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**SUBJECT II**  
**GENDER EQUALITY AND RESILIENT AGRICULTURE**

**Gender and Producer Organisations: Case Studies of  
Performance and Impact of All-Women Member PCs  
in Central India**

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**ABSTRACT**

Producer organisations are seen as vehicles for upliftment of rural livelihoods as they reduce transaction costs and provide access to input and output markets besides giving better bargaining power to their members. Given that women producers are more marginalised in terms of their access to and control over means of production, the significance of such organisations is even higher for such producers. However, the gender lens has not been used to assess the effectiveness of such producer agencies. This paper attempts to document and analyse the performance of all-women member PCs in Central India to see how these agencies fare if they are constituted of only women members. It examines their physical and financial performance and assesses their member impact in terms of input and output market benefits besides the engagement of members in their agency.

**Keywords:** Producer organisations, all women producer companies, gender, membership

**JEL: J16, J24, Q13**

**INTRODUCTION**

Primary Producers' organisations or collectivities are being argued to be the only institutions which can protect small farmers from globalisation by helping farmers buy or sell better due to scale benefits, lower transaction cost, technical help in production, and creating social capital. In Mozambique, where 80 per cent farmers were small holders and only 7.3 per cent were members of any farmer organisation in 2005, the membership in a farmers' organisation led to 50 per cent increase in profits (Bachke, n.d.). In India, the initiatives like rural producer associations promoted by Self Employed Women's Association (SEWA) had a substantial effect on the awareness of members and modest effect on income and output, at least in the short term (Desai and Joshi, 2014). A recent global review of aggregation models for small farm commercialisation puts together evidence on the effectiveness of such models especially non-traditional co-operative models and finds that though they provided many input services, but joint selling remained weak and very few studies assessed the organisational performance of such models (Abraham *et al.*, 2022).

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In China too, there was a coexistence of smallholder exclusion and favourable impact on co-operative member smallholders, including their net returns from crops (Ito *et al.*, 2012; Ma and Abdulai, 2016; Ma *et al.*, 2022). Indeed, such collectivities are needed for small farmers as they help realise better output prices (Roy and Thorat, 2008), improve technology adoption, and get better credit terms and thus can help eliminate interlocking of factor and product markets into which small farmers are trapped (Patibandla and Sastry, 2004; Kumar *et al.*, 2013; Kumar *et al.*, 2018; Verma *et al.*, 2019). Producers Organisations (POs) can also help appropriate a part of the value created in the chain by private sector, for their members (Gersch, 2018). In Uttarakhand, the Organic Producer Groups negotiated with the buyers for a better price and so, even with decline in crop yields, farmers continued because of the premium price, while, in Kerala, Indian Organic Producer Company Limited (IOPCL) provided support to member producers in the form of subsidised seeds, micro-irrigation equipment and organic certification (Cherukuri and Reddy, 2014).

POs in India can be registered under either Cooperative Societies Act, Autonomous or Mutually Aided Cooperative Societies Act, Multi-State Cooperative Society Act, Producer Company (PC) or as Mutual Benefit Trusts besides as private or public limited companies. Until recently, in India and many other developing countries, collectives were mostly organised under the co-operative structure. However, co-operative structure in India does not give the needed freedom to operate in complex environment for large scale co-operatives and due to political interference, corruption, elite capture, and similar issues, the co-operatives soon lost their vibrancy and became known for their poor efficiency and loss-making ways with a few exceptions. Also, they face higher competition due to privatisation and liberalisation policies. The major problems of traditional co-operatives have been capital constraint due to the withdrawal of financial support by the government, high competition from other players in the market, and lack of access to credit (capital) and technology, besides free riding by members (Singh, 2008). In fact, internal and external free riding problems originate in the very nature of the co-operative as an institution as it distributes profits based on patronage and not investment (Giannakas *et al.*, 2016). The horizontal problem occurs as members cannot trade shares at market price, and thus, they cannot capitalise their gains when they leave the co-operative. Non-tradability of equity shares at market prices also creates portfolio problem as members cannot diversify their portfolio to reflect their risk preferences. Additionally, influence problem distances investors from control as there is only one member one vote (Rosairo *et al.*, 2012).

In order to escape from this difficulty of co-operative enterprise, New Generation Co-operatives (NGCs) had emerged in many parts of the world during the 1990s. This arrangement by co-operatives helped them become economically efficient, financially viable, and obtain member loyalty. In practice, though the NGCs have been able to raise 30-50 per cent of their total capital through delivery rights issues, the problems include: (i) off market purchases to meet contract terms by the

growers; (ii) leasing of delivery rights by members; and (iii) dependence on non-producer member equity and non-member business (Singh, 2008).

An amendment was made to the Companies Act, 1956 in 2003 in India, to include Producer Companies (PCs). India is the second Asian country after Sri Lanka (where they mostly failed) to try this form of PO (Singh, 2016). A similar entity called Farmer Professional Co-operatives- in China were granted clear legal status as independent and democratically administered organisations in 2007 registered under the State Administration of Industry and Commerce (SAIC) (Vorley *et al.*, 2012). PCs try to establish principles of profit-oriented contemporary business organisations within farming communities, to connect them with corporate buyers from the rapidly transforming Indian retail landscape. It gives more freedom to co-operatives as companies to operate as business entities in a competitive market (Trebbin and Hassler, 2012). PCs are also seen as an institutional innovation in the domain of farmer aggregation and agricultural marketing channels (Bhanot *et al.*, 2021; Singh, 2021b) (For details of PC features and structure and their departure from or similarity with co-operatives, see Singh and Singh, 2014).

This paper examines five all-women member PCs with high value agricultural products and promoters across Madhya Pradesh to assess their performance and member impact. The next section discusses the gender aspects of the PCs as POs, Section III provides the context and methodology adopted followed by assessment of performance of five case studies women-only PCs and their impact on members vis-à-vis non-members in Section IV. Section V concludes the paper.

## II

### GENDER AND PCS

So far as participation of women in PCs in India is concerned, initially, they were brought in as members in mostly male dominated PCs. For example, membership in PCs in Karnataka was quite biased towards male members (87 per cent members being men). Women participation in PCs with animal husbandry as secondary activity was quite prominent compared to other sectors, which reflected the nature of women preferences, who place more emphasis on food self-sufficiency compared to cash crops (Gowda *et al.*, 2018). In general, the ratio of women members in Farmer Producer Organisations (FPOs)/Producer Companies (PCs) has been low at 20-30 per cent and the FPO guidelines do not specify any targets or incentives for promoting this ratio in mixed member FPOs/PCs (Sinha *et al.*, 2022) and this is generally explained in terms of women not having land titles, though land is not a requirement to become member of a FPO/C, and the socio-cultural norms for women as workers which restrict their movement and participation in such entities despite the fact that women form a very large chunk of rural and agricultural work force accounting for 14 per cent of land owners, 55 per cent of agricultural workers, 24 per cent of farmers, and 33 per cent of agricultural labour. Furthermore, 73 per cent of women workers are engaged in the agricultural sector which employs 80 per cent

of all active women workers (NAFPO, 2021). Some promoting agencies like Small Farmers' Agribusiness Consortium (SFAC) and FPO guidelines also make it mandatory to include women as marginalised sections as members or at least one woman as member of the PC Board, for providing financial support to PCs.

Realising that this was not very empowering for women in such entities, as it was more a by-product of mainstreaming gender narrative in development circles, women only PCs were established at many places along the lines of all women milk co-operatives promoted by the National Dairy Development Board (NDDB) in many parts of India given that dairying is mostly women's work. Its subsidiary (National Dairy Services) has also later promoted five milk producers' companies under the Companies Act, 2003 including one all-women member PC which are at the state level and one of the largest size PCs in India in terms of equity capital, membership and turnover (Singh, 2021a). Across India, women-only member PCs accounted for only 2.4 per cent of the total in 2021. Further, 82 per cent of the women-only PCs were engaged in farm-related activities and 4 per cent in non-farm activities. While only 3 per cent of PCs were in dairy sector, there were 7 per cent women-only milk PCs (Neti *et al.*, 2019). Furthermore, dairy PCs were majority (11) of the top 20 PCs in terms of paid-up capital and most of this majority (8) were all-women PCs (Neti and Govil, 2022). Maharashtra (20 per cent), Madhya Pradesh (18 per cent) and Odisha (13 per cent) were three states with more than half the women-only PCs. Only 4 per cent of women owned PCs had paid up capital (PuC) of > Rs. 50 lakh; majority of them (85 per cent) had PUC less than Rs.10 lakh. Five of the top ten women-only PCs were in the dairy sector and also half of the top 10 women-only PCs in India had PUC of more than Rs. one crore each. (Neti *et al.*, 2020).

It is argued that such adverse inclusion of women in PC structures either in general or in all-women member PCs often serves to disempower and further burden women as participation often adds to their daily activities and thus is not necessarily empowering. Furthermore, it is seen to lead to exclusion and inequality among women producers as only those who were part of Self-Help Groups (SHGs) were brought into the PC fold as most such PCs were based on the existing women SHG structures (Tandon, 2019). Even much later, some stakeholders have been proposing that there should be 70 – 80 per cent women-only FPOs in some sectors like dairy, poultry, goatery and forest produce where women are predominant workers and rearers while other sectors can do with mixed FPO/Cs with 20-30 per cent women members which will add up to 40 per cent entities being women only and suggest that one-third of the proposed 10000 FPOs being promoted during 2019-2024 should be women only FPOs (NAFPO, 2021).

There are not many serious analytical studies on the performance and impact of all-women PCs in India unlike PCs in general (for details see Singh, 2021a). Among a few small assessments in local contexts, in case of silk, MASUTA women producer's company led to members receiving 75 per cent of consumer price, leading to empowerment of women as well as financially weaker sections of the society

besides promoting gender equity (Gupta, 2015). In case of one all-women member maize PC in Bihar, members realised 15-20 per cent higher price due to direct marketing by PC and off-season sale at higher prices owing to linkages with warehouses, on time electronic payments and fair weighing practices and the PC made a profit of Rs. 6.3 million in its first two years of active operation and distributed patronage bonuses up to 70 per cent from year one, benefiting nearly 6,000 farmers (Vutukuru *et al.*, n.d.). The Madhya Pradesh Women Poultry farmer PC (made up of 10 producer co-operatives as members) which had more than 2000 members and worked with 10,000 producers was found to be very effective and the political, social, human and economic capital of the members were found to be much higher than those of the non-members (Mukherjee *et al.*, 2019). The above review shows that most of the case studies are specific to a single all-women PC and do not involve robust assessment of their member impact in most cases.

### III

#### CONTEXT AND METHODOLOGY

In Madhya Pradesh, agriculture contributes 22 per cent of State Gross Domestic Product and provides employment to around 54.6 per cent of its workforce. 48.91 per cent of the total area of the state is cultivated. The cropping intensity of Madhya Pradesh is 146 per cent. Only 32 per cent of the gross cropped area (GCA) is irrigated with large parts of the state being dry. M.P. is primarily a food grain growing state with around 62 per cent of its GCA devoted to foodgrains and 32 per cent to oilseeds in 2014-15 (Gulati *et al.*, 2017). The cropping pattern consists of soyabean accounting for 27 per cent of GCA, wheat 22 per cent, gram 14 per cent, paddy 8 per cent, mustard and maize 4 per cent each, urad, masur, tuar and cotton 3 per cent each, jowar and sesame -2 per cent each and bajra, peanut and peas 1 per cent each (Sharma *et al.*, 2013). Wheat is the major crop grown during the rabi season and it is intercropped with gram. In the *kharif*, farmers mostly grew oilseeds, specifically soybean. Within foodgrains, cereals crops had 39.4 per cent of GCA and pulses 23 per cent. In M.P., food grains (cereals and pulses) is the largest segment constituting around 27.3 per cent of gross value of output followed by livestock (18 per cent), fruits and vegetables (17.4 per cent) and oilseeds (14.3 per cent) (Gulati *et al.*, 2017). In 2010-11, 44 per cent operated land holders were marginal and 28 per cent small with 12 per cent and 22 per cent of area respectively. The semi-medium holders were 19 per cent of total with 28 per cent area and only 9 per cent were medium with 29 per cent area and 1 per cent being large with 9 per cent area (Sharma *et al.*, 2013).

There are 4,530 Primary Agricultural Credit Societies (PACS) operational in the state. The state has been also a pioneer in the setting up of new form of co-operatives- PCs- since 2005 (Singh and Singh, 2014). The state was also the first to set up a state level PC as a consortium of PCs which had 90 members (Rani *et al.*,

2018). The state has put in place a set of incentives to strengthen FPOs through financial support, infrastructure building and relaxation of the provisions of the Agricultural Produce Market Committee (APMC) Act (Gulati et al., 2017).

The five case studies PCs were all at least three year old and were promoted by well-known NGOs which include Action for Social Advancement (ASA) (two of the total three all-women member PCs by them in the state), Agha Khan Rural Support Program, India (AKRSP(I) (one of the two which was all-women member), Professional Action for Development (PRADAN) (one out of three all-women member PCs) and Samaj Pragati Sahyog (SPS) (the only all women-member PC) most of whom have large presence in the state for long time in terms of number of PCs promoted and presence in local areas as development organisations. Besides accessing all the documented information from their records for all PCs, 41 member and 45 non-member producers was also interviewed across five PCs during October 2019 to find out the member impact vis-à-vis non-members and also before and after the PC membership in case of the members. Each PC was visited personally, and time spent with to understand its operations and strategy besides interviewing board and other members and non-members. These PCs were evaluated in terms of their physical and financial performance by analysing and comparing their net profit, the ratio of equity capital mobilised to authorised equity capital, payment of dividends, ratio analysis, and corporate linkages from annual reports and business plans of past few years, and interviews of Chief Executive Officers (CEOs), managers, board members and key persons of promoting agency for the respective PC/s.

#### IV

#### PHYSICAL AND FINANCIAL PERFORMANCE OF PCS

All of the case studies PCs originated from the SHGs of women with three being setup during 2012 and 2013 and another two during 2015 and 2016 each. A comparative analysis of the all-women case study PCs in MP by various promoters shows that ASA promoted women PCs had small size of membership though they had registered with good amount of authorised capital of Rs. 15 lakh each but one of them could not even reach 50 per cent of it even after 6 years of working (Table 1). But their turnover was significant (Rs. 45-81 lakh) given the small size of membership. However, they also seemed to have passed on the profits to the members as revealed by the small profits and reserves they had. On the other hand, AKRSPI promoted PC (Pandhana) which was of more recent origin had really small, authorised capital (Rs. 5 lakh) and small mobilised equity (60 per cent of authorised). But it was able to achieve good level of revenue/turnover (Rs. 24 lakh) and remained in profit almost throughout. The performance of this goat PC was even more impressive as it was not only a women member PC and but was in an unusual and unorganised sector of meat and animal trade which is a high value sector.

TABLE 1: PROFILE AND PERFORMANCE OF ALL WOMEN MEMBER PCS IN M.P.

PC	Ranapur Tribal women (2012)					Aliapur Tribal PC (2013)					Pandhara PC (2016)					Chirayu Women PC (2015)					RR Pragati PC (2012)				
	Year	2015-16	2016-17	2017-18	2018-19	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2015-16	2016-17	2017-18	2018-19	2015-16	2016-17	2017-18	2018-19	2015-16	2016-17	2017-18	2018-19		
Year Parameter	16	17	18	19	14	15	16	17	18	19	17	18	19	17	18	19	17	18	19	16	17	18	19		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)					
Members	700	980	1000	1200							808				672	980	1000	1200							
Authorised capital (Rs. lakh)	15	15	15	15	15	15	15	15	15	15	15	5	5	5	10	25	25	40	40	100	100	4000			
Paid up capital (Rs. lakh)	12.4	12.4	14.11	14.11	1(6.00)	4.44	7.22	7.22	7.22	7.22	1	1	2.99	7.5	15	15	20	39.02	58.8	58.8					
(Loss) (Rs. lakh)	(83.00)	(83.00)	(94.00)	(94.00)	(30.00)	(48.00)	(48.00)	(48.00)	(48.00)	(48.00)	(20.00)	(20.00)	(60.00)	(75.00)	(60.00)	(60.00)	(60.00)	(98.00)	(59.00)	(59.00)	(59.00)				
and as per cent of authorised capital (in brackets)																									
Revenue (Rs. lakh)	27.54	28.02	64.15	45.22	5.65	24.6	16.4	25	13	81	2.78	14.7	23.9	60.83	139.5	133.23	148.47	177.71	268.23	518.12					
Profit (Loss) (Rs. lakh)	(2.68)	(2.97)	(1.58)	0.41	0.03	0.49	(1.23)	(1.35)	(1.36)	(1.36)	0.3	0.017	1.79	1.09	0.39	0.31	0.70	0.24	2.53	12.01	12				
Reserves (Rs. lakh)	(3.82)	(6.79)	(8.38)	(7.97)								0.017	0.25	0.31	1.37	1.83	2.61	(38.91)	(36.37)	24.36	23.15				
and surplus (Rs. lakh)																									
Total Assets (fixed assets) (Rs. lakh)	26.58	50.24	44.53	36.37								2.75	5.88	16.89	33.18	63.47	68.48	120.59	281.02	277.47					
	(8.63)	(12.2)	(10.2)	(11.11)								(0)	(0.22)	(0.22)	(3.96)	(4.13)	(12.56)	(18.78)							

Source: Primary data from various PC records.

All of the five PCs had input supply services for their members and only one (Alirajpur tribal PC) also ran a farm machinery rental service, mainly a thresher for various crops, set up with 40 per cent subsidy, for the last 1.5 years. The Ranapur Mahila Tribal PC BoD had five members (all women) to begin with but in 2017-18, of the nine BODs, only six were women. The members bought inputs from it because of lower price. The PC had a warehouse since 2014-15 which was used for aggregating and storing the produce. The PC had promoted larger cultivation of soyabean and a new variety of wheat during the last five years.

Seed contract farming was another significant activity for four of them except the goat PC. Three of them (Ranapur and Alirajpur and Chirayu) organised seed production for the state seed corporation. The Ranapur tribal Mahila had also procured gram for the SFAC at Minimum Support Price (MSP) at 1 per cent commission. Another PC (Alirajpur) had done procurement of 80 tonnes of urad for SFAC at MSP in 2014-15 and had sold its members produce (soya and wheat) at the APMC market under Bhavantar Bhugtaan Yojana (BBY, deficiency price payment or DPP) once to realise MSP. Even Chirayu had bought gram on behalf of SFAC at MSP for 1 per cent commission in 2015-16. Alirajpur PC also sold some of the soyabean, chana and wheat produce procured from members in wholesale markets in M.P and Gujarat directly to traders. Whereas all of the members transacted with PC for input purchase, only about 70 per cent of members transacted with PC on the output side. 60 per cent of its revenues come from output and 40 per cent from input sales.

The Alirajpur tribal PC sold various bio-inputs to members of which 25 to 60 per cent bought these products mainly due to lower price. However, no members exclusively bought any input from PC despite lower price, better quality, and easier availability. The PC aggregated various crop produce and had rented a warehouse. Twenty five per cent of its input and output business came from non-members. The PC also had organic cotton project in the area. It had also sold in wholesale to Indian Tobacco Company (ITC) once.

PRADAN promoted PC (Chirayu in Betul district) had good start and mobilised a significant amount of equity from members (60 per cent of authorised i.e. of Rs. 25 lakh in 2017-18 raised from earlier Rs. 10 lakh). In fact, it had reached 75 per cent of its earlier authorised capital of Rs. 10 lakh. It had high level of revenue (> Rs. one crore in 2017-18) and profits throughout and created some small reserve as well (> Rs. one lakh). Inputs sales accounted for 40 per cent of turnover and 60 per cent of this turnover came from 70 per cent of the membership. It also sold maize, cotton seed to members at lower than market price. On the output side, it aggregated crops like soya bean, maize, wheat and gram. In terms of livelihood diversification, it had introduced soya bean as a cash crop and a new variety of wheat in the last few years. 7 per cent of its input sale and 20 per cent of output turnover came from non-members. It also facilitated sale of its members produce to wholesale traders in various markets in M.P. and Gujarat.

Pandhana PC had most of the members (400 active members) rearing goats of local breed for the purpose of meat, besides some (200) doing poultry and others both. Each member had 5-6 goats and in the case of poultry 15- 20 birds. The animals were sold in the Pashu Bazaars (livestock markets) organised by the village panchayats. The Pashu Sakhis (animal female friends who were also directors of the PC) kept an account of animals which could be sold to PC and brought in the buyers. 30 per cent of the goats and 50 per cent of chicken were sold through the PC. PC received 5 per cent commission on sales. The meat was sold in wholesale @ Rs. 150 per/kg. The PC also started selling fresh meat at weekly heats where the goat meat was sold @ Rs. 400 per/kg. The cost of rearing was about Rs. 90 per/kg. The Muskan Brand of Urea Molasses Blocks (UMB) as well as mineral mixture and poultry feed were produced by the members who were organized into Pashu Palak (livestock rearers) groups of 20 to 25 each.

The PC bought only 10 per cent of the output from non-members. 30 per cent of the total sales were realised during Eid festival. The PC also introduced weight-based sale of animals in the market instead of only visual assessment of live animal weight. 70 per cent of the revenue of the PC came from commission received on wholesale transaction with the traders and 30 per cent from the animals bought from the members and sold by PC in retail for meat. Its turnover included: sale of goats, mineral mixture, UMB, poultry feed and chicken.

The RRPPC had its own warehouse and processing facility. The members and non-members were given the same price on output purchase. On the input side, it sold seed to about 250 members on advance booking and payment of 30 per cent of the price. The sale of seeds to non-members was less than 5 per cent. On the output side it aggregated various crops like wheat gram and maize from 2600 members (out of total of 4000 members). It also made use of warehouse receipt-based loans for storing its produce in its own warehouses. It was mainly into Non-Pesticidal Management (NPM) produce and sold 90 per cent wheat and gram procurement to Safe Harvest India Pvt. Ltd. (SHIPL) which is into promotion and distribution of NPM products under its brand exclusively created for this purpose. The farmers members had been into NPM crop practices for the last 10 years and so far, only wheat had been rejected once by Safe Harvest based on sample tests for which the buyer paid. The PC had also sold 6000 quintals of sweet corn to private buyers. It also undertook grading of gram last year for Big Basket. The PC promoted crop of red gram in the area and also was 'reverse selling' pulses to the member farmers after processing it into dal. It also dealt with non-members in maize procurement up to 10 per cent of total procurement. It is the one of the very few PCs and perhaps the only all-women member PC which had participated in futures markets and made profits in maize but lost money in soya in 2016-17. It also had Rs. 2.5 lakh equity investment from SHIPL which was a unique arrangement as SHIPL was a private civil society promoted company and also bought from RRPPC.

Table 2 presents ratios on the financial position and performance of the four case study PCs. A liquidity ratios analysis showed that all of the four PCs had comfortable position though Chirayu was poor on current ratio but very high on quick ratio. Most of them managed cash very well, but proprietary ratios were not very good, in general. The solvency ratio measured as proprietary ratio showed that it was variable over the years in most cases reflecting lack of long-term business stability of the operations of the PCs. On two other parameters of solvency, the largest PC (RRPPC) had very high debt equity ratio as well as debt to assets ratio across the years. However, all PCs did well on efficiency ratios like turnover/capital or turnover/fixed assets ratios though one of the efficiency ratios was also poor across PCs except one (Chirayu).

#### 4.1 All-Women PC Member and Non-Member Profile and Impact

Of the 41 all-female members of five PCs across four promoters, 2/3rd of the members were illiterate and rest with various school level literacy levels like their non-member counterparts. 80 per cent reported agriculture as the primary occupation followed by goatery and labour respectively compared with almost 90 per cent non-members being engaged in farming as primary occupation. Average age of members was 41 years and that of non-members 45 years. The major secondary occupation was animal husbandry and farming besides labour as against non-members who were into labour as secondary occupation.

Seventy-eight per cent of the non-members in case of five women PCs were female and 67 per cent of the total members were illiterate and 22 per cent middle standard literate. There was only one member who was graduate. 81 per cent of the farmers reported farming as primary occupation, 12 per cent animal husbandry and 7 per cent labour. On the other hand, 65 per cent reported no secondary occupation with 12 per cent being into farming and poultry and 7 per cent reporting wage labour as the major secondary occupation. There was not much difference in occupational patterns of non-members and even their literacy levels but 24 per cent had labour engagement as secondary occupation and only 4 per cent labour.

The average operated land holding of members was 2.71 acres and owned land 2.55 acres and it was much smaller than that in case of non-members (Table 3). The average operated land of non-members was 3.9 acres and average owned land 3.7 acres. 53 per cent of the members were marginal farmers and 32 per cent small with the rest 15 per cent being semi medium farmers. However, this 15 per cent accounted for 35 per cent of the cultivated area and marginal category only 26 per cent of the total area. 79 per cent of the non-member farmers were marginal or small and only 2.5 per cent were medium category farmers. However, small and marginal farmers had only 55 per cent of the cultivated area and medium farmers had 9 per cent of the total.

TABLE 2: FINANCIAL PERFORMANCE OF ALL-WOMEN MEMBER PCS IN MP - A RATIO ANALYSIS

PC	Ranapur Tribal women (2012)			Pandhara PC (2016)			Chirayu Women PC (2015)			RR Pragati PC(2012)				
Year	2015-16	2016-17	2017-18	2018-19	2016-17	2017-18	2018-19	2016-17	2017-18	2018-19	2015-16	2016-17	2017-18	2018-19
Ratio	16	17	19											
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Liquidity ratio (Current ratio)	1.08	1.94	1.27	1.5	1.58	1.52	0.97	0.98	0.57	0.56	0.09	1.08		1.06
Liquidity ratio (Quick ratio)	1.2	0.53	0.79	0.8	0.98	2.948	0.89	0.93	0.56	0.5	0.25	0.11	1.0	
Liquidity ratio (Absolute ratio)	0.035	0.016	0.005	0.016	0.689	0.47	0.54	0.268	0.19	0.21	0	0.023	0.28	
Solvency ratio (proprietary ratio)	0.47	0.24	0.32	0.39	0.36	0.17	0.44	0.45	0.23	0.29	0.32	0.209	0.211	
Solvency ratio (debt/equity ratio)	0.4	0.96	0.009	0.95	0.28	0.17	-	0.028	0	0	1.25	1.27	2.55	3.14
Solvency ratio (debt/assets ratio)	0.188	0.24	0.0029	0.368	0.1	0.029	-	0.016	0	0	0.36	0.41	0.53	0.66
Efficiency ratio (turnover/capital ratio)	2.22	2.23	4.55	3.2	2.78	14.7	7.99	8.11	9.3	8.88	7.4	4.5	4.56	8.82
Efficiency ratio (turnover /fixed assets)	3.2	2.3	6.29	4.07	2.78	14.7	-	3.6	4.2	2.0	37.3	43.02	21.35	30.94
Efficiency ratio (annual sales/working capital)	0.18	0.21	0.12	0.08	0.62	1.5	1.82	2.07	1.33	0.77	1.32	0.49	0.96	

Source: Primary data from various PC records.

TABLE 3: AVERAGE OWNED AND OPERATED LAND HOLDING OF WOMEN PC MEMBERS AND NON-MEMBERS

Category>Average (acres) (1)	Members (2)	Non-Members (3)
Owned Land	2.55	3.72
Operational Land	2.71	3.92

Source: Primary data.

Thirty per cent farmer members owned buffaloes, as many as 73 per cent goats, and more than 60 per cent cow and/or bullocks each with goats accounting for 58 per cent of the total livestock followed by cows and oxen. On an average, each household has two cows or bullocks and six goats (Table 4). The non-member farmers owned less of livestock in total and more of goats which was 56 per cent of the total livestock followed by bullocks at 20 per cent, cows 14 per cent, and buffaloes at only 9 per cent. 49 per cent of the farmers had goats with average of 5 goats per household and 45 per cent, 35 per cent and 20 per cent each had two bullocks, cows or buffaloes (Table 4). Well was reported to be the source of irrigation by 47 per cent of the member farmers and 42 per cent non-members were rainfed farmers compared with only 20 per cent of member farmers being so. Only 3 per cent had tube wells. 44 per cent received information of agricultural activities from friends and neighbours with only 7 per cent accessing it from the PC.

TABLE 4: DISTRIBUTION OF WOMEN PC MEMBERS AND NON-MEMBERS BY LIVESTOCK OWNED

Category> Parameter> Type of livestock (1)	Members					Non-Members				
	Farmers (2)	Per cent farmers (3)	Animals (4)	Per cent animals (5)	Average (6)	Farmers (7)	Per cent farmers (8)	Animals (9)	Per cent animals (10)	Average (11)
Buffalo	12	29.27	15	5.02	1.25	9	20.00	19	9.50	2.11
Cow	26	63.41	61	20.40	2.35	16	35.56	28	14.00	1.75
Goat	30	73.17	175	58.53	5.83	22	48.89	112	56.00	5.09
Oxen	25	60.98	48	16.05	1.92	20	44.44	41	20.50	2.05
Total	41	100	299	100		45	100	200	100	

Source: Primary data.

The major *kharif* crops grown by a significant part of member farmers included maize, soybean, pulses and cotton accounting for 33 per cent, 19 per cent, 13 per cent and 11 per cent of the cropped area respectively. In the rabi season, major crops grown included wheat and pulses which accounted for 50 per cent and 28 per cent of the cropped area. Overall, maize and wheat crops accounted for 20 per cent of the gross cropped area each followed by pulses at 19 per cent, soybean at 11 per cent and cotton at 6 per cent. The cropping intensity of these farmers was 1.86. On the other

hand, 42 per cent of the *kharif* area of non-members was under maize, 20 per cent under soybean and 25 per cent under cotton. Similarly, in *rabi* season wheat had 22 per cent area and wheat and gram together another 28 per cent, with another 22 per cent being under gram. Thus, maize, soybean, cotton and gram were the crops which accounted more than 10 per cent of the gross cropped area. Their average cropping intensity was 2.0. Fifty-four per cent members bought seeds from PC while 58 per cent non-members bought it from dealers and majority also bought chemical fertilisers (including 20 per cent from Primary Agricultural Credit Societies - PACS) and pesticides from PCs among member and mostly dealers among non-members. Bio inputs were not bought by 83-100 per cent of members and 93 per cent of non-members with only 15 per cent members buying biofertilisers from PCs and 3 per cent from PACS.

On the output side also, there was movement from good to very good in majority of the cases especially on market availability. The number of members selling to the PCs had almost tripled over the three years in gram, doubled in the case of maize and wheat, and produce sold through PC increased substantially in gram, maize and wheat. There was a consequently a large decline in the produce going through the direct wholesale and the APMC channel (Table 5). There was no effect of the presence of PC on the non-member farmers in terms of the sale of their produce or the crops grown. Only 39 per cent of the all-women PC members had received share certificates and 87 per cent also were members of SHGs with some being members of other PCs. Agricultural information obtained from PC accounted for about 48 per cent and from a combination of friends and PCs in 20 per cent and only friends in another 22 per cent cases. Interestingly, a majority of the members (53 per cent) knew that PC belonged to farmers, the others seeing it as employee owned, promoting agency or government owned. In case of RRPPC, 88 per cent knew that PC was owned by the farmers, and they had become members due to the influence of promoters and friends. Among non-members, 45 per cent did not know about the PC and 66 per cent did not know who owned it with others reporting promoting agency or the farmers as the owners of the same. About 60 per cent of them had not received any information about the PC and the other source for 21 per cent of the farmers was the meetings of the PC and in some cases promoters (13 per cent). Only 13 per cent of them had aspiration to become a member of the PC as they had some awareness about the activities of the PC.

Ninety per cent of the all-women PC members had no dislike about the services being offered by the PC and 20 per cent even reported the PC helping them in availing of government schemes and subsidies and in some cases (10 per cent), it was mainly for PC members. 71 per cent reported meeting frequency to be monthly, 17 per cent annual and 10 per cent quarterly. 58 per cent participated in all the meetings and 20 per cent sometimes and another 20 per cent had never participated in any meeting.

TABLE 5: CROP AND CHANNEL WISE DISTRIBUTION OF ALL-WOMEN PC MEMBER PRODUCE SALES

Channel			All						Wholesale					
Parameter>	Farmers			Produce			Farmers			Produce				
	Crop	Before	After	Per cent difference	Before	After	Per cent difference	Before	After	Per cent difference	Before	After	Per cent difference	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)		
Cotton	9	9		59.25	62	4.6	8	9	12.50	50.25	62	23.4		
Gram	12	12		51.2	51.2		11	9	-18.18	49.7	35.7	-28.17		
Maize	15	19	26.67	345	412	19.4	9	6	-33.33	187	133	-28.9		
Red Tuar	2	2		6	6									
Soyabean	13	13		249	247	-0.8	6	6		130	116	-10.8		
Wheat	13	14	7.69	269.5	299.5	11.1	7	4	-42.86	87	72	-17.2		

  

Channel			PC						APMC						
Parameter>	Farmers			Produce			Farmers			Produce					
	Crop	Before	After	Per cent difference	Before	After	Per cent difference	Before	After	Per cent difference	Before	After	Per cent difference		
(1)	(2)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)		
Cotton								1		-100	9		-100.00		
Gram	1	3	200	1.5	15.5	933.33									
Maize	6	12	100	158	239	51.27		1				40			
Red Tuar	2	2		6	6										
Soyabean	6	6		113	126	11.50	1	1			6	5	-16.7		
Wheat	3	7	133.3	26.5	71.5	169.8	3	3			156	156			

Source: Primary data.

All of them wanted to continue as members and also wanted others to join the PC. The only crop in which the area had expanded after the PC intervention was cotton as most of them were focused on cotton. The price realisation in cotton had also gone up by 21 per cent after the PC intervention as was the case in fruits and goat meat. There was also reduced cost of transportation in the case of goats, maize, and pulses. However, the payment time had gone up substantially in cotton and pulses. The farmer members also appreciated the improvement in input quality which move from poor and good to very good and excellent after the intervention of PC. Similarly, the cost as well as availability and accessibility besides quantity of inputs had also improved in a similar manner.

## V

### CONCLUSIONS

The above analysis of the all-women PCs shows that though all of them except one (RRPPC) had small size of shareholders and equity capital (and had not mobilised the authorised capital fully expect in two cases) but all of them expect the two promoted by ASA were doing well in terms of not being in losses and with reasonable turnover over the years. The best case was that of Ram Rahim Pragati - an all women PC - which had very large capital base and large revenue running into tens of million rupees annually beside being in profit all the time and creating some assets including a warehouse with imported technology and processing facilities. Though the PCs were expanding and undertaking more activities, the financial performance still left much to be desired in most cases.

The members, on an average, had smaller land holdings than their non-member counterparts but they had more livestock than their non-member counterparts who had more of goats. So far as member impact was concerned, most of them had intervened on the input supply and farm extension front introducing new crops and technologies including seeds as they had been working with SHGs for long time even before the PCs were established in most cases. However, on the output side, only a few of them were able to make significant impact setting up linkages with corporates or creating their own marketing facilities like warehouses and engaging in public procurement of some crops where relevant. The importance of output market linkage and high value produce focus which can lead to higher turnover as well as higher member engagement in the PC business also needs to be recognised.

Since all-women PCs shows a greater promise, the policy incentive of providing matching equity grant could be higher for women only PCs as the women member are more capital constrained than their male counterparts due to lack of ownership and control over resources. This can help promote inclusion and deal with double disadvantage (gender and resource marginalisation) women producers suffer. The best practices of governance and management in all-women PCs could also be identified and replicated in other mixed member PCs. Since there is limit to expansion of all-women PCs due to the asset control being with men and many other constraints of socio-cultural type, it is also important to improve the ratio of women members in mixed member PC by giving joint shareholding to couples rather than only male members or two different members of the family jointly and to incentivise such membership to bring gender awareness and gender sensitive orientation and functioning of the PCs for them to make even a larger and much desired livelihood and developmental impact.

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