insights into how grassroots-level initiatives can make substantial contributions to broader global objectives.

II Literature Review:

Economic Impact:

Dairy cooperatives (DCs) possess a robust governance structure uniquely suited to assist members in achieving Sustainable Development Goals (SDGs). In the dairy farming sector, marked by substantial market dependence and significant socio-economic implications (Thaker, N.M, 2020)², dairy cooperatives facilitate the vertical integration of dairy farmers, providing a counterbalance against the influence of powerful oligopolies in distribution and retailing. Moreover, they orchestrate dairy supply chains, enhancing strategic logistics among production, processing, and distribution, particularly in emerging markets (D'antoni and Mishra, 2012)³. Dairy farming also serves as a shield against financial risk and economic uncertainty faced by its members in mature markets (Maynard, 2009)⁴, a vulnerability exacerbated by the fluctuating prices of milk and feed. The income of dairy cooperatives is intricately tied to the dynamics of milk demand and supply. The dairy cooperatives serve as vital channels in the production and distribution of milk, thereby creating income opportunities for rural communities (Wolf and Widmar, 2014)⁵.

Social Impact:

Dairy cooperatives (DCs) bolster members' negotiation power, ensuring more competitive prices for both inputs and outputs. They also enhance information transparency and elevate agro-food safety and quality standards (Trebbin, 2014)⁶. Furthermore, DCs strengthen the connection between farms and dairy processing, leading to increased productivity, higher milk quality, and greater safety throughout the supply chains, it's worth noting that the organizational structure of DCs can sometimes limit their access to external financial resources (Jadhav. SG, 2011)⁷.

Nevertheless, DCs utilize effective economic strategies to cultivate markets for value-added products, even if this entails higher transactional costs compared to private companies. They do so driven by strategic objectives and intent (Charlebois and MacKay, 2010)⁸. Dairy cooperatives (DCs) often embrace agricultural values that enable dairy farmers to meet the growing quality standards within value chains (Acosta and Valdés, 2014)⁹, they maintain this commitment even when external factors may pose challenges to their ability to effectively manage quality (Muruganandan, P. 2004)¹⁰.

III Objectives:

1. **Assess Impact:** To comprehensively assess the impact of dairy cooperatives on the sustainable livelihoods and economic growth of their members in the state of Tamil Nadu.
2. **Explore Empowerment:** To explore how these cooperatives empower their members by providing economic opportunities, preserving dignity, and fostering resilience, particularly in the face of economic challenges.
3. **Examine Gender Dynamics:** To examine the role of dairy cooperatives in reducing gender disparities and enhancing the participation of women in dairy-related activities, contributing to gender equality.
4. **Alignment with SDGs:** To investigate how dairy cooperatives in Tamil Nadu align with and contribute to the achievement of Sustainable Development Goals (SDGs), with a focus on poverty alleviation, gender equality, and economic growth.

These objectives collectively aim to provide a thorough understanding of the impact, empowerment, gender dynamics, alignment with global goals, and broader significance of dairy cooperatives in Tamil Nadu.

IV Methodology:

Data Source:

This study draws upon both primary and secondary data sources. Primary data was acquired through structured questionnaires, while secondary data was gathered through an extensive review of published books, reports, periodicals, dissertations, articles, newspapers, brochures, and annual reports.

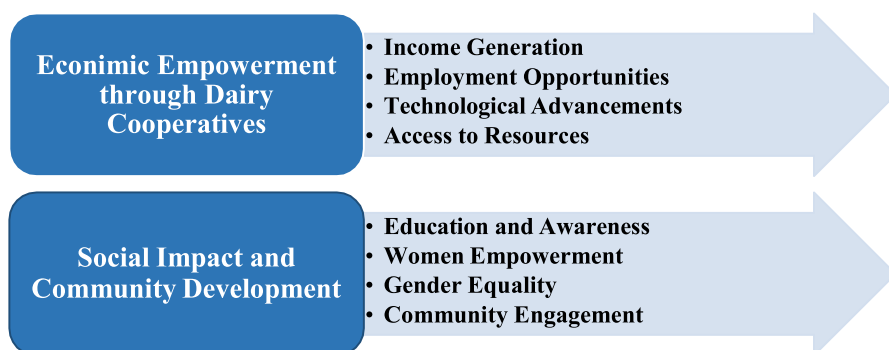
Sampling:

Primary data for this study were obtained through a convenience sampling method, involving 100 dairy farmer members from the dairy cooperatives of the Dindigul district. Data collection was conducted using structured interview schedules. The analysis primarily employed simple percentage-based methods.

V The Role of Dairy Cooperatives In Members' Livelihoods and Economic Groups in Tamil Nadu:

The development of dairy cooperatives in India, particularly in Tamil Nadu, Gujarat, and Uttar Pradesh, started gaining momentum primarily in the 1950s. Before this era, organized efforts towards the establishment and growth of dairy cooperatives were virtually non-existent until the initiation of the 5th Five-Year Plan (NCUI, 2020)¹¹. It was during this period that the "Amul" cooperative in Gujarat emerged as a prestigious model, setting the tone for milk producers' cooperatives not only in Gujarat but also in various other states across the country. These cooperatives played a pivotal role in advancing milk production and uplifting the economic well-being of their members.

The cooperative movement in Tamil Nadu dates back to the early 20th century when the Madras Cooperative Act was introduced. However, it was after India gained independence in 1947 that the dairy cooperative movement gained momentum. Driven by the vision of Dr. Verghese Kurien, the architect of the White Revolution, the National Dairy Development Board (NDDB) and its local counterpart, the Tamil Nadu Cooperative Milk Producers' Federation (TCMPF), initiated efforts to organize dairy farmers and create a self-sustaining dairy industry in the state. The emergence of dairy cooperatives marked a turning point, empowering farmers through collective action and providing them with a platform for sustainable growth.



VI Results and Discussions:

Demographic factors:

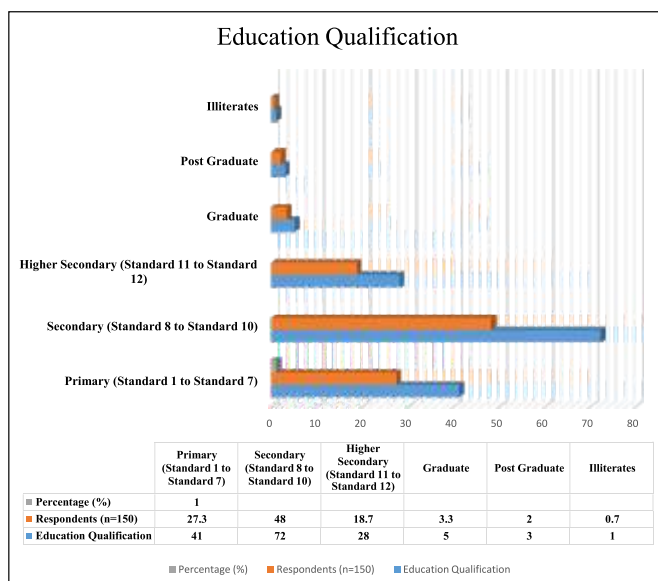
The following paragraphs delve into the demographic characteristics of chosen member dairy farmers in the Dindigul district.

Table 1: Gender of Dairy Farmers

Gender	Respondents	Percentage (%)
Male	96	64
Female	54	36
Total	150	100

Among the 150 Member Dairy Farmers, 96(64%) are male, while the remaining 54 (36%) are female, Therefore, a predominant proportion of Member Dairy Farmers are male.

Chart 1:

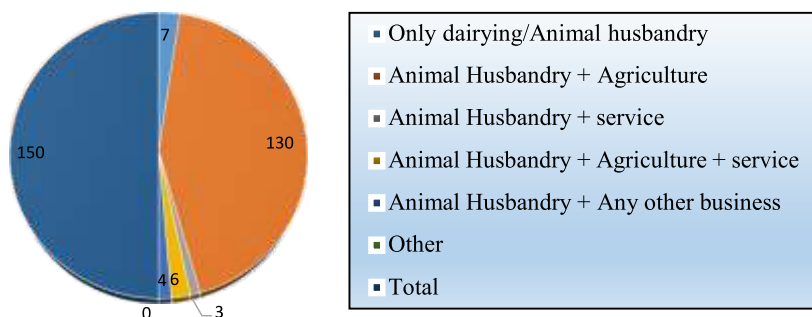


Among the 150 respondents, the educational qualifications of Member Dairy Farmers are distributed as follows: 41 (27.3%) have attained a Primary education level (Standard 1 to Standard 7). 72 (48%) possess a Secondary educational qualification (Standard 8 to Standard 10). 28 (18.7%) hold a Higher Secondary educational qualification (Standard 11 to Standard 12). 5 (3.3%) have graduated from a university. 3 (2%) have postgraduate qualifications. The remaining 1 (0.7%) are illiterate. This distribution indicates that the majority of Member Dairy Farmers have completed either Secondary or Higher Secondary education.

Table 2: Family Type

Type of Family	Respondents (n=150)	Percentage (%)
Joint	97	64.5
Nuclear	53	35.5
Total	150	100

Among the 150 respondents, 97 (64.5%) of the Member Dairy Farmers belong to joint families, while the remaining 53 (35.5%) are part of nuclear families. Therefore, a majority of the Member Dairy Farmers within the sample are from joint families.

Chart 2:**Occupation**

Among the 150 respondents, 130 (86.5%) Member Dairy Farmers are engaged in both Animal Husbandry and Agriculture businesses, 7 (4.5%) are solely focused on dairying/Animal husbandry activities, and 4 (3%) are involved in Animal Husbandry alongside another business.

Table 3: Monthly Income

Monthly Income	Respondents	Percentage (%)
≤ ` 10000	3	2
` 10001 to ` 20000	61	40.7
` 20001 to ` 50000	76	50.6
Above ` 50000	10	6.7
Total	150	100

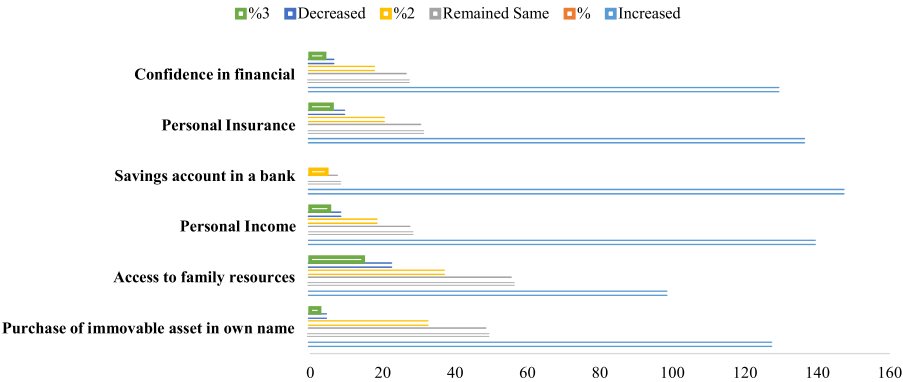
Hence, within the sample of 150 respondents, the majority of Member Dairy Farmers are engaged in both Animal Husbandry and Agriculture activities. Regarding monthly income, it's notable that among the 150 respondents: 3 (2%) Member Dairy Farmers earn less than ₹10,000 per month. 61 (40.7%) have a monthly income ranging from ₹10,001 to ₹20,000. 76 (50.6%) generate a monthly income falling within the range of ₹20,001 to ₹50,000. This data demonstrates that the monthly income for most of the Member Dairy Farmers in the sample falls between ₹10,000 and ₹50,000.

Table 4: Animal Holding

Animal Holding	Respondents	Percentage (%)
1-2	6	4
3-4	62	41.5
5-6	70	47
7– 8	7	4.5
Above 8	5	3
Total	150	100

The provided data, in the context of 150 respondents, shows the distribution of Member Dairy Farmers based on the numbhave 3-4 animals. 70 (47%) own 5-6 animals. 7 (4.5%) have 7-8 animals. 5 (3%) Member Dairy F er of animals they own: 6 (4%) Member Dairy Farmers possess less than 2 animals. 62 (41.5%) armers have more than 8 animals. This information reveals the distribution of animals among Member Dairy Farmers within the 150 respondent sample.

**Chart 3:
Economic Growth of Respondents**

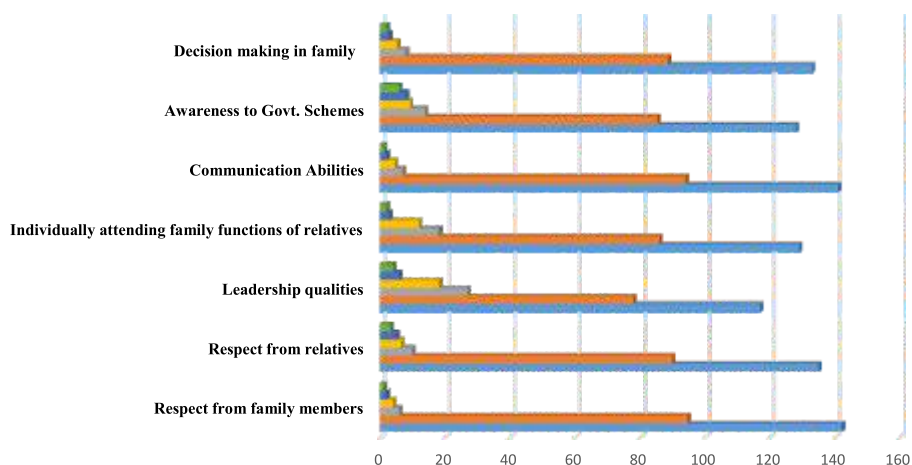


	Purchase of immovable asset in own name	Access to family resources	Personal Income	Savings account in a bank	Personal Insurance	Confidence in financial
■ %3	2.6	14.6	5.3	0	6	4
■ Decreased	4	22	8	0	9	6
■ %2	32	36.6	18	4.6	20	17.3
■ Remained Same	48	55	27	7	30	26
■ %	84.6	65.3	92.6	98	90.6	86
■ Increased	127	98	139	147	136	129

Among the 150 respondents in this study: 84.6% reported an increase in the purchase of immovable property assets. 65.3% had access to family resources within their families. 92.6% indicated an increase in their personal income. 98% mentioned that they held a savings account in bank. 90.6% reported having personal insurance to meet future demands. 86% expressed confidence in financial transactions.

Chart 4:

Response from respondents about their livelihood



	Respect from family members	Respect from relatives	Leadership qualities	Individually attending family functions of relatives	Communication Abilities	Awareness to Govt. Schemes	Decision making in family
■ 3%	1.3	3.3	4	2	1.3	6	2
■ Decreased	2	5	6	3	2	8	3
■ 2%	4	6.6	18	12	4.6	9.3	5.3
■ Remained Same	6	10	27	18	7	14	8
■ %	94.6	90	78	86	94	85.3	88.6
■ Increased	142	135	117	129	141	128	133

■ 3% ■ Decreased ■ 2% ■ Remained Same ■ % ■ Increased

Among the 150 respondents interviewed for this study: An overwhelming 94.6% reported an increase in the respect they received from their family members. Only a minimal 1.3% indicated a decrease in respect from their family members. A substantial 90% of respondents expressed that they continued to receive respect from their relatives. Approximately 86% mentioned that they actively attended family functions individually, showcasing an increase in their engagement with relatives. A mere 3% reported not individually attending family functions involving relatives. Approximately 94% of respondents reported an enhancement in their communication skills after joining the Dairy Cooperatives. A significant 85.3% attributed an increased awareness of Government Schemes to their affiliation with Dairy Cooperatives. These findings shed light on the positive impacts of joining Dairy Cooperatives on respect, family relationships, communication skills, and awareness of government initiatives among the respondents.

VII Recommendations:

1. **Promoting Financial Literacy:** It is evident from the study that a significant number of Member Dairy Farmers reported increased respect from family members and a rise in personal income. To ensure the continued financial well-being of these farmers, it is recommended that educational programs on financial literacy and investment be conducted. This will help them manage and invest their increased incomes effectively.
2. **Enhancing Women's Participation:** The study highlights the empowerment of women through their involvement in dairy farming. To further enhance women's participation, cooperatives, and relevant authorities should provide training and support to women farmers, encouraging them to take on leadership roles and expand their knowledge in the field.
3. **Skill Development Programs:** The majority of respondents reported an improvement in their communication skills after joining Dairy Cooperatives. Building on this, cooperatives should consider offering more skill development programs that enhance both technical and soft skills, thereby increasing employability and entrepreneurial capabilities among their members.

4. **Market Diversification:** While dairy cooperatives have significantly improved income and economic well-being, there is a need to explore market diversification opportunities. Encouraging members to explore value-added dairy products or venturing into related agribusiness activities could further boost incomes.

5. **Government Scheme Awareness:** To ensure that members fully benefit from government schemes, cooperatives should continue to educate and inform their members about relevant schemes. They can serve as intermediaries between the government and farmers, facilitating the application process and supporting farmers in accessing available benefits.

VIII Conclusion:

The study on the impact of dairy cooperatives on the livelihoods and economic well-being of members in Dindigul District, Tamil Nadu, has revealed substantial positive outcomes. The cooperatives have not only contributed to increased income and employment opportunities but have also played a significant role in empowering both men and women in the community. Members have reported improved communication skills, greater participation in family functions, and an enhanced understanding of government schemes. This, in turn, has improved their social status and overall well-being. Furthermore, the cooperatives have enabled farmers to engage in both animal husbandry and agriculture, fostering economic diversification. Members also reported increased respect from family members and relatives, underlining the social significance of their involvement in dairy cooperatives. In conclusion, dairy cooperatives have been instrumental in transforming the lives of members in the Dindigul District, fostering economic growth, and contributing to their overall well-being. These cooperatives have served as models of sustainable development and empowerment, and with the right strategies and continued support, they can further elevate the livelihoods of their members in the years to come.

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Role of Employees Credit Cooperatives in achieving SDGs (A case study of “The Ratnagiri District Postal Employees Cooperative Credit Society Ltd.

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Abstract:

The Sustainable Development Goals is a collection of some interlinked objectives to serve for peace and prosperity for people and the planet, now and into the future.

Cooperatives are well-placed & are playing an important role in achieving SDGs in wide areas of poverty, health & well-being, education, gender equality, working & economic growth, inequality, cities and communities, consumption & production patterns, & partnership practices etc.

Out of about 8.5 lakh cooperatives in India with the membership of about 30 crore, the State of Maharashtra claims about 2.30 lakh cooperatives of 56 types with membership of about 5.75 crore.

All these cooperatives are broadly classified as Agricultural credit, Non-agricultural credit, Production, Processing, Marketing & Social Services cooperatives.

For the purpose of this study the Ratnagiri District Postal Employees Cooperative Credit Society Ltd., Ratnagiri.

Keywords:

Transformation, SDGs, Employees, Credit Cooperatives, Viability

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1 Introduction:

As compared to other types of cooperatives, the number of Employees Cooperatives Credit Societies is comparatively less. But their nature of working, support system to the members & their contribution to the progress of cooperative movement in general, is important & noteworthy. These cooperatives are playing transformational role & are working as partners to achieve the SDGs.

The Employees Cooperatives Credit Cooperatives provide various financial services to their members. They collect deposits from them & disburse loan & advances to them. The profit making cooperatives introduce & implement some welfare schemes for their members.

To better understand the working of this type of cooperatives "the Ratnagiri District Postal Employees Cooperative Credit Society Ltd., Ratnagiri, Maharashtra, India has been selected for the purpose of carrying the present research study.

A study of working of this long working cooperative will give more insight regarding the historical progress of entire cooperative movement in the country. In view of above this society has been selected for the purpose of carrying the present research study, as a representative entity of the other employees credit cooperatives in the district, state & country

2 Hypothesis:

"The Employees Credit Cooperatives can play a vital role in the transformation of cooperatives, their members and in achieving various SDGs."

3 Concept of Cooperative Working:

A concept of cooperative working was first introduced in England in the year, 1844. A few weavers voluntarily came together & formed a society named Rochdale Pioneers Equitable Society through which a consumer outlet was opened to provide consumables, at reasonable prices to the members. Thereafter, the concept of cooperative working became so popular that it spread throughout the world, including India.

4 Defining Cooperative Society:

As defined in the Maharashtra Cooperative Societies Act, 1960 "Society" means a cooperative society registered, or deemed to be registered, under the Cooperative Societies Act, which is an autonomous association of persons, united voluntarily to meet their common needs and aspirations through a jointly owned and democratically controlled enterprise and adhering to the cooperative principles and values."

5 SDGs & Role of Cooperatives in achieving SDGs:

The Sustainable Development Goals are a collection of some interlinked objectives to serve for peace and prosperity for people and the planet, now and into the future. Cooperatives are well-placed to play an important role in achieving SDGs. Cooperatives are working in the wide areas which are directly or indirectly related to poverty, health & well-being, education, gender equality, working & economic growth, inequality, cities and communities, consumption & production patterns, & partnership practices etc.

6 Objectives of Study:

The main objectives behind carrying out the study of this type of cooperatives is to understand the issues relating to the –

- a) style of working of this type of cooperatives;
- b) supports being extended by them to their members
- c) various schemes being implemented for the welfare of the members, &
- d) problems being faced by the cooperatives.
- e) role being played by these cooperatives in achieving SDGs.

7 Significance of the study:

This study will be useful to assess the -

- (1) overall working of various types of cooperatives in the Cooperative Movement.
- (2) direct or indirect role being played by these type of cooperatives in achieving the SDGs
- (3) problems being faced by the various cooperatives
- (4) probable measures to be taken to address their problems.

8 Cooperative Movement:

In India there are about 8.5 lakh cooperatives with membership of about 30 crore. Out of that, the State of Maharashtra is having 56 types of cooperatives numbering about 2.30 lakh with membership of about 5.75 crore. These cooperatives are broadly classified as Agricultural credit, Non-agricultural credit, Production, Processing, Marketing & Social Services cooperatives.

Table - I Cooperative Societies in Maharashtra (31/03/2022)

Sr.No	Type of Societies	No.of Societies
1	Apex Societies	33
2	PACSS	21097
3	PNACSS	21030
4	Marketing Societies	1291
5	Processing/ Production Societies	25816
6	Social Services Societies	153471
	Total	222738

9 Working of employees credit cooperatives & contribution to achieve SDGs:

As compared to the other types of cooperatives, the quantum of Employees Credit Cooperatives is comparatively less, but their importance existence, nature working, system of giving support to the members is noteworthy.

The members of these cooperatives play dual role. Firstly, as an employee of their respective establishments & secondly, as a member of respective Cooperative Society. Through their members these cooperatives contribute significantly, to make the progress of cooperative movement & to play transformational role while working as partners to achieve the SDGs.

10 Employees Cooperative Credit Societies:

There are about 76,997 Employees Thrift & Other Credit Cooperatives in India of which Maharashtra claims 20392 Non-agricultural Cooperative Credit Societies, including 6646 Employees Credit Cooperatives. There are some cooperative banks in Maharashtra which have been formed & being run by the

employees. The credit cooperatives collect savings ,term& recurring deposits from the members & out of that disburse loans and advances to the members. The profit making cooperatives introduce & implement certain welfare schemes for the benefits of their members.

11 Employees Credit Cooperatives in Maharashtra:

The figures in the table below show that there is a trend of increase & decrease in the number of societies, membership & share capital, outside borrowings, profit making cooperatives etc.

Table - II Employees Cooperative Credit Societies in Maharashtra

(Figures as on 31/03/2020)

Item	1971	1981	1991	2001	2011 in lakhs	2020
No. of societies	2220	4187	6117	7079	7318	6613
Membership (000)	1505	2014	2697	4120	3508	4869
Share capital	3075	13903	33834	166283	21777	339670
Owned Funds	3421	16917	41565	224933	340482	477149
Deposits	2740	11414	22385	85590	269027	420641
Borrowings	231	2527	23331	133052	121507	158736
Working Capital	6063	36764	106098	526274	986101	1901740
Loans Advanced	4175	28318	55533	353293	602527	1030404
Loans Out standings	3652	27803	79862	400821	654777	708629
Loans Overdue s	61	365	3049	34193	40167	78405
Societies in Profit	1791	3446	5401	6371	6414	5716
Amount of Profit	231	1087	3393	28694	39949	50659
Societies in loss	205	473	377	671	782	840
Amount of Loss	3	21	43	458	815	19032

Source:- Cooperative Movement At A Glance In Maharashtra -2020.

Table - III Salary Earners Credit Societies in the Ratnagiri District :
(As on 31/3/2023)

(Rs. in lakh)

No.of Societies	Members	Share capital	Owned Funds	Deposits	Borrowings	Loan Advances	Outstanding loans	Over dues	Societies in Profit	Societies in Loss
79	2.97	8567	1558	1839 6	15749	9864 66	5648 4	151	79	Nil

Source:- Information received from the office of the DDRCS, Ratnagiri.

12 Methodology/Data collection Sampling:

For the purpose of carrying out the study the Ratnagiri District has been identified where 79 Employees Credit Cooperatives are operational. Of which following two cooperatives are formed by the postal employees in the district.

- 1) The Ratnagiri District Postal Karmachari Sahakari Patsanstha Maryadit, Ratnagiri. (Regn.No.161/1923,Dt.13/8/1923.) Having working of 100 years.It has membership of 398 employees out of about 500 employees.
- 2) The Shivajirao Desai Gramin Daksevak Pagardar Sahkari Pata Sanstha Mmaryadit, Ratnagiri. (Regn.No.110/2002,Dt.16/4/2002.)

It has completed about 20 years of its working.Having 508 members out of about 1000 employees. Both these cooperatives are working successfully & providing financial services to their members. The Ratnagiri District Postal KarmachariSahakariPatsansthaMaryadit,Ratnagiri has been selected for the study for the reason that it has working history of last hundred years. A study of this society will be a representative of employees credit cooperatives in the district, state & country & will give more insight about progress of cooperative movement in the country.

13 Topic for the present study:

A topic for this research study is," An analytical study of working of ,The Ratnagiri District Postal Employees Cooperative Credit Society Ltd.Ratnagiri, Maharashtra, India."

Table - IV Financial Position of the Socy.(As on 31/03/2023)

(Rs.in Lakh)

Members	Share capital	Loans Advanced	Cash Credit Availd from the RDCCB	Total Deposits	Net Profit	Members Welfare Fund	Dividend Declared (%)	Audit Class
398	343	748	350	332	59	2.53	13.50	A

Source:- Annual Report of the society -2022-23.

14 Some facts & features of the society:

The society has been registered in the year 1923, under the Cooperative Societies Act. It has completed a period of hundred years of it's successful working & has celebrated its Centenary on 13th August,2023.

It collects Savings, Term & Recurring deposits from the members, & provides loans & advances to the members as per their requirement. Out of profit earned it declares & pays dividend to the members. For the last three financial years dividend was declared at the rate of 15, 15 & 13.5%. Society implements certain schemes for the welfare of the members. Present committee of the society, consisting of eleven directors including two women directors, entered into the office on 15th January, 2023.

The society has its own office premises duly computerized. The statutory audit, filing mandatory returns, calling annual general body meeting, conducting elections of the committee is carried out timely. Two employees of the society look after the day to day working & record keeping.

Interest rates on Savings, Term & Recurring deposits are fixed at 5% & 10.5% respectively.

Interest rates on Emergency, Term, & Education & other loans is fixed at 10.5%. The society has availed cash credit limit of Rs.3.50 cr. from the RDCC Bank, Ratnagiri.

There are loan overdues of Rs 12.02 lakhs in 5 loan accounts. The overdues are due to untimely death or permanently removal of the members from his employment. For the recovery of said overdues the society has obtained RRCs under the Cooperative Societies Act, from the Registrar & execution thereof is in progress.

The society has made financial provision of RS.72 lakhs against Non Productive Assets (NPAs). The society has obtained accident insurance cover for its members to the extent of Rs.5 lakh each.

15 Methodology:

A) Primary data:

Collected through following three types of questionnaires, namely-

- One, for the society;
- Second, for the office of the District Deputy Registrar, Cooperative Societies, Ratnagiri.
- Third, for the present & ex- members of the society.

B) Secondary data Collected from the:

- Offices/field offices of the Cooperation Department of the State
- Identified Society.(RDPECCSoc Ltd.)

C) Additional information:

- The annual report of the society for the year-2022-23.
- Visited the society & discussed with the Management Committee members of the society.
- Discussion with the field officers of the State Cooperation Department.
- Attended Centenary celebration event.
- Attended Annual General Body Meeting working.
- Obtained oral feedback from the present & ex-members of the society.
- Obtained feedback from the software service provider of the society.

16 Method of collection of primary data :

I could participate in the Centenary Celebration Program & attended the Annual General Body Meeting of the society held on 13th of August 2023. In both of these events ex-members & present members of the society were present. The questionnaire made for the members was circulated to all the members present & were requested to fill up & handover the questionnaire to the officials of the society. Thus the Questionnaire duly filled in by the members & ex-members was collected on spot. In all 70 members have responded to The questionnaires to the society, & the District Deputy Registrar, Cooperative Societies, Ratnagiri office was shared by WhatsApp, to which they responded timely.

17 Coverage of the questionnaire for the members :

Following particulars were expected from the members.

- Ex-member or current
- Age of the members

- Education
- Period of membership
- Whether worked as a Committee member
- Attendance & participation in the AGBM.
- Shareholding, deposits, Types & purpose of loans availed, quality of services given by the society.
- Whether the members got the loans conveniently, adequate & timely
- Whether receives dividend
- Nature of financial help received from the society in case of emergency etc.
- Welfare schemes/initiatives of the society for the members.
- Whether transactions regarding share purchase, deposits & loans are made Regularly.
- Had the help from the society not received, what would have been the difficulty faced by the member.
- How transformation has taken place because of the support of the society.
- Opinion about future of the society
- Importance & need of the Cooperative Movement.

18 Observations on questionnaire:

The data collected has been scrutinized, processed, tabulated, analyzed & the results are found as below .

- 1) In the Ratnagiri district there are about 500 employees working on the regular establishment of the Postal Department, of which 398 employees are enrolled as members of the society.
- 2) About 480 current & ex-members participated in the Centenary Celebration Program & 243 Regular members attended the Annual General Body Meeting held on 13th August, 2023.

- 3) Of which 70 responses to the questionnaire from the (51)Regular &(19) ex-members. 19 ex- members of age group between 60 to 87, include 2 female members.2 female members & one male member is graduated,remaining all male members have education below graduation.

51 regular members include 4 female members. 25 members are graduated & 26 are below graduation. The regular members include 5 members of age between 60 to 67 who are retired from services but still continue to be members.

Out of 51 regular members 11 have membership tenure upto 10 years, 20 have tenure between 12 to 20 years & 20 members have tenure above 20 years. 14 members including 2 female members have worked on management committee.

All members including ex & regular members regularly receive dividend on their share capital holdings.For the financial years2020-21 & 2021-22 the society declared dividend @ 15% & for the year 2022-23 the dividend has been declared @ 13.5%.

Out of 70 responses 25 members are having Savings Deposits,18 have Fixed Deposits &14 are having Recurring Deposit accounts.

Out of 70 responses 21 have availed emergency loan,37 term loans & 4 availed education loan for their family members.

Out of 70 responses 41 say that the loan was given timely & adequately.

Out of 70 responses 36 say that the continue to invest in the shares of the society, keep deposits or avail loans.

Out of 51 current members 50 say that they attend the AGBM Regularly& out of 18 ex members 12 say that they attend the AGBM regularly.

Society pays certain amount to the members to facilitate them to incur traveling expenses for attending AGBM.

19 General opinions offered by the respondents on questionnaire :

- Society always eagerly extends cooperation & help to the members.
- Because of timely financial help from society one could have his home.

- Working of the society is transparent & that is in the interest of the members
- Feeling of ownership of the society amongst members develops. While taking any work on hand members get assurance of help from the society.
- Had there not been the society to help, members could have faced various financial difficulties.
- Earnest needs of the members are fulfilled by the society, otherwise members could have to approach to the banks wasting time & facing trouble.
- Society has helped members to become self-reliant.
- Society assuredly helped members at the time of their hardships.
- Works of most of the members could not have been completed in a one go. Their financial problems would not have been solved.
- Loans are always sanctioned by the society quickly & as per the requirement of the members. For social development financial support by the society is a must.
- Internal disputes are harmful to the society. Therefore that should always be avoided.
- Because of the society amongst members leadership is developed & public contacts improved
- The society is a reliable source of help to the members.
- Habit of cooperation among members is developed.
- Had there not been the society members would have to borrow from private sources with heavy rate of interest.
- Society is assured source of support to the members.
- For raising adequate funds more deposits should be collected from the members.
- Society always helps to meet out emergent needs of the members.

- The society always helps to fulfill different needs of the members..
- Because of the society economic standard of the members is improved.
- Habit of saving is developed among members.
- Society always helps members to meet out emergent expenses of the members on education, house construction etc.
- The society has helped members to purchase land.
- Through the society needs of the members can be fulfilled timely.
- Had there not been the society houses could not have been purchased by the members.
- Number of financial problems could be solved through the society.
- The society is helpful to the members & their families.
- Through the society the current & ex-members are getting number of financial benefits.

20 Need of Cooperative Movement:

There is always a need of the Cooperative Movement because it can strengthen common man & he can make progress. The existence of the Cooperative Movement is necessary because it is important.

It extends financial support to all the members. Cooperation is a need of the time. Such societies should have branches at rural areas so that deposits can increase. Society always gives cooperation & help to the members. Society always stands in support of the members. Way of samruddhi goes through the cooperation. Development through cooperation is possible. Cooperation is an important part of life. Therefore cooperative Movement is needful for making social progress. Internal disputes should be avoided. Cooperation is important for making individual progress. Importance of cooperation should reach upto bottom level.

Cooperative movement is Important for making public welfare. Cooperatives help to fulfill emergent financial needs. Under Co-operation people can come together & satisfy their different needs. Cooperation is a need of the time for a

common man to strengthen himself financially.Cooperative movement is important & it is very much needed.

It helps public to make progress. Through the cooperatives all needy members get financial help.In the cooperatives there should not be corrupt practices & it should be free from politics also. Cooperatives are helpful at the time of financial hardships & specially education. Cooperatives help members to march towards making progress. Cooperation is necessary to o fulfill needs & objectives of the members, to develop their union/organisation. When there is an increase in the share capital the society makes progress.Cooperatives are helpful to the members to meet out financial needs of education & marriages, making social progress.In case of emergency,only Cooperatives come forward to give loans urgently.

21 Some important issues of the society:

- (1) Number of members less,therefore share capital collection also is low.
 - (2) Employees are subject to transfer out of the district also.When such transfers are made out of the district, that affects membership, share capital collection, deposits, loaning, recovery, management etc.of the society.
 - (3) It is suggested that the education & training should be properly arranged& should be arranged on Sundays.
 - (4) Rural DakSewa employees work on contract basis.They need to furnish security to the Government. Poor employees are not position to give such security.This society has come to the rescue of the employees.Society issues security against the Employees to the employer.For which certain charges are taken from the respective employees as a fee. In case of any mis-deed or fraud,misappropriation taken place on the part of any employee, the society will be responsible to make good the loss incurred to the postal department.Under this scheme the society used to get good collection of fees,butgovt has now discontinued said scheme
- Share capital collection & deposit collection of the society is not adequate. Hence society is availing CC Limit.For the earlier financial year society had got the CC limit sanction of Rs.3.50cr.But this creates the additional burden of interest on the members.

- Number of members of the society is less.Because entire
- staff in the district is not enrolled as members. That hampers fund raising.
- It is because another Employees Cooperative Credit Society is at Mumbai and it has operational jurisdiction of Maharashtra. Therefore some employees in the Ratnagiri District prefer to get membership of Mumbai society. That society is self- financed, rates of interest on loan are less, it has heavy funds, it does not ask for any guarantor while giving loan to the members.
- In respect of deceased member of who left their loans unpaid outstanding, the society waives such loans.
- For the recovery of overdue loans, no proceedings u/s 101
- are not initiated. Therefore number of employees prefer to join that society. After passing promotion examination, such employees normally get promotion & posting in Mumbai. They get membership of Mumbai society. Some staff after having transferred from Mumbai to Ratnagiri they join continue their membership there.
- After having transferred from Mumbai to Ratnagiri, even if loan is outstanding of Mumbai society double financing also is made by the Ratnagiri society based on the pay slip & repaying capacity of the applicant.
- Once the staff, who has been transferred out of the area of operation of the society he is not allowed to vote, no new finance is made. But if he has earlier loan outstanding against him, he is allowed to repay the loan as per given installments.
- To raise adequate funds of the society, the monthly rate of contribution which is now Rs.500/- pm, as per old rate, will be increased, as salary hike is quite good.
- Upper limit of individual shareholding in the society is Rs.2 lakh, if that limit exhausted in respect of any members, the excess amount over & above the limit fixed, if deducted from the salary of the members, that excess deducted amount as a monthly contribution will be diverted to the Fixed Deposit accounts.

- Retired employees are not encouraged to resign from membership of the society, but they are not eligible for availing loan & voting.

22 Recommendations:

- 1) Membership of the society is limited. It should try to Increase membership.
- 2) Instead of allowing retired employees to continue as regular members, they if desired, could be accommodated as nominal members & deposits from them can be accepted. That will be helpful for the society to raise funds.
- 3) Availing Cash Credit limit from the bank creates burden of interest on the society & members. Society should try to raise own funds disbursement Appointment be made out of those fund
- 4) Regular members be encouraged to increase their deposits. Habit of saving among members be cultivated.
- 5) Regular members may be encouraged to avail loans so that funds of the society can be utilized & income increased.
- 6) Increase in the share capital makes the society to make progress. Regular members may be encouraged to invest in the shares more, so that fund position of the society will improve & members will have more savings & will get good returns on shares as dividend.
- 7) Society is best medium to have leadership developed & public contacts improvement amongst the members.
- 8) More stress may be given on Training, & Education of the directors, employees & members.
- 9) New branch opening is not desirable & viable. Instead society should make more use of digital platform for effecting all types of transactions.
- 10) Employees Cooperative Credit Society is a best media to develop their organization of the members.
- 11) Rural DakSewa employees Security like alternative may be identified to get income increase.

- 12) Rate of monthly contribution from the members may be raised,so that share capital level will increase.
- 13) Society may see to it, whether schemes like Mumbai Postal Employees Credit Cooperative Society can be introduced & implemented for the benefits of members.

23 Conclusion:

Cooperatives are formed by the members for the purpose of satisfying their own needs.To serve the members properly cooperatives need to work viably.During the present era of globalization, private sector is continuously becoming dominant & cooperatives are struggling for protecting their existence.Cooperatives are facing certain problems relating to the legal compliances, financial & administrative matters etc. Cooperative is an important sector of the economy with respect to the socio-economic & cultural point of view. The members of the society are performing dual role as Government employees & members of the society to achieve the SDGs in different areas. The society, since long,is playing transformation role & showing pathway of progress to other cooperatives in the district.Other societies should take lesson from this society to have professional management & serving the community.

Sustainable Development Goals : Retrospective - Prospective

Sharanagouda G. Patil*

Sustainability is our goal and it extends for reaching targets fixed by the organization to achieve. We are passionate about making a positive impact on the environment, society and governance. Our winning together for our people and our planet approach is deeply rooted in our purpose of helping each other change the world. As a federation we trust build with our members, stakeholders, society and communities to aiming for sustainable and inclusive future.

I Achieving together:

Our focus on sustainability, diversity and inclusion aligns with the values on which we built the society and the values on which we will continue to grow with proper training and education. With a knowledgeable, passionate team a commitment to innovation, and a focus on the environment, we don't just embrace challenges, We thrive on them transforming obstacles into stepping stones towards success.

As we embrace on the new horizons /vision, we invite like minded individuals society to join us in shaping a future where progress is defined not only by profits but by collective positive change we bring about.

II Cooperatives and the Proposed Sustainable Development Goals:

Cooperatives are highly relevant and important in the realization of proposed sustainable development goals

The brief highlights of the actual contribution of cooperatives to the twelve SDGs Proposed by the high-level Panel of Eminent Persons in the post -2015 Development Agenda in their report of 2013. Through the specific goals

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targets and Indicators will not be agreed upon until September 2015 as a part of on going process, these twelve proposed goals reflect in range by themes that will likely be covered by the SDGs.

1) Poverty Reduction:

There is a widely held consensus among many actors including United Nations, the International Labour Organization and the International Cooperative Alliance, that in cooperative enterprises is the type of organization that is most suited to addressing all dimensions of reducing poverty and exclusion. The way cooperative help reduce poverty is important that they identify economic opportunities for their members; empower the disadvantaged to defend their right to provide security to the poor by allow them to convert individual risk; collective risk and mediate member access to assets that utilize to earn a living.

For instance, while savings and credit cooperatives facilitate their members access to financial capital, agricultural cooperatives help farmers access the inputs required to grow crops and keep livestock and help them process, transport and market their produce. Similarly consumer cooperatives make it possible for their members and the society at large to access good quality household supplies like food, clothing and other products, at affordable prices such service help pull members out of poverty.

In this direction Karnataka State Souharda Federal Cooperative Ltd. has been making concerted efforts to come across poverty reduction by setting up of various types / categories of Souharda Cooperatives in Karnataka State. During 2023-24 there are almost 6012 Souharda Cooperative running Coop Bank Credit Housing, SHGs, Coop Union Others cooperatives include multipurpose, consumer, education, employee, dairy, industrial, agriculture, labour etc.

There are 329 women's cooperatives working in all districts.

Karnataka State Souharda Federal Cooperative Ltd., Bengaluru																			
Co-operatives Registered Under Karnataka Souharda Sahakari Act, 1997 as on 31st March 2023																			
Division	Sl. No	Debitors	Credit	Profit	Bank	Consumers	Employees	Industry	Housing	Education	Multipurpose	Industry	Agriculture	Labour	Others	Others	Dividend registered under KSC Act	From KSC Act	Total
Kachharagi	1	Bidar	131	1			2				23				1		154	4	158
	2	Kalaburagi	201	6			3				17		4		1	1	230	3	233
	3	Yadagi	63	1							7					1	69	3	72
	4	Balan	71	4	2		1				16						92	2	94
	5	Raichur	250	24	1		3				27	1	2		1		342	7	349
	6	Koppal	288	9	2		1				74	1	1		1		369	8	377
	7	Vijayanagara	118	15	2	1				1	43					1	174	7	181
Belagavi	8	Vijayapura	345	17		1	1			108		6					504	14	518
	9	Bagalkot	367					1		39	1	6					423	11	434
	10	Belagavi	660		2		2	1			483	3	6		2		948	220	1168
	11	Dharwad	98	1				1	1		30		3		1		126	9	135
	12	Gadag	57		2		1				10					1	61	10	71
	13	Haveri	110	1						2	33		3			6	142	13	155
	14	North Canara	176				2	1		1	24	1	10	2	1	3	201	20	221
Mysuru	15	South Canara	79	2			1			35		1			1	2	117	4	121
	16	Udupi	108							36	1				1		142	4	146
	17	Kodagu	9				1						2				11	1	12
	18	Mysuru	50				1				23	1			1		69	7	76
	19	Chamarajanagar	19								9						28	0	28
	20	Hassan	40	2							19		1				61	1	62
	21	Mandya	17	1				1		1	2						22	0	22
Bengaluru	22	Chikmagalur	35				2				15						49	3	52
	23	Shivamogga	95				1	2	1		65		5		1	4	166	8	174
	24	Chitradurga	63	23	2						7				1		93	10	96
	25	Davanagere	56	4							24				1		81	4	85
	26	Tumakuru	168	13	1	2	4				24		3		1		220	16	236
	27	Kolar	27	3							9						36	0	36
	28	Chikballapur	34	2							7		1				44	0	44
	29	Ramanagar	10	7				1			3		3				21	3	24
	30	Bengaluru Rural	32								6						37	1	38
	31	Bengaluru Urban	366	8	4	1	8			1	80	1	4	1	2	1	444	53	497
Total			4292	144	18	9	35	3	3	5	1298	10	61	3	15	22	5472	446	5918

2) Gender Equality:

Cooperatives are contributing towards gender equality by expanding women's opportunities to participate in local economics and societies in many parts of the world.

In Souharda Federation there are about 61 Agriculture, 5 education Souharda cooperatives, 35 employees Souharda, 329 women's Souharda cooperatives, 3 dairy cooperatives, 9 consumer cooperatives are working, where most of this women are members of the society and contribute 53% of membership and have gained a place in the governance structure of their cooperatives, women have been empowered to take up leadership roles setup their own management community and organize welfare activities through cooperatives in some of the Souharda federation under SHGs. During the year of 2022-23, 154 such groups are working progressly.

There are special women's cooperatives working in Karnataka. They are women cooperatives give raw materials to the members and they will get it finalized for ex. Garland, shalls, cooperative flags etc. Women are more numerous and rising in sub sectors such as fruits, spices cereals and dairy, where land ownership in less critical and capital requirement lower in larger financial cooperatives women's tend to be in minority while in small savings and credit cooperative with micro fiancé, scheme such as Bangladesh or Philippines women's are most likely to be in majority.

Women's cooperative in general trend to be smaller in capital, membership and volume of business and less well connected to cooperative movements and support structures. Gender in equality in literacy level, skills, land ownership and access to credit and information can also limit women engagement in cooperatives.

At the National level under Central Sector Scheme NCUI is running 43 Cooperatives Educational Field Projects with the objective of catering the needs of under developed states by providing sanitize programmes for women's exclusively under 4 such projects.

2020 marks the 25th anniversary of the Beijing Declaration and platform for Action which recognized the multiple benefits of cooperatives. Now it is time for the UN, International Development Organization and International cooperative Alliance prioritize aid to key development sectors that strengthen women's economics social and political empowerment.

The Souharda movement has involved more number of Women's in the sector. There are 329 Women Cooperatives in having 12,000 Women directors along with around 1000 Women are individual members. They are having arranged marketing of home made products, handcrafts, and other activities.

3) Quality Education and Lifelong Learning :

Cooperatives support access to quality education and lifelong learning opportunities by providing the means for financing education, supporting teacher and schools; establishing their own schools to provide quality education to both youth and adults and by serving as centers for lifelong learning.

KSSFCL taken initiative under training and development with 6031 member organization. Having been aware of this challenges KSSFCL has been made conscious and comprehensive efforts in Capacity building of their key executives and leaders who in turn can make a significant impact on the growth of their Souharda Cooperatives. It is also instrumental in planning organization and continuous improvement of variety of need based training programs for various categories of leaders executives and staff, which includes customized training and development programs like :

- A) Presidents, Vice Presidents & Board of Directors.
- B) Chief Executives officers (CEOs) /Employees like Skill development training, Personality development training programs.
- C) Chartered Accountant who under take Audit & Inspection of Souharda cooperative societies.
- D) Staff handling e-stamping centers etc.

KSSFCL also conduct short-term education training programs like 7 days, 10 days, 5 days, 3 days training programs.

Special types of training program and long term course.

Diploma in Cooperation and Banking Management (D.C.B.M). DCBM course also collaborated with Karnataka State Rural Development and Panchayat Raj University, Gadag. Along with this our initiatives align with many of SDG announced by the United Nation.

4. Health :

Cooperatives ensure healthy lives by creating the infrastructure for delivering healthcare services, financing health care and providing home based health care services to people living with HIV/AIDs among others.

Health care cooperative include workers cooperative that provide health services, patient or community cooperatives that are user owned and hybrid multi-stake holders Cooperatives. They can provide anything from home care to full scale hospitals. The International Cooperative Alliance estimates that there are more than 100 million households worldwide that are served by health cooperatives.

In Kerala Cooperatives Health care societies are doing woman services. In Delhi Health Care cooperatives are working significantly. During covid-19 Health care medical cooperatives played an significant role by providing sanitizer, medical kit, food packets etc. by taking all precautionary & measures the over all world. Souharda Federation also activity involving such social activities to create health awareness program, sensitization of members, eye camp, health camp health check upprogram etc periodically for the benefits of its member.

Hence health care sector is playing an important role of cooperatives Setting of more cooperative health insurance which can protect of its members in the future.

5. Food Securing and Good Nutrition :

Cooperative contribute of food security by helping small farmers fisher folk, live stock keepers, forest holders and other producers to solve numerous challenges that confront them is their endeavors to produce food. Farming and agriculture is where the cooperative business model is most widely utilized. Cooperatives together have an estimated 32% of the global market share in this sector.

Challenge faced by small agricultural producers often include remoteness and lack of access to information about food prices on national and international markets; access to high quality inputs and variable costs of buying seeds and fertilizer; access to loans to buy these inputs; and lack of transport and other infrastructure in rural areas.

However Agricultural Cooperatives help farmers overcome these obstacles, by offering their members a variety of services such as group purchasing and marketing, input shops for collective access to credit and market, outlet, E-market access, farmer produces groups, knowledge and sharing information, more importantly decision making processes.

There are 61 agricultural Cooperative and 3 dairy cooperatives, 10 industry cooperatives, 3 housing cooperatives, 5 education cooperatives, 9 consumer societies / cooperative to the people at grass root level. These cooperatives provide services, like construction of godown outlets, fair price shops, warehouses etc. which will help preserve indigenous food. Diversification of household food supply for example doing cooperative has improved nutrition as well as incomes.

6. Access to Water and Sanitation:

Cooperatives 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.

Cooperatives have providing alternative ways for urban communities to get clean water and safe sewerage services. Water cooperatives also provide remote locations that would otherwise have no services. National Cooperative Development Corporation of India has providing financial assistance for catering the need of water and sanitation societies. Besides National Cooperative Housing Federation has mobilized the urban poor in more than 92,000, Housing Cooperatives with the above facilities. Souharda Federation is also having three number of cooperative housing societies to provide needy facilities to the member.

7. Sustainable Energy:

Energy cooperatives are contributing to the achievement of the sustainable energy goals of energy access, energy efficiency and reduced emissions. Cooperative are visible in facilitating access to sustainable energy, where they are playing a significant role in generating electricity and distributing to consumers. They are also leading the way to the adoption of new and renewable energies like solar and wind power in many parts of the world.

In many countries rural electrification cooperatives are playing a significant role. But in India, there is a need of such cooperatives more and more especially in rural area to cater the need of acute shortage of electricity. However now the Ministry of Cooperation, GOI in its recent amendments allowed PACS to act multiple activities including setting up of Bio-gas Electricity Cooperative societies Souharda Federation is also follows in line of guidelines issued by central / state government time to time. More than 100 million jobs existing in cooperatives globally is cited by the ILO and ICA in recent year.

Other contributions to livelihoods and equitable growth documented for cooperatives include income security, jobs for rural communities, strengthening farmers position in the value chain, employments in diverse sectors of the economy, spillover efforts on employment provision of infrastructure and other services and social inclusion. Evidence from around the world shows that the contributions cooperatives have made in promoting decent work and providing income security, especially among those previously excluded. Research on the dairy industry in India indicates that cooperatives members enjoy higher and more secure incomes than non-member within the industry particularly at the primary level of production.

8. Employment generation through Souharda movement:

It may be seen from the chart of growth of KSSFCL movement in Karnataka as the number of societies increased in every year the number of youths employed the Souharda movement is also growing simultaneously. Presently 6000 all societies have provided 62,000 employment in Karnataka.

9 Employment Creation Livelihood and Equitable Growth:

Cooperatives play a significant role in employment creation and income generation activities.

Cooperative Enterprises Impact on Employment:

They employ people directly.

Indirectly they promote employment and self employment through creating marketing opportunities and improving marketing conditions; and

As spillover effect to non-members whose professional activities are closely related to transactions with cooperative (such as tradesmen or input suppliers).

Employment in Cooperatives Selected Counties

Country	Number of Jobs
United States	2 million
France	1 million
Italy	1.1 million
Brazil	274.000
Argentina	290.000
Kenya	250.000
Indonesia	300.00
India (Direct employment)	13.30%
(self employment)	10.90%
Colombia (Direct employment workers cooperators)	7.00.000

Source : *The Cooperator magazine*.

Some reasons for the success:

- In the short term, cooperatives are member based so rather than shedding labour they think of new activities (productive, export restricting).
- Members are aware of an imminent crisis and can prepare for it due to democratic structure and information sharing in real time
- Since decision making is rest with members it is easy to decided any issues which arises.
- Safety and support funds guard against shocks and common reserves that cannot be withdrawn guarantee financial stability.

- In the long term, cooperatives build pension and education mechanism for member and target community needs with a long term vision.
- Restructuring and entering new activities are standard practice for cooperatives. Other contributions to livelihoods and equitable growth documented for cooperative include income security, job for rural communities, strengthening farmers position in the value chain, employment in diverse sectors of the economy, spillover efforts on employment provision of infrastructure and other services & social inclusion. Evidence from around the world shows the contribution cooperatives have role in promoting decent work and providing income, security, especially among those previously excluded. Some of the best example in India, is dairy Industry, agricultural sectors, fertilizer sectors shows providing employment opportunity income generating and livelihood.

10. Sustainable Natural Resource Management :

Cooperatives contribute to the sustainable management of natural resource in a various of ways;

- A. Cooperatives can ensure that natural resources are not depleted where cooperative have provided a forum for local people to find solutions to environmental change by defining their properly and user rights.
- B. Managing natural resource
- C. And diversifying their economic activity to embrace green economic venture Sustainable agricultural cooperatives diversity their activities to include water management, tourism, production of quality regional foods and organic farming. As like in other countries of the world, in India, cooperatives can adopt “social cooperatives” (as in principles) which provide maintenance of public Green Spaces, Urban waste collection, urban sanitation, installation of solar panels and waste prevention & recuse. At national level NCDC can take lead role in this Direction.

11. Good Governance :

Cooperatives have an important role to play in the process of good governance. Firstly, one of the principles of cooperation is democratic member control. The equal voting rights of cooperative enterprises, on the basis of our

member, one vote impact the necessary and legitimate representativeness to make them key actors in the social dialogue process especially in rural and informal economy settings. Good governance characteristics such as transparency, responsibility, accountability participation (TRAP), responsiveness to the people's needs, and respect for the rule of law, are also features of the cooperative identity. Cooperatives can empower people by enabling even the poorest segments of the population to participate in economic progress. Further cooperatives can bring together a range of community Institution to faster opportunities for decent work and social inclusion.

Secondly, cooperatives and cooperative members in their dual role as state holders and owners or controller can provide an important voice in the global debates on governance and transparency. Strong and legitimate governance Institution including social enterpriselike cooperatives and needed to ensure that the benefits of development are equally shared and sustainable overtime.

At the national level GOI set up an separate MOC to bring good governance by trans -forming the changes in governance and setup an example how cooperatives can make [vibrateIndia](#). Similarity cooperatives are acting as bridge between center & state bring uniformity in the governance.

12. Promotion of Stable and Peaceful Societies:

Cooperative have often emerged as sources of positive social capital, fostering a strong sense of community participations, empowerment and inclusive among member and restoring interpersonal relationship and peace. They can have trans- formative potential in revitalizing struggling sectors, recovery of crises for local economics, increasing returns. producers and service providers across, value chains, formalizing informal employment and generating employment for woman& youth in rural and urban areas across times.

There are also new forms of cooperatives that are being formed, are respondingto different crises, for instance social care cooperative that are being formed in responding to the care needs of ageing population, or care cooperative formed to take care of orphans' after earthquake, care needs during Covid-19 epidemic etc.

The Participation of women's cooperatives have been especially active during the peace and development. Souharda Federation is also making concerted efforts in promotion of stable& peaceful societies in this direction.

III Cooperatives and Global Enabling Environment and Long Term Finance:

Cooperatives are contributing to the creation of a global enabling environment to chaperone sustainable development by bridging the trading divide between the developed and developing countries' of the world, by stabilizing financial system during crises; and by providing the base for financial deepening around the world. Creating link between the countries to support social economic and culturalis essential factor. These is a wide and growing range of fair trade products exported by cooperative including coffee, tea, handicrafts, cocoa, sugar, bananas, honey, wine and flowers etc.

Financial Cooperatives are some of the best means for financial deepening and provide the financial base for other kinds of development activities many parts of the world. In many cases they are the only formal financial organization available, particularly inremote rural areas, where members can save and borrow money to develop their own business.

In India cooperatives also provide micro insurance in different forms. These roles initiates contribute to financial stability. Creation of National Cooperative Fund may be the future goal for financial stability.

IV Conclusion:

Cooperatives have long been champions of economic inclusivity offering opportunities for self employment fair wages and shared prosperity to individuals from diverse backgrounds. They empowermarginalized communities, Support local economics and contribute to provery reduction. By prioritizing cooperation over competition, cooperatives demonstrate that economic success can go hand in hand with social and environmental responsibility.

Cooperative education and training plays a vital role in promoting social entrepreneurship, critical thinking and cooperative mindset from early age is the time factor. It equips involves with the knowledge, skills and values necessary to actively engage in cooperative enterprises and contribute to the development of more inclusive and sustainable societies. By promoting sustainable practices renewable energy initiatives and responsible consumption, cooperative contributes to mitigate environmental degradation and building more sustainable in future continuously. Cooperative

governance sets cooperatives apart from traditional hierarchical structure. Through democratic decision-making processes, cooperatives prioritize, inclusivity transparency and member participation. By upholding principles of equitable representation, transparency and accountability cooperatives foster a sense of ownership, community and shared responsibility.

By leveraging digital tools and platform such as block chain technology, digital cooperatives and online platforms cooperatives can enhance their efficiency expand their vision foster innovation and create new opportunity for collaboration and value creation.

As a federal cooperatives, it is planning to establish state level Souharda apex bank to bring member cooperative to re financed opportunity and help them to reinvest their surplus funds for betterment. Further setting up of joint venture business formation of cooperative unions encouraging to super markets for financial products etc. are the new future vision to sustain its objectives.

Centre of Excellence by KSSFCL A New Project:

KSSFCL is keenly interested to start Centre of Excellence for the healthy growth of Souharda movement in Karnataka. KSSFCL is getting ready to submit a proposal for Ministry of Skill Development and Entrepreneurship of India.

Skills and knowledge are the driving forces of economic growth and social development for any country. Countries with higher levels and better standards of skills adjust more effectively to the challenges and opportunities in domestic and international job markets. Center of Excellence (CoE) is a body that provides leadership, best practices, research, support, training of trainers and skill training for a specific sector/s. The literal meaning of a Center of Excellence is – ‘A place where the highest standards are maintained.’

KSSFCL will have a Centre of Excellence for Souharda cooperatives in Karnataka.

The cooperative movement is a powerful and transformative force for posting changes by fostering inclusivity, sustainability and democratic governance, cooperatives provides a pathway towards a more equitable and resilient world. It is crucial that we recognize and support the growth and impact of the cooperative movement as it holds the potential to address the pressing challenges we face and create a more just and sustainable future for all.

I. Introduction:

As United Nations members in the year 2015, states the agenda for sustainable development goals for peace & prosperity in the world by the year 2030. The world cannot disregard cooperatives.

United nation members realized that the development of planet & people cannot be separated. At this stage the world is facing too many problems like poverty, inequality, environmental issues, health & education issues and so many. The main focus of sustainable development goals is on economic, social, cultural & environmental aspects.

In Bharat & in the world cooperative movement is the only movement that can reach root level people and can develop them by all means.

The world is distributed in mainly two economic systems, which are capitalism and socialism. Capitalism is based on individual initiative and favours market mechanism over government intervention, while socialism is based on government planning, and limitations on private control of resources.

At present both the systems are facing too many problems which reflected in united nations members strategies for sustainable development goals.

At the midway point to 2030, the global progress on SDGs is off-track with only 12 percent of the targets on track says G20 summit, held in New Delhi on September 2023. The only answer for this is cooperatives. The world must think and implement cooperation. The development of each and every people in equality is only possible with cooperatives.

* Cooperative Auditor, Kolhapur

Though the first cooperative society is registered in England, cooperative movement is developing very fast in Bharat. Last year central ministry made a law and a separate ministry for cooperation. The very active & strong person Mr. Amit Shah is controlling this most important ministry.

As our national economy is based on agriculture, the development of farm & farmers is the main strategy of this ministry. The main focus of this ministry is to develop root level cooperative societies called PRIMARY AGRICULTURAL COOPERATIVE SOCIETIES i. e. PACS. At present these societies are working for financial assistance for their memberfarmers at concessional rate of interest by three tier system as NABARD, district co operative bank and PACS. In Bharat there are 103420 PACS which are now working for farmers for their financial needs with the help by NABARD. As second tier, there are 351 district cooperative banks which are as a mediator, financing these PACS in the country having 13670 branches in all over Bharat. Last year the finance made by them was 128524 crore. But in these 351 Banks, 97 are seek and occurring loss. The government is thinking of financing PACS directly by NABARD. In coming period the second tier DCCB may be set apart from this system.

In Maharashtra there are 20104 PACS which are financed by 31 District cooperative banks. But in these 31 banks, 11 are occurring loss and not able to fulfill the needs of PACS, and the farmers depending upon them. 50 percent's of PACS are not profit making. currently these PACS are very weak and not able to fulfill all needs of farmers.

Hence government of Bharat & cooperative ministry is trying to develop PACS for development of farmers, development of peoples, as well as development of nation by economic, social cultural & environmental aspects. In association of NABARD, government is trying to focus various business opportunities for these societies. Last year NABARD suggested the list of 151 various businesses which can be started by PACS. Production of organic foods is most supported activity by them. This can be a very useful plan for natural resources of our nation, as well as health of people. Government is providing funds to them for these activities at very low rate of interest. This should be a very good opportunity for development of PACS as well as member farmers. After all, development of people is development of planet.

II Methodological Approach:

The vision and future plan of government is to develop PACS. This should be making the member farmer strong by financial and all means. PACS and the members as a grassroots organisation should play a vital role in development activities and contribute for sustainable development of goals more effectively for better world in future.

III. Bibliography:

Questioner prepared for the management of 40 PACS in Kolhapur district. Annual financial statements of these 40 PACS. Publications by ministry of cooperation Bharat, cooperative department of Maharashtra, Internet.

IV. Brief history & Present condition of PACS:

The Cooperative Societies Bill, based on the recommendations of The Edward Law Committee was enacted on 25th March, 1904. As its name suggests, the Cooperative Credit Societies Act was restricted to credit cooperatives. By 1911, there were 5,300 societies in existence with a membership of over 3 lac. The institution of the Registrar, visualized as a special official mechanism to supervise cooperative development was the result of the Cooperative Societies Act of 1904.

With the developments in terms of growth in the number of cooperatives, far exceeding anticipation, the Cooperative Societies Act of 1912 became a necessity and cooperatives could be organized under this Act for providing non-credit services to their members. The Act also provided for Federations of cooperatives.

With this enactment, in the credit sector, urban cooperative banks converted themselves into Central Cooperative Banks with primary cooperatives and individuals as their members. Similarly, non-credit activities were also cooperatively organized such as purchase and sales unions, marketing societies, and in the non-agricultural sector, cooperatives of handloom weavers and other artisans.

The primary agricultural societies was facing problem of increased over-dues of loans. To take stock of the situation, in October, 1914, Government appointed MacLagen Committee. It recommended building up a strong three-tier structure in every province with primaries at the base, the Central

Cooperative Banks at the middle tier and the Provincial Cooperative Bank at the apex, basically to provide short-term and medium-term finance. Considerable emphasis was laid on ensuring the cooperative character of these institutions and training and member education, including training of the Registrar and his staff.

To nurse the rural cooperative credit system, to ensure that the rural credit doubled over three years and that the coverage of small and marginal farmers by institutional lending was expanded substantially,

In August 2004 the Government of Bharat setup a Task Force to suggest an action plan for reviving rural cooperative credit institutions and legal measures necessary for facilitating cooperative finance. The Task Force, chaired by Prof. A. Vaidyanathan, recommended that any financial restructuring which did not address the root causes of the weaknesses of the system would not result in its sustained revival and would require legal measures. The recommendations of the Task Force are basically confined to revival of credit cooperatives for which it suggests a financial package. The Vaidyanathan Committee has also suggested a model cooperative law that can be enacted by the State Governments.

But the financial package cannot do more for strengthening PACS. In the year 2013 by 97th constitutional amendment Government tried to give autonomous to cooperatives. Created a new idea of active and non-active members in cooperation. But this also cannot do more for strengthening PACS. Hence to develop cooperatives at national level and for all type of cooperatives, the ministry of cooperation is came in existence.

After the formation of ministry of cooperation the government's main mandate is cooperation prosperity. Our ministry is trying to strengthening cooperative movement by intensive efforts. Because Sustainable development is possible only when they should be developed properly. PACS is the opening gate for development of cooperatives and also for sustainable development goals for peace & prosperity in the world.

V. Initiatives taken by the government for sustainable development Of PACS:

1. Model Bye-Laws for making PACS Multi purpose:

On 05 January 2023, the Model Bye-laws for PACS were prepared by Ministry of Cooperation. To increase the sources of income of PACS and create new employment opportunities in more than 25 new sectors like dairy, fisheries, storage, etc. So far, they have been adopted by 27 States/Union Territories and the work of adoption in other States is in progress.

At this stage all these bye laws are accepted by PACS in their regional languages.

2. Computerization of PACS:

To enhance the efficiency of PACS, computerization of PACS has been started. Under this scheme total 63,000 functional PACS are being linked with NABARD through a single National Software Network. So far, proposals for computerization of a total of 58,383 PACS are in progress.

For this, the amount of Rs. 437.17 crore has been released by the Central government to the States for hardware purchase, digitization and setting up support systems. Computerization will start after the procurement of hardware and finalization of system integrator by the States. This initiative will enhance efficiency and transparency in PACS.

3. Establishment of new Multipurpose PACS:

This scheme, approved by the Cabinet on February 15, 2023, has a target of setting up 2 lac new Multi-purpose PACS/Dairy/Fisheries Cooperative Societies, in the next 5 years in the Panchayats/Villages not covered so far.

4. Grain Storage Program in Cooperative sector:

Under this scheme, approved by the Cabinet on May 31, 2023, different types of agricultural infrastructure such as godowns, custom hiring centres, processing units, fair price shops, etc. will be created by convergence of various schemes of the Government of Bharat at the PACS level. This scheme will ensure country's food security, reduce wastage of foodgrains, result in better price for farmers for their produce and meet various agricultural needs.

5. PACS as Common Service Centers (CSCs):

For better access to e-Services, MOU has been signed on 02.02.2023 between Ministry of Cooperation, Ministry of Electronics and Information Technology, NABARD and CSC e-Governance Services Bharat Limited for providing CSC services through PACS, after which more than 300 e-services provided by CSC will now be provided by PACS also. Till date more than 17,000 PACS have been on boarded as CSC and the work of on boarding of other PACS is also in progress.

6. Formation of new Farmer Producer Organizations (FPOs) by PACS:

Under the FPO scheme, it has been decided to allot 1100 additional FPOs to the National Cooperative Development Corporation (NCDC) in cooperative sector. Now, PACS will be able to do other economic activities related to agriculture as FPOs. This initiative will also be helpful in providing the members of the cooperative societies with the necessary market linkage to get fair and remunerative prices for their produce. The formation of FPOs in the Cooperative sector has been launched by the Hon'ble Cooperation Minister in National Mega Conclave organized on July 14, 2023.

7. Eligibility of PACS for LPG Distributorship:

Petroleum Ministry is amending rules to make PACS eligible for LPG distributorship. This will give PACS an option to increase their economic activities and create new employment opportunities in rural areas.

8. Petrol Pump operated by PACS into retail outlet:

PACS will also be given priority for new petrol pump dealership. These provisions will increase the profit of PACS and create new employment opportunities in rural areas.

9. PACS as Jan Aushadhi Kendra for access to generic medicines at Rural level:

In a meeting held on June 06, 2023 under the Chairmanship of the Hon'ble Home and Cooperation Minister with the Hon'ble Minister of Chemicals and Fertilizers, it was decided to open 1,000 Jan Aushadhi Kendras by August, 2023 and 2,000 Jan Aushadhi Kendras by December 2023 at identified PACS.

With this initiative, cheaper generic medicines will be available to the common people at the Village/Block level and PACS will get additional employment opportunities. Interested PACS are being identified and encouraged by the State Government to apply online.

10. PACS as Fertilizer Distribution Centre:

To make functional PACS eligible to act as fertilizer retailers, Pradhan Mantri Kisan Samridhhi Kendras (PMKSK) and drone entrepreneurs for spraying fertilizers and pesticides. These drones can also be used for property survey. This step will ensure availability of fertilizers to the farmers and will create new business opportunities in PACS.

11. Convergence of PM - KUSUM Scheme:

PAC Scan beleveraged to set up decentralized solar power plants at the Panchayat level. With this, farmers connected to PACS can replace Agricultural Diesel Pumps with Solar Agricultural Water Pumps.

12. Micro-ATMs to Bank Mitra Cooperative Societies:

PACS have also been made Bank Mitra of District Central Cooperative Banks and State Cooperative Banks. To ensure their ease of doing business, transparency and financial inclusion, Micro-ATMs are also being given to these Bank Mitra Co-operative Societies with support from NABARD to provide 'Door Step Financial Services'.

13. Rupay Kisan Credit Card to Members of Cooperative Societies:

Under this project, Rupay - Kisan Credit Cards are being distributed to the account holders. Through Rupay – Kisan Credit Card loans will be available to members of the Cooperative Societies at reasonable rate and members can also use this Card for other financial transactions. This pilot project is targeted to be implemented nationwide in coming days.

14. PACS as Paani samiti:

PACS should make eligible as Paani Samiti to undertake the work of Operation and Maintenance (O&M) of Piped Water Supply schemes in rural areas. This step will strengthen the O&M work of water supply schemes in rural areas as well as create new employment opportunities for PACS.

15. Relief in taxation:

The surcharge on Income Tax for Cooperative Societies with income from Rs. 1 Crore to Rs 10 Crore has been reduced from 12% to 7% at par with Companies.

- The Minimum Alternate Tax rate for Cooperative Societies has been reduced from 18.5% to 15%.
- The limit for Cash Deposits and Cash Loans by PACS has been increased from Rs. 20,000 to Rs. 2 lac per member.
- The cash withdrawal limit of cooperative societies without deduction of tax at source has been increased from Rs. 1 crore to Rs. 3 crore per year.
- Cash transaction less than 2 lakhs done by PACS or any cooperative society with its member in a day will be considered separately, and they will not be charged with income tax penalty.

VI. Prospective effects on strengthening of PACS :

With all these schemes, policies & financial assistance, government is expecting total development of PACS in all the sectors. Ministry had prepared a portal named COOPSINDIA for the database about cooperative sector. The government is trying for sustainable development of cooperative societies, mainly PACS and suggested the list of 151 business opportunities to them. Banking solutions, common service centres, LPG distribution, petrol pumps, godowns, generic medicines shops, catering, insurance, marketing, formation of farmer producing companies, dairy business, fisheries, fertilizers & pesticides centres, etc.

This will make more opportunities of income generation, employment, and services for these PACS and serve farmers as well as rural people in better manner.

By these new opportunities PACS should start new businesses or expand the businesses which are already in existence. These are being financially supported by ministry of cooperation. Finance is provided at very low interest rate for the businesses of services listed by them. Licences are also provided them immediately for new services like adhar updating, common service centres, Insurance or banking business, and so on.

The income generated by these new opportunities would develop cooperative sector as well as our villages by all means. Businesses like organic food, use of solar energy, plantation of environment friendly trees, use of biogas, Milk production, fisheries, etc. The prosperity of cooperatives, farmers, and villagers would change the view of those towards sustainable development of villages. Sustainable development of villages should develop our nation as well we should reach our goal of sustainable development of world.

Our goal of sustainable development of world should be achieved by the way of cooperatives very well.

VII. Methodological / conceptual approach of study:

1. Collection of primary data:

The case study of the subject has been conducted, based on primary data collected through a questioner designed for 395 directors of 40 PACS in Kolhapur district, Maharashtra, consisting 25 questions of multiple choice.

2. Collection of secondary data:

Secondary data has been obtained from the website of ministry of cooperation, internet, various publications, personal interviews and other available resources. Statutory financial statements of PACS.

3. Coverage of questioner:

Area of operation, present financial conditions, services provided, departments currently in working, their profitability, types of services given to its members, status of computerization, hardware quality, basic requirements like building, office space, power supply, internet availability, qualified and trained staff, number of societies handling by a secretary, etc.. youth participation, directors/managements participation in the transactions, educational qualification of directors & staff, availability of godowns, support of new portal prepared by ministry of cooperation, assistance given by them by registrar of cooperative societies and DCC Banks, willingness of staff and management to start a new service or business, etc.

Our questioner was presented in a meetings arranged by registrar of cooperative societies in taluka hatkanangle & shirol, district Kolhapur for awareness of management for the schemes for PACS presented by government. So the presence was good and all the management members

reacted to the questioner. The other data like financial conditions, departments opened, their profitability was collected by visit to the offices of PACS.

VIII Analysis of collected data and findings:

Following is the analysis of the data collected

1. Area of operation:

As PACS are working in rural area & they are working for farmers, 38 (95%) out of 40 PACS are working in villages

They are working in rural areas in one village for farmers.

2. Financial conditions:

Out of these 40 PACS 36 (90%) were profit making. They are having good financial conditions. Their required C R A R is above 25 %, having good net worth.

The financial conditions are good.

3. Services provided:

Service provided by them is only disbursement of loans with the finance provided to them by DCC Banks by the three tier system currently working.

4. Other departments:

26 (65%) are having departments of fair price shops only which was controlled fully by government, 3 (07.50%) are having other services namely fertilizers selling, R O water providing, and a drone handling for spread of pesticides on crops.

They are not working for other activities other than finance & fair price shops.

5. Computerization:

32 (80%) are having computer system in their offices. But the hardware is so poor. The capacity of these hardware is not suitable for the current and coming workloads. as well as software is also not working properly. There is not proper login password system, day end process is not in use. Authorities are not given properly to use the computers. No system audit is done from the installation.

Although there are computers in use, they are not reliable.

6. Basic requirements:

37 (92.50%) PACS are having their own building with power supply and other requirements. They have all the essential infrastructure for further development.

Basic requirements are ready.

7. Internet availability:

Only 2 (5%) PACS are having authentic internet connection. All other societies are not having separate internet connection. Currently the internet needs are fulfilling by the mobile networks by the staff.

No authentic internet availability.

8. Qualified and trained staff:

Basic requirement for this official work should be graduation, but at the study in these 40 societies, 31 (77.50%) societies are having graduate secretaries. Other secretaries are not having required educational qualification. No secretary is Post graduate or having any other special course useful for cooperation.

Trained and qualified staff is not available.

9. Number of societies in control of a secretary:

The secretary is appointed by a cedar controlled by DCC bank. \By last 12 years no new recruitment was made. Hence the secretaries working currently has to work at 2 or 3 societies at a time. These 40 societies are controlled by 31 secretaries. i.e. 9 (22.50%) societies are not having separate secretary.

Non availability of experienced separate secretary.

10. Youth participation:

In the study of all the PACS or societies there was no any staff or a management committee member bellow 40 years. Average age of these cooperatives is 46 years. The management committee is more aged than staff. There is no incoming of fresh candidates in cooperative movement.

Youth participation is nearly none in these PACS.

11. Managements participation in the transactions:

Going through the proceeding records of these PACS, it seems that the attendance of the management committee members for the meetings is very poor. Resolutions passed in these meetings are only in the matter of finance and recovery. No discussion is made for any other activities like starting a new project, or any income generation plan.

Managements participation in day today transaction is not sufficient.

12. Managements awareness to policies laid by government:

The information regarding the policies about strengthening PACS by government is not discussed in meetings of 36 (90%) of PACS. The circulars, detailed information and the policies are sent to the secretaries of these PACS. But they are not forwarding them to management properly. So the management is unknown about it.

Management of PACS is still unknown about the development policies.

13. Support of new portal prepared by government and registration for CSS:

The government had made a portal named COOPSINDIA for information, registration and other activities for PACS before six months. All the PACS are insisted to register on this portal by registrar of cooperative societies. In our case out of 40, 38 (95.00%) societies are registered for common service centres. Other are trying to register.

Government said that now they can do any online service provided, like aadhar card updating, LPG booking, property card service, travel bookings etc. 35 type of services. But the societies registered on this portal are only able to one or two services.

The portal is not working in full, or there may be some restrictions.

14. Willingness of staff and management to start a new service or business:

In the total 395 respondent in the management of these 40 societies 225 (57%) were willing to start a new business or service supported by

government financial & other support. 110 (28%) reacted that they are unknown what to do. They are not in position to make a decision to work or not with the new policies. And rest (15%) denied to work more. They stated that the current working of PACS that is financial assistance is sufficient for farmers. The other businesses should be carried out by government itself.

Proper information or knowledge is not passed to these management persons.

15. Women participation:

In every sector women are working with men very aggressively. But in cooperative sector, the percentage of participation of women in staff personnel and in board of directors is very low. At this stage only reserved seats of board of directors are filled by women. As well as there was no single women secretary in these 40 PACS.

Women participation is very restricted in cooperation.

16. More PACS in one village:

In the geographic area the quantity of PACS is more in a village. In many cases there are three or four PACS in a village. The area of operation of these PACS is same. So they are working in same area, same type of services are given by them. Because of this the future expansion and development is restricted to them.

Area of operation and expansion is restricted.

17. Financial condition of DCC banks:

As stated earlier 97 DCC banks out of 351 in total country are recurring losses. They are not able to fulfil all the financial needs of PACS. They are trying to make profit by charging extra for the finance to the PACS. Because of this second tier the finance to the farmers is charging extra rate of interest up to 2 to 4 percent.

Extra rate of interest by DCC banks.

IX Major issues:

1. Staff related:

Unavailability of trained staff is a major issue in progress of cooperative sector as well as PACS.

The average salary paid to secretaries of these PACS is 12000 to 24000. This salary is very low in comparison to other sectors. Hence the trained & qualified secretaries are not willing to handle another project suggested by government or board of directors.

The average age of secretaries was found to 43 year in the study. Because of last 12 years no recruitment was made by district cadre, no young secretary was appointed. The right to appoint secretary is handed over to board of directors from the year 2009 by Viadyanathan committee report. But the implementation is not done in Kolhapur district.

Educational qualification of the secretaries in PACS is 12th standard to graduation only. This is affecting to their grasping capacity for the schemes and projects launched.

Because of educational issues the secretaries are not able to handle computers and internet properly.

One secretary appointed by cadre is to handle more than one PACS. The ability for new project is divided, and it is not working in full pledge.

2. Management related :

The average age of management persons i.e. board of directors is above 48 years. No youth participation in all the cooperative sector as well as PACS.

The educational qualification is very poor. Most of directors are not even graduate. This is affecting to their power of decision making and willingness of starting new project.

They have no trust to government for the policies laid down. They are thinking that these policies are a political drama, and in coming period it would not work properly.

3. Members related:

Members participation in day to day transactions in the PACS is very poor. They are receiving only financial needs by societies and are satisfied with it. There is no wide thought to do any new project, new ideas, new services etc. The annual general meetings of these PACS are too many powers, in which the members are expected to participate. But these meetings had no sufficient quorum.

X Suggestions:

1. Training - The secretaries & staff should be qualified and well trained for day to day transactions, for the services given to its members & customers.

The board of directors should be trained enough the principles of Cooperation, the existing law & forthcoming changes in state law, made them aware about the new policies and ideas laid by government and also for the projects coming from central government for strengthening PACS.

2. Youth participation – There should be proper planning to make aware of youth about cooperative movement currently working for development of root level people in world.

3. Financial assistance – PACS should given financial assistance or package to strengthening them which are facing financial problems.

4. Women participation – Government should take proper steps and we also should promote women participation in staff, management as well day to day transactions in the PACS.

5. Amalgamation of PACS - The villages in which two or more PACS are in working, the government, by law should amalgamate them in one PACS. Policy of one village, one PACS should be implemented.

6. DCC banks should be set aside – As the second tier, DCCs are doing a job to finance the PACS, but they are charging 2 to 6 percent of interest rate as a mediator. The finance made to directly by NABARD to PACS should be a good initiative which will reduce cost to finance.

XII Conclusions:

Our Government is trying enough for development of PACS, development of cooperative sector, development of we people. We have to respond them in better manner.

Youth and women participation by training them about cooperative principles should be main agenda of cooperatives for better future. Because in future, sustainable development of cooperation is the only way for sustainable development goals for peace & prosperity in the world by the year 2030.

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Abstract:

Media is an important tool of advocacy for SDGs, but it is not effectively used for highlighting SDGs, or utilized to sensitize policy-makers to take appropriate action at their end and support the cause of creating a more sustainable world. At G-20 meeting recently, there was a strong call for more progress on achieving SDGs, in which digital technology was highlighted as a major action-point. As social media is an important component of digital technology, this paper advocates a social media strategy for cooperatives for achieving SDGs, in which the role of NCUI's social media profile is also discussed. The paper argues that through social media, coops can play a lead role in implementing SDGs.

Background:

The Sustainable Development Goals (SDGs) are the blueprint to achieve a better and sustainable future for all. They address the global challenges we face, including those related to poverty, inequality, climate change, environmental degradation, etc. The 17 SDGs are listed below:

1. No Poverty
2. Zero Hunger
3. Good Health and Well-Being
4. Quality Education
5. Gender Equality

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6. Clean Water and Sanitation
7. Affordable and Clean Energy
8. Decent Work and Economic Growth
9. Industry, Innovation & Infrastructure
10. Reduced Inequality
11. Sustainable Cities & Communities
12. Responsible Consumption & Production
13. Climate Action
14. Life below Water
15. Life on Land
16. Peace, Justice & Strong Institutions
17. Partnerships

It is a matter of grave concern that the UN's SDG Progress Report (April 2023) states that for realization of the SDGs, as per the set deadline of achieving the 2030 Agenda Sustainable Development and accelerated SDGs, only 12% targets are on a track, which by now should have been half-way accomplished. As reported, the progress on 50% is weak and inadequate. It has also been reported that across the globe, more than 30% of SDGs have been stalled or gone into reverse mode in this time period hindering the worldwide development! According to UNDP's recent Human Development Report, for the first time, the global Human Development Index (HDI) has declined for straight two consecutive years in a row, thereby erasing the development of almost previous five years. On many counts, we are still on a recovery path from the after-effects of Covid-19 pandemic, and the ongoing challenges to development persist, in particular due to the conflicts in Ukraine or Sudan, and the global climate crisis.

In such scenario, it is essential for all nations and enterprises, including the cooperative enterprises, to stay positive and strive to ensure accelerated growth by the usage of innovative and creative means for sustainable

development to gain momentum.

The G20 New Leaders' Declaration of 2023 has emphasized on 'Accelerating Progress on Sustainable Development Goals', recommitting to achieve SDGs. The Declaration states accelerating progress on SDGs, by taking collective action for effective and timely implementation of G20 Action Plan. The 7- year Action Plan for G20 focuses on three core agendas: (i) harnessing data and digital technologies for development, (ii) implementing sustainable, inclusive and just transitions globally while leaving no one behind, and (iii) investing in gender equality and empowerment of women. The Declaration also reiterates G20 nations' commitment to take action to scale up sustainable finance.

Social media is an important component of digital technology today. There is rising awareness for devising strong social media strategies amongst all levels of the cooperative organizations. With Ministry of Cooperation's emphasis on harnessing the power of social media and its directions to all the cooperative organizations to give focal attention to this vital factor, the cooperatives have now taken up necessary steps to become active on their social media handles. NCUI, an apex organization of the cooperative movement, has also become active on social media.

Importance of Media for SDGs& Role of Social Media:

The role of media is very important in depicting progress of SDGs. It can facilitate dialogue between the people, civil societies, business conglomerates and international organizations, and also act as a critical watchdog. It can create a right environment for all types of organizations to take appropriate action for achieving SDGs. Media can also highlight best practices of effectively aligning with SDGs. Mainstream media has been neglecting SDGs, barring a few environmental issues that make headlines.

There is much connection between thematic areas of SDGs and cooperatives. Every activity of the cooperatives is aligned with at least one of the objectives of SDGs. An example here worth mentioning is related to poverty eradication. However, as mainstream media generally ignores stories on cooperatives, the issue of their covering stories on SDGs and cooperatives does not arise at all.

The SDGs, through a large number of indicators, cover all components of economic activity (agriculture, industry, housing, health, education,

production, consumption etc.), and address a wide range of key global concerns (poverty, equality, employment, gender, climate change, peace etc.). Cooperatives can contribute to all SDGs, both since they are involved in the very diverse economic sectors concerned, and because their impact contributes substantially to the global objectives pursued. Of course, a number of SDGs and their indicators may be more particularly well suited to the 'cooperative identity', for example SDG1 on reducing poverty (in line with their endeavour to meet members' social and economic needs), SDG 8 on decent work (supported by cooperatives' democratic and member-based approach, coupled with their concern for community), SDG 12 on responsible production and consumption, and SDG 17 (upheld among others by the principle of cooperation between cooperatives).

Considering all this, the role of social media becomes very important in highlighting SDGs through cooperatives. Therefore, this paper explores this aspect, which has not been dealt from a research perspective as yet. It is crucial to mention here that the cooperatives, in particular National Cooperative Union of India (NCUI), and state & district cooperative unions can collectively even address the challenges of governance, by fostering member economic participation and facilitating education and training, ways in which they solve common issues and enable people to take charge of their own development.

Objectives of the Paper:

- i) To review the social media coverage of NCUI's SM handles, with particular reference to Facebook and Twitter
- ii) To suggest a social media strategy so that SM handles align themselves effectively with SDGs, and position NCUI to build up a model which can be emulated by others.

The methodology of the study will be analytical, based on deeper study of NCUI's SM handles.

Study of NCUI's SM Handles:

The major findings of the study are as follows:

1. Majority of the posts are primarily descriptivewith a focus on the events/programs/activities of NCUI.

2. Some of the posts are retweets with occasional comments, on the posts of Ministry of Cooperation, related to their developments/initiatives.
3. Some of the posts mention the words ‘sustainable development’, ‘sustainable’, but these have been used on very few occasions.
4. NCUI’s Cooperative Educational Field Projects are doing wonderful work in the areas of poverty-eradication, health, education, all related to SDGs, but in these posts, the words ‘SDGs’, or ‘sustainable development’ are definitely missing.
5. There has been no well-planned and conceptualized social media strategy to highlight posts aligned with SDGs.

What should be NCUI’s SM Strategy for SDGs?

The above findings clearly indicate the need for NCUI to formulate a Social Media strategy for SDGs. Accelerating progress on SDGs can happen only when cooperatives emerge as lead players in highlighting their activities, programs, success stories, etc., based on SDGs, so that a proper awareness is created amongst the policy-makers who may be sensitized to assign bigger responsibilities to cooperative organizations in implementing SDGs through projects/schemes, or various other methodologies. The following should be the major components of this strategy:

1. Education:

If the members of cooperatives are still not aware of the 17 SDGs, they cannot implement them at their end with more focussed strategies and action-plans. A social media campaign with focus on one, or two specific goals, with facts and figures backed up by captivating graphics and short reels, can teach the cooperative members about the importance of SDGs, and help non-cooperative world to know more about the cooperatives’ role in ensuring clean environment and sustainable development. For example, poverty eradication and health may be the goals with a focus on posts related to NCUI’s cooperative education field projects.

2. Inspirational Stories:

It is important to find people and organizations aligning with the objectives of SDGs. Their work may be unseen, but it is important to highlight this aspect

through social media posts. The staff of NCUI's cooperative education field projects, as brand ambassadors of SDGs, play an important role in poverty-eradication by improving the socio-economic condition of people in rural areas through various income-generating activities. Similarly, the trainees of NCUI's Incubation Centre are actively involved in sustainable development activities, like manufacturing environment-friendly recycled and upcycled many products etc. The posts of these field functionaries may not only use words like 'poverty eradication', but also use hashtags like 'SDGs', 'poverty alleviation', etc. The posts, featuring such people and their stories based on informational interviews to learn about their SDG-aligned interviews, can form a substantial chunk of social media posts.

3. Action-Oriented Posts:

How can SM enable people to take concrete action towards the SDG goals? For example, encouraging NCUI cooperative education field project staff, to post pictures of themselves to promote sustainable environment, for example planting trees, would definitely spur more cooperative grass-root officials to take action for achieving SDGs. Coming up with innovative posts, which can psychologically motivate cooperative members to support SDGs, would be a big challenge.

4. Designing Attractive Graphics/Short Reels:

Creating attractive posts with appealing images and quality video clips would enable cooperative members and other stakeholders to interact with SDG-focussed posts of NCUI.

5. Background Research:

This is important to ensure that the facts and figures are correct. Researching about the subject, as well as target audience, will be very important in this regard.

6. Writing High-Impact Headlines and Captions:

These are very important to communicate the messages so that they can create necessary impact. The text should be concise, with good use of action verbs, while avoiding passive voice. Use of relevant hashtags, aligned with the goals of SDGs, will be very important.

7. SM Live events & Facebook Pages:

Social Media (SM) Live events on Facebook and Instagram with focus on SDGs would be very important in sensitizing members to take action. Creating a separate NCUI Facebook page on ‘Achieving SDGs’ would also be an effective SM strategy to give aspecialized focus on this subject. Categorization of SM SDGs posts will be very important for building up NCUI’s brand in motivating other cooperative organizations to take similar steps.

8. Monitoring & Evaluation:

Measuring social media SDGs metrics will be very important on a regular basis. For example, measuring engagements through likes, shares, retweets, comments, etc., would be very useful in providing guide to take necessary corrective action in initiating further improvements in this regard.

Conclusion:

NCUI’s social media strategy for SDGs can be a very useful template of use by other promotional organizations, who can modify this strategy according to their activities/programs, while keeping the basic tenets of this strategy intact. For even business organizations, this can be a useful reference point. If the cooperative organizations at all levels from national to district, or PACS level, devise similar social media strategies, and undertake necessary steps, then the cooperatives will no doubt emerge as lead actors in implementing SDGs. This is because the cooperative model is well placed to resolve the issues posed by transitions to sustainability, including those like poverty, gender inequality or economic and social exclusion.

Both national level cooperative federations and other big cooperative enterprises comprising state and district enterprises, through the contributions of their members, are actively considering how to streamline the SDGs into their activities; and by integrating their objectives championed by the 17 SDGs e.g., gender and economic solidarity into their member-based structures can help generate a ‘trickle-down’ effect, whereby SDG implementation can take place across different levels of governance, including the grass-root level cooperative enterprises. In this endeavour, social media awareness not only helps in promoting sustainable enterprises, but also encourages masses to use

eco-friendly practices and products, which can significantly impact the environment by helping both individuals, and cooperative enterprises, to make informed decisions conducive to the environment and lead to all-inclusive socio-economic growth.

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Empowering Sustainability: Key Initiatives of MoC and Realizing SDGs in India

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Introduction:

All nations have pledged to support the Sustainable Development Goals (SDGs) of the United Nations in an effort to create a more just and sustainable world. India, a country with a diverse population and many complex issues, is working toward these objectives through a number of official programs. The Government of India's creation of the Ministry of Cooperation is a noteworthy step in this regard. In India, the Ministry of Cooperation (MoC) has played a pivotal role in executing multiple programs aimed at fortifying the cooperative industry and advancing sustainable development. The aforementioned efforts are designed to promote economic growth, improve food security, and empower rural people.

The Ministry of Cooperation (MoC), Government of India (GoI):

The co-operative sector has experienced a number of organizational, administrative, and regulatory changes in the previous 75 years since India gained its freedom. In this regard, the establishment of a distinct Ministry for the Co-operative Sector marks a significant milestone in the cooperative movement's history in India. Beginning in July 2021, the Department of Cooperation, which was previously housed inside the Ministry of Agriculture and Farmers' Welfare of the Indian government, has been separated into its own ministry. India's Ministry of Cooperation was founded with the intention of encouraging and aiding organizations that are based on cooperative principles all throughout the nation. The Ministry, which completed its second year on July 6th, has launched a number of initiatives during the past two years, pointing with the concept of "Cooperation for Prosperity".

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In addition, it seeks to meet the growing demand for a comprehensive and well-coordinated strategy to maximize the potential of cooperatives across a range of sectors, including agriculture, handlooms, dairy, fisheries etc. These cooperatives, which frequently act as the skeleton of rural and agricultural communities, are a vital component of India's socio-economic fabric.

UN Sustainable Development Goals (SDGs) and its Relevance for Cooperative Development in India:

The United Nations' Sustainable Development Goals (SDGs) hold its immense relevance and significance for different nations such as India in the process of development. They serve as a guiding track towards achieving all-encompassing, sustainable progress while addressing critical challenges like poverty, inequality, and environmental stability.

The primary objectives of these SDGs comprehend poverty alleviation, fostering sustainable growth, enhancing social well-being, ensuring environmental sustainability, and fostering global partnerships. Within the context of India, where income and social disparities are still widespread, the SDGs play a vital role in reducing inequalities. These goals are closely aligned with India's mission to uplift millions from poverty and elevate living standards. The promotion of sustainable economic, social, and environmental practices stands as a critical aspect for developing nations, guaranteeing not just short-term growth but long-term welfare as well.

One of the essential features of the SDGs is their role in facilitating international collaboration. They act as a conduit for providing developing nations like India with access to funds, knowledge, and technology. Furthermore, the SDGs offer a comprehensive framework for policy development, aiding countries like India in defining their development priorities more clearly. The realization of these SDGs has the potential to substantially enhance the quality of life for citizens in developing countries by addressing crucial aspects such as health, education, clean water, and sanitation.

The United Nations' Sustainable Development Goals (SDGs) play a pivotal role in shaping India's socio-economic and environmental landscape. These global objectives harmonize with India's strategic development focus and provide a clear roadmap for policies and initiatives geared towards eradicating

poverty, ensuring high-quality education, enhancing healthcare access, promoting clean energy, and safeguarding environmental sustainability. A crucial element of this endeavour is cooperative development, which emphasizes collaborative approaches involving the government, civil society, and the private sector to implement and realize these goals. Through partnerships, resource sharing, and the exchange of knowledge, cooperative development in India augments the effectiveness of SDG implementation, promising a brighter and more sustainable future for its diverse population.

In this context, an attempt has been made in the following section of this article to explore how the key initiatives of the Ministry of Cooperation are enabling the realization of the UN's Sustainable Development Goals.

I. Upgradation of PACS as Pradhan Mantri Kisan Samridhi Kendra (PMKSK):

The decision by the Government of India to upgrade Primary Agricultural Cooperative Societies (PACS) already functioning as fertilizer distribution centres into PradhanMantriKisanSamridhiKendras (PMKSK) and to involve PACS in drone-based fertilizer and pesticide spraying, as well as property surveys, has the potential to contribute to the realization of several United Nations Sustainable Development Goals (SDGs). Let's examine the ways in which this initiative aligns with the SDGs:

1. **Zero Hunger (SDG 2):** Upgrading PACS and incorporating drone technology for precision farming can enhance agricultural productivity by ensuring the timely and efficient distribution of fertilizers and pesticides. This supports SDG 2 by increasing food production, improving food security, and reducing hunger.
2. **No Poverty (SDG 1):** The initiative provides new business opportunities for PACS, increasing their profits and benefiting the rural economy. This can contribute to poverty reduction by improving the livelihoods of individuals and communities, thereby aligning with SDG 1.

3. **Decent Work and Economic Growth (SDG 8):** Involving PACS in drone entrepreneurship and property surveys can create new employment opportunities in rural areas. This aligns with SDG 8 by promoting sustained, inclusive, and sustainable economic growth and decent work for all.
4. **Industry, Innovation, and Infrastructure (SDG 9):** The use of drone technology for agricultural activities and property surveys promotes innovation in rural infrastructure and agriculture. This contributes to SDG 9, which seeks to build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation.
5. **Reduced Inequality (SDG 10):** By providing new business opportunities to PACS, this initiative can reduce economic inequalities in rural communities, thus aligning with SDG 10.
6. **Sustainable Cities and Communities (SDG 11):** The adoption of drone technology in agriculture and property surveys can promote sustainable rural development, reducing the migration of rural populations to urban areas. This helps in achieving SDG 11 by building sustainable rural communities.
7. **Life Below Water and Life on Land (SDGs 14 and 15):** Efficient and targeted use of fertilizers and pesticides through drones can reduce the environmental impact on terrestrial and marine ecosystems, aligning with SDGs 14 and 15, which focus on life below water and life on land, respectively.
8. **Partnerships for the Goals (SDG 17):** Collaborative efforts between the government, PACS, and technology providers are essential for the success of this initiative. Such partnerships exemplify the importance of working together to achieve the SDGs.

II. PACS as Paani Samiti:

The initiative to make Primary Agricultural Cooperative Societies (PACS) eligible as 'Paani Samiti' to undertake the work of Operation and Maintenance (O&M) of piped water supply schemes in rural areas, under the JalSakthi program of the Government of India, is a commendable step

that aligns with several United Nations Sustainable Development Goals (SDGs). Let's explore how this initiative can contribute to the realization of these goals:

1. **Clean Water and Sanitation (SDG 6):** The primary and most direct impact of this initiative is on SDG 6. By empowering PACS to undertake O&M of water supply schemes, it helps ensure access to clean and safe drinking water in rural areas. This is fundamental to achieving SDG 6's targets, which aim to provide universal access to safe and affordable drinking water and adequate sanitation for all.
2. **Decent Work and Economic Growth (SDG 8):** This initiative creates new employment opportunities for PACS and local communities. O&M of water supply schemes requires trained personnel for maintenance and management. By offering employment in rural areas, it contributes to SDG 8 by promoting sustained, inclusive, and sustainable economic growth and decent work for all.
3. **Industry, Innovation, and Infrastructure (SDG 9):** By involving PACS in water supply management, it promotes innovation in rural infrastructure development. This aligns with SDG 9, which seeks to build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation.
4. **Reduced Inequality (SDG 10):** Empowering PACS to manage water supply schemes helps reduce inequalities in rural areas. It provides employment opportunities and resources to communities that might otherwise be marginalized, thus contributing to SDG 10 by reducing income inequalities.
5. **Sustainable Cities and Communities (SDG 11):** Access to clean and safe water is essential for the development of sustainable and resilient rural communities, thereby contributing to SDG 11. It helps reduce the migration of rural populations to urban areas in search of basic services, promoting sustainable rural communities.

6. **Life Below Water and Life on Land (SDGs 14 and 15):** Ensuring clean and sustainable water sources through proper O&M helps protect terrestrial and marine ecosystems by reducing pollution and over-extraction of water. This aligns with SDGs 14 and 15, which focus on life below water and life on land, respectively.
7. **Partnerships for the Goals (SDG 17):** Collaborative efforts between PACS, government agencies, and local communities in managing water supply schemes exemplify the importance of partnerships in achieving the SDGs. SDG 17 calls for revitalizing the global partnership for sustainable development, and this initiative is a practical demonstration of such cooperation at the grassroots level.

III. Rupay Kisan Credit Card to Members of Cooperative Societies:

The pilot project initiated in Panchmahal and Banaskantha districts of Gujarat to expand the reach and capacity of Rural Co-operative Banks and provide necessary liquidity to the members of rural Co-operative Societies, including the distribution of Rupay-Kisan Credit Cards (KCCs), is a promising initiative that aligns with several United Nations Sustainable Development Goals (SDGs). Let's explore how this project can contribute to the realization of these goals:

1. **No Poverty (SDG 1):** By providing access to financial services and credit through Rupay-Kisan Credit Cards, this initiative helps reduce poverty in rural areas. It empowers farmers and members of cooperative societies to invest in their agricultural activities, increasing their income and economic well-being.
2. **Zero Hunger (SDG 2):** Improved access to credit and financial resources can help increase agricultural productivity, reduce food insecurity, and contribute to achieving the goal of zero hunger. Farmers can invest in better seeds, technology, and practices to enhance food production.
3. **Decent Work and Economic Growth (SDG 8):** This initiative can stimulate economic growth in rural areas by providing access to credit for smallholder farmers and members of cooperative societies. It creates opportunities for rural employment, leading to decent work and fostering economic growth.

4. **Industry, Innovation, and Infrastructure (SDG 9):** By expanding the reach of Rural Co-operative Banks and providing financial services, this initiative contributes to SDG 9 by promoting infrastructure development, innovation, and sustainable industrialization in rural areas.
5. **Reduced Inequality (SDG 10):** Access to credit, financial services, and KCCs can help reduce economic inequalities within rural communities. It empowers marginalized populations and cooperatives to access the resources they need for sustainable development.
6. **Sustainable Cities and Communities (SDG 11):** By strengthening rural cooperative banks and providing liquidity, this initiative can help reduce rural-to-urban migration, promoting sustainable rural communities and reducing the strain on urban infrastructure.
7. **Life Below Water and Life on Land (SDGs 14 and 15):** Sustainable agricultural practices promoted through access to credit can help protect terrestrial and marine ecosystems by reducing deforestation, soil erosion, and pollution. This aligns with goals focused on biodiversity and environmental conservation.
8. **Partnerships for the Goals (SDG 17):** Collaborative efforts between Rural Co-operative Banks, NABARD, and cooperative societies exemplify the importance of partnerships in achieving the SDGs. This initiative is a practical demonstration of such cooperation at the grassroots level.

IV. Newly Promoted Multi-State Cooperatives and SDGs:

The Ministry of Cooperation in the Government of India has embarked on a significant endeavour by initiating the formation of three new Multi-State Cooperative Societies, each dedicated to a specific sector: Exports, Certified Seeds, and Organic Products. These initiatives have the potential to play a pivotal role in contributing to the realization of the United Nations Sustainable Development Goals (SDGs), reflecting India's commitment to sustainable development on a global scale.

1. **Multi-State Cooperative Society for Exports:** This initiative is directly related to the SDG 17 (Partnerships for the Goals). By creating a dedicated cooperative society for exports, India is fostering international partnerships and cooperation. The society can facilitate the export of a diverse range of products, including agricultural produce and manufactured goods, thereby boosting economic growth (SDG 8). It can also promote responsible production and consumption (SDG 12) by encouraging sustainable and ethical export practices. By expanding export opportunities, the society can generate employment (SDG 8) and reduce inequalities (SDG 10) within India, especially in rural and marginalized communities.
2. **Multi-State Cooperative Society for Certified Seeds:** The formation of a cooperative society for certified seeds significantly aligns with SDG 2 (Zero Hunger). Access to high-quality certified seeds is essential for increasing agricultural productivity and achieving food security. This initiative not only ensures the availability of quality seeds but also supports sustainable agriculture practices (SDG 15). By promoting responsible consumption and production of seeds, it contributes to reducing environmental impact and conserving biodiversity.
3. **Multi-State Cooperative Society for Organic Products:** The establishment of a cooperative society for organic products is crucial in addressing several SDGs. It supports SDG 3 (Good Health and Well-being) by promoting healthier, organic food choices. Organic farming practices contribute to environmental sustainability (SDG 13) by reducing chemical usage and mitigating climate change. This initiative also aligns with SDG 12 (Responsible Consumption and Production) by promoting sustainable agriculture and reducing waste. Additionally, it can create economic opportunities, especially in rural areas (SDG 8), by encouraging organic farming practices and expanding the market for organic products.

Conclusion:

The formation of new MoC and its recent initiatives underscores the country's commitment and have far-reaching implications for sustainable development, not only within India but also on a global scale. They facilitate economic

growth, sustainable agricultural practices, responsible consumption and production, and partnerships for the goals. By creating new business opportunities and leveraging technology, this initiative can serve as a model for promoting inclusive and sustainable development, not only in India but also for other regions and countries seeking to achieve similar SDGs. By empowering rural communities, improving agricultural practices, and reducing inequalities, they are expected to play a crucial role in India's commitment to achieving the SDGs and building a more equitable and sustainable future.

Governance, Risk And Compliance (GRC) in Indian Cooperatives – Leveraging Technology For Good Governance

Dr. V. Mariappan*

1. Introduction :

Managing businesses are increasingly complex, as they need to effectively identify and manage key activities and integrate into a cohesive discipline to enhance the effectiveness of people, business processes, decision-making, technology, facilities and other important business elements. Governance, risk and compliance is an institution's strategy for handling the interdependencies among - cooperative governance policies, risk management strategy and regulatory compliance. The concept of GRC was developed in 2007 by Open Compliance and Ethics Group and gained recognition when there is demand to ensure ethics in achievement of business goals. The Cooperatives in India being an entity engaged in economic activity across different industry and sectors, the idea of adopting GRC is very much necessary and appropriate for cooperatives in India, importantly when there are many big failures reported from cooperative sector across different businesses, more specifically in the credit and banking business. Moreover, the concept of cooperatives itself strongly inherits the principle of transparency, accountability and good governance.

2. Governance Challenges in Indian Cooperatives:

Despite efforts and attempts to improve the performance of cooperative sector in India, the issues and challenges continue to remain very large and significant. However, the most significant among all is the lack of spontaneity of the cooperative movement itself, it is a government sponsored movement as against the people movement in most successful countries. The other problems and challenges are - non-accountability of stakeholders, problems related to internal free rider dominated by vested interest groups, lack of coordination among various cooperative sectoral organisations, failure to

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keep pace with the products and service innovations, inability to cope with the quality enhancement and market outlook, lack of balanced growth, lack of financial strength and mismanagement of funds, neglecting the demand aspect, regional disparities in growth, lack of co-operation on the part of the members, lack of professional management, non-viable character of some of the cooperative organisations, problem of largescale overdoes, dual and multiple control and political interference that affects the independent nature of the cooperatives.

All these issues and challenges faced by Indian cooperatives challenged the very purpose and survival of cooperative institutions and a result, the incidence of failure of cooperatives across various sector are wide and common in India. Many of the cooperatives are just a head count and in reality they are unviable and surviving in a life support system for many years. Largely, the root cause for the failures are related to poor governance, management and administration cooperatives in India. This calls for technology adoption to address most of the ills of the cooperative sector.

3. Present Status of Technology Adoption in Cooperatives in India:

The governance challenges and the subsequent failure of cooperative institutions across country and sectors are adduced to various challenges in the Indian context. Co-operative movement in India lacks spontaneity in the sense that it has not been emanated from the people themselves. They usually do not come forward to organise co-operatives on their own accord.

However, to improve the governance and management of cooperatives, sporadic efforts are made by cooperative institutions, regulatory bodies, state and central governments. Generally, these efforts are limited to big cooperative organisations like AMUL, IFFCO, State Cooperative Banks and large UCBs. But the efforts tentative and not strategic and also are not uniform and holistic to reap the advantage of emerging technologies. Mostly these efforts are witnessed in the credit and banking sectors barring few other sectors, because of the encouragement, incentives and regulatory prescriptions imposed by the regulatory authorities

For instance, the state of Kerala introduced Integrated Co-operative Department Management System (ICDMS) scheme as part of the modernization of the Department of Co-operation with the technical support of CDIT. They developed three modules of the ICDMS in regard to (a) Registration of Co-operative Societies and bylaw Amendment where the

applications for Registration of Co-operative Societies and Amendment of Byelaws can be submitted directly by the public / Co-operative Societies online and is integrated with the Treasury Online Payment Gateway for payment of fees and Byelaw amendment (b) Fund Management Module that is designed to accurately monitor the repayment of the amount after disbursement of financial assistance to Co-operative Societies included in State / NCDC schemes, and (c) Audit Module for preparing the audit report of the Co-operative Societies in the software system and making it available online.

Similarly, a total of 63,000 functional PACS/LAMPS are being linked with NABARD on a single National Software Network. Computerization plays a crucial role in strengthening Primary Agricultural Credit Societies (PACS) by enhancing their efficiency, transparency, and overall effectiveness in delivering financial services to members. This will strengthen PACS by modernizing their operations, improving service delivery, reducing operational costs, and promoting financial inclusion.

In fact, many cooperative institutions despite having wide scope and advantage, due to lack of understanding and appreciation of technology advantage not embraced technology and continue to do their business the traditional way and losing out to competition.

4. Technology and Good Governance:

Leveraging technology in the corporate governance of cooperative banks is essential for enhancing transparency, efficiency, and compliance while ensuring the financial stability and trust of stakeholders. Here are some ways in which technology can be effectively utilized in the corporate governance matters with regard to cooperative institutions, more particularly cooperative banks / credit institutions.

1. **Adhaar Based E-KYC:** Member / Customer has to submit the KYC details in the digital format that is linked to Adhaar verification.
2. **Biometric authentication:** Every transactions/approval/application processing should be done by a Biometric Authentication by the concerned employee for accountability.
3. **E-signatures:** Incorporate electronic signatures to streamline the approval process for documents, contracts, and agreements, making it faster and more efficient.

4. **Digital Record Keeping:** Implement robust digital record-keeping systems to store and manage important corporate documents, including meeting minutes, financial reports, and regulatory filings. This ensures easy access, reduces paperwork, and enhances data security.
5. **Customer Relationship Management (CRM):** Utilize CRM systems to maintain and enhance relationships with members. These systems can help banks better understand their members' needs and tailor their services accordingly.
6. **Board Online Portals:** Implement secure board portal software that allows board members to access and collaborate on documents, schedules, and reports in a secure online environment. This streamlines communication and ensures timely dissemination of information.
7. **Compliance and Risk Management Software:** Utilize specialized software for tracking and managing compliance with regulatory requirements and risk assessments. These tools can help identify and mitigate potential risks while ensuring adherence to legal and operational standards.
8. **Data Analytics:** Leverage data analytics tools to gain insights from financial data, customer behaviour, and operational performance. This can aid in decision-making, risk assessment, and identifying areas for improvement.
9. **Cyber Security Measures:** Invest in robust Cyber Security measures to protect sensitive financial and customer data. Regular Cyber Security audits and employee training can help prevent data breaches and financial fraud.
10. **Mobile Banking and Online Services:** Offer convenient mobile banking and online services to members. This not only improves customer satisfaction but also enables cooperative banks to operate more efficiently.
11. **Digital Voting and Surveys:** Use digital platforms for voting and conducting surveys among members and stakeholders. This can facilitate better communication and engagement in the decision-making process.
12. **Regulatory Reporting Automation:** Automate the generation and submission of regulatory reports to ensure accuracy and timeliness in compliance with regulatory requirements.

13. **Audit and Internal Controls:** Implement automated audit and internal control systems that can track and report on deviations from established policies and procedures.

Long-term Goal:

The cooperatives have to strategize their policies and programmes in the longer term for adopting the following emerging technologies in a phased manner.

14. **Cloud Computing:** Utilize cloud computing to store and access data, enabling scalability, remote access, and disaster recovery capabilities.
15. **Blockchain for Transactions:** Explore the use of blockchain technology for secure and transparent transaction processing. Blockchain can enhance the trustworthiness of financial transactions and reduce the risk of fraud.
16. **Artificial Intelligence (AI) and Machine Learning:** Implement AI and machine learning algorithms to detect unusual patterns and anomalies in financial transactions, thereby identifying potential fraud or compliance issues.
17. **Other Emerging Technologies:** This includes Knowledge Engineering, Natural Language Understanding (NLU) / Natural Language Processing (NLP), Expert System, Machine Learning, Data Analytics, Data Base, Cloud Technology & Big Data, Extract Transform and Load (ETL) Services, Data Acquisition Technologies / Internet of Things (IOT), Business Intelligence and Robotic Process Automation (RPA), etc.

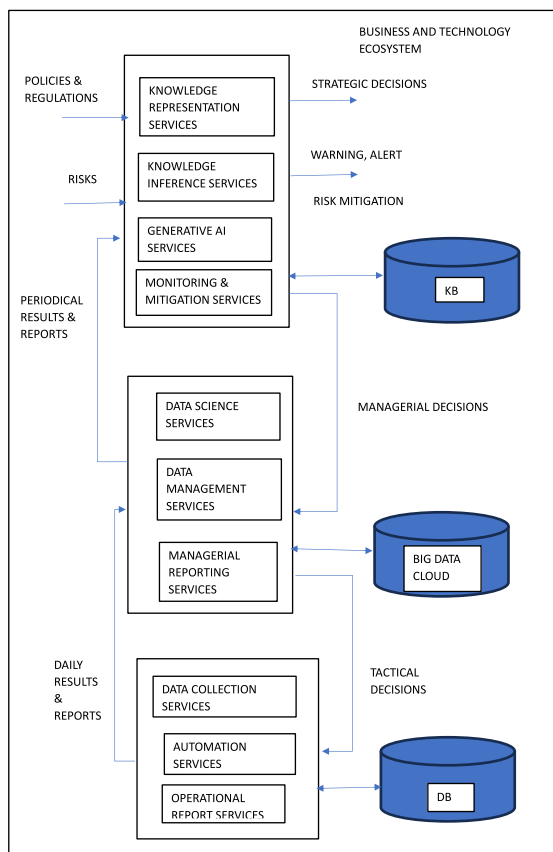
Finally, the cooperative institutions must invest in training and education for board members, executives, and employees to ensure they are well-versed in the latest technological advancements, compliance requirements, and best practices in corporate governance. The Technological solutions model for good governance, risk and compliance for cooperatives is enclosed in the Annexure-I.

5. Conclusion:

The emergence of technological advancements across various sectors of the economy and industry paid rich dividends for the private and public sector organisations in India and across the world as well. Certainly, embracing these technological advancements, cooperative banks can enhance their corporate

governance practices, improve operational efficiency, and build trust with their members and regulatory authorities. However, going by the tentative attempts by some of the cooperative institutions particularly cooperative banks in some part of India and consequent technology related frauds and technology based risks experienced in the recent years, it's important to ensure that technology implementation is accompanied by robust cybersecurity policies, measures and adherence to data privacy regulations to mitigate potential risks. It is imperative that hardware and software procurement policies and procedures needs proper care and adherence to regulatory policies and the handlers of technology- particularly employees and customers needs proper training and education for creating a conducive atmosphere in the cooperative sector.

Annexure I - Technological solutions for Governance in Cooperatives



PART 3





**Indian Society for Studies in Cooperation (ISSC)
VAMNICOM, Campus, University Road, Pune 411 007**

(Tel.No.020-25701000/205, Fax No.020-25537726 Web Site: www.isscpune.in)

Brief Profile

Indian Society for Studies in Cooperation was registered in the year 1979 primarily to promote Research and Studies in Cooperation amongst the Universities. It has cooperative Institutions and individuals as members. Presently, its membership is more than 500 comprising of Institutional Donor Members, Individual Donor members and Individual Life Members.

Society organizes Annual National Conventions every year in different parts of the country focusing on the important issues related to cooperation and allied sectors. At each of these Conventions, papers are invited on subjects selected for the discussions. Eminent Cooperators, Academicians, and Key administrators are invited as Guest of Honour and requested to deliver keynote addresses. These Conventions have been addressed by eminent persons like Dr. Manmohan Singh, Dr. V.K. R.V. Rao, Dr. B. Venkatappiah, Dr. V. Kurien, Dr. V.M. Dandekar, Dr. Nilkantha Rath and Padmabhushan Balasaheb Vikhe Patil others.

Objectives:

The studies, research, and teaching of:

- a) Cooperative Principles and Philosophy.
- b) Cooperative Policy development in India and abroad.
- c) Economic, Social, Political, & Administrative aspects of cooperation.
- d) Management of cooperative enterprises.

Activities:

- i) Undertaking, organizing, and co-coordinating research in fundamental and applied aspects of cooperation.
- ii) Organizing or collaborating in the organization of conferences, seminars, workshops, symposia, colloquia, and other educational programs at the State, Regional, National, and International levels.
- iii) Publishing journals, reports, papers, books, collection of readings, etc.
- iv) Instituting fellowships, scholarships, and prizes.

Membership:

The membership is open to both individuals and institutions interested in the study and research in co-operation. Individual members could be teachers, researchers, executives in cooperative institutions, officers in cooperative departments, etc.

Institutional membership is open to universities, colleges, research institutions, training organizations and cooperatives from the national to the primary levels. Other institutions and individuals interested in development of cooperation could also be the members.

Membership Subscription (One time):

1.	Institutional Donor Member	Rs.20,000/-
2.	Individual Donor Member	Rs. 4,000/-
3.	Individual Life Member	Rs. 3,000/-

ISSC Bank Details:

Name of the Bank	Saraswat Cooperative Bank, VAMNICOM Branch, Pune
Name of the Account	Indian Society for Studies in Cooperation
Type of Account	Savings
Account Number	110 2001 0000 1289
IFSC Code of the Bank	SRCB 0000 110

(Our website www.isscpune.in will give you more details about the Society.)



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Publications of ISSC

1. 25 years of ISSC
2. Proceedings and papers of 24th Annual National Convention, Pune
3. Proceedings and papers of 25th Annual National Convention, Gandhinagar
4. Sugar Cooperatives
5. Shamrao Vithal Co-operative Bank A Voyage Through A Hundred Years
6. Readings in Cooperation
7. Recent Trends in Cooperative Law and Micro Finance (Proceedings and papers of 28th Annual National Convention)
8. Impact of Vaidyanathan Committee on STCCS & 100 years of Housing Cooperatives (Proceedings and papers of 29th Annual National Convention)
9. Best Business Practices in Co-operatives (Proceedings and papers of 30th Annual National Convention)
10. Innovative Co-operative Ventures/Initiatives (Proceedings and papers of 30th Annual National Convention)
11. Positioning of Cooperatives in Emerging Market Economy (Proceedings and papers of 31st Annual National Convention)
12. Role of Cooperative Movement in Inclusive Development of India (Proceedings and papers of 32nd Annual National Conference)
13. Digitalization of Economy and Cooperatives (Proceedings and papers of 33rd Annual National Research Conference)
14. Rejuvenating Cooperatives for doubling Farmers Income: A Road Map (Proceedings and papers of 34th Annual National Research Conference)
15. Strengthening Cooperatives and Youth Participation (Proceedings and papers of 36th Annual National Research Conference)
16. Cooperative Connect (National & Global Perspective) (Proceedings and papers of 37th Annual National Research Conference)