
Rapporteur's Report on Role of Agri-Business Entrepreneurship, Innovation and Value Chains/Networks in Farmer Income Improvement: Models, Policies and Challenges

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I

INTRODUCTION

Agribusiness entrepreneurial activities strengthen the value-based product delivery to the customers as well as ensure the improvement in the income of the farmers. There are and can be various market-based business models with respect to agribusiness in terms of entrepreneurship and innovation in the context of global and lower level value chain participation. There is also a role for policy interventions and incentives for entrepreneurial and innovative mechanisms for making farming and other allied livelihoods more remunerative and sustainable. However, there are many challenges that various value chain players face which range from social (including gender) barriers, economic barriers, ineffective regulations, lack of access to finance and information, and their own capacity to cope with risks and to seize the opportunities.

There are issues of scale, viability and sustainability which most agribusiness starts ups and producer agencies face while creating new or participating in the existing value chains and networks. The papers under this theme were aimed to help understand the new and innovative market-based business models in various stages of the agribusiness value chains like farm inputs and services, farm production, aggregation, storage or processing, distribution and marketing especially those focused on small farmer market linkage or market interface, including bio-inputs and more sustainable agricultural produce handling.

Papers were invited on the following dimensions:

- Role and evidence of entrepreneurship in agribusiness sector in terms of helping farmer incomes and employment
- Business models and their rationale for intervention in the farm and allied sector and performance and issues
- Small farmer and marginalised sector livelihoods interface of the new initiatives and their effectiveness in bringing an impact.

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- Role of various policies and assessment of their effectiveness in promoting and supporting inclusive agribusiness entrepreneurship and value chains at national, state and local levels.

The theme received 17 submissions of which only six were found relevant to the theme. Out of these, two were accepted as full papers and four in summary form, for presentation at the Conference. This report gives a summary of the accepted papers in a thematic manner and brings out issue for research and discussion among the participants at the conference.

II

NEW OPPORTUNITIES IN AGRIBUSINESS

Organic farming has emerged as a new farming and agribusiness practice along with global and national standards for it since the last two decades in India and much earlier in the international market to address problems of sustainability. However, case studies have shown many challenges at various levels of such value chains (Singh, 2009). Sreemoyee Das *et al.*, examined agribusiness opportunities in organic agriculture in South 24 Parganas district in West Bengal with the help of a sample survey of 80 farm households from three selected villages in 2020. Ninety per cent farmers were following both organic and inorganic cultivation practices by allocating varying amount of land under organic or inorganic paddy and vegetable crops. They analyse the current status and economics of organic cultivation; production and marketing constraints of organic produce; factors affecting adoption of organic agriculture; and consumer behaviour towards organic commodities. The results indicated that the average organic farming experience of the farmers in the study area was six years and average holding only 0.58 ha with 50 per cent each under organic paddy and vegetables. Cost of cultivation of organic paddy and vegetables was lower by ₹4280 per ha and ₹11910 per ha respectively, but yields of organic crops were also lower by 1.37 tonne per ha and 3.12 tonne per ha for paddy and vegetables, respectively, as compared to inorganic practice based production. Organic produce marketable surplus was lower, even though own consumption was also lower, due to lower yields in organic process. Still, net return was positive for both paddy and vegetable grown organically.

However, farmers producing organic vegetable were not gaining profit as compared to inorganic farmers, mainly due to absence of specialised market/linkages for organic produce which led to lack of premium price for organic commodities. Only 2 per cent of organic farmers had marketing linkage with the specialised organic market and rest (98 per cent) had to depend on the open market wherein 69 per cent of paddy and 89 per cent of vegetable producers sold at local market of whom 35 per cent and 42 per cent sold in wholesale market and only 58 per cent and 13 per cent each respectively sold at farm gate. Almost all of them faced lack of separate organic

produce markets, poor price, poor government support, and lack of information for market trends and prices in that order. Promotion of high value paddy such as aromatic and scented rice variety increased the interest of farmers in organic farming. The price premium was also available for such quality rice produced by the farmers.

On the other hand, consumer survey indicated there was a good potential for a range of organic commodities including cereals, fruits, vegetables, spices and pulses. Towards harnessing the potential of agribusiness opportunities of organic farming in the state, the paper suggests creation of value chains connecting farmers to the final consumers with the help of institutional linkages. Besides, educating farmers about the consumer preference of the specific organic commodities, and positioning of product to the '*niche*' market through creation of separate value chains was needed.

Lakshmi Dhar Hatai examined the costs, returns and determinants of oyster mushroom production in West Garo Hills of Meghalaya with a sample of 60 oyster mushroom growers. The selected mushroom growers were classified into three categories on the basis of their number of polybag beds spawned. The study revealed that the total cost of production showed a decreasing trend with increase in the size of beds spawned due to economies of scale. Total cost was estimated to be Rs.467 per 5 units of polybag beds spawned. The operational cost accounted for 83.94 per cent and fixed cost 16.05 per cent of the total cost. Both the returns over variable cost as well as net returns from mushroom cultivation were directly related to the farm size. Thus, larger farmers appeared to be using the resources more efficiently as compared to smaller farms. The returns were ₹58/kg, ₹76/kg and ₹120/kg for small, medium and large mushroom farms respectively. In general, one rupee invested in mushroom growing yielded about ₹1.55. The input-output ratio was the highest on large mushroom farms (1.82), followed by medium (1.48) and small (1.35) farms.

The coefficients of expenditure on plant protection chemicals and labour for picking and packing operations were positive and significant showing that with increase in expenditure on these variables by one per cent, the resultant value productivity of mushroom would increase by 0.19 per cent and 0.17 per cent, respectively. It showed that efficient use of plant protection chemicals and labour can further enhance the value productivity of mushroom in a significant way. In order for making a win-win proposition as a promising mushroom enterprise, the paper suggested that efforts should be made towards making the mushroom growers aware of appropriate techniques and application of modern inputs for better production of oyster mushroom. Single window approach for input delivery system should be encouraged. Mushroom enterprise in Garo Hills region of Meghalaya was, thus, found to be economically feasible which could be further made more attractive by reducing the costs of production through intervention of modern techniques, value addition at producer level and necessary steps for efficient marketing.

III

PROMOTION AND ROLE OF AGRIBUSINESS ENTREPRENEURSHIP

Deepak Shah and Sangeetha Shroff assessed the effectiveness of agri-business entrepreneurs in enhancing farmer income in Maharashtra. These enterprises were Agri Clinics (ACs) and Agri-Business Centres (ABCs) promoted by a scheme of the Government of India since the early 2000s and examined the factors constraining services to farmers. The study conducted in Solapur and Ahmednagar districts of Maharashtra covered five ACs or ABCs started by trainees of the two ITIs in each of the two districts and 10 of their served farmers each. Thus, a sample of 50 beneficiary member farmers was selected from each of the districts. As control group, 5 non-beneficiary member farmers were selected from each of the five selected agri-ventures totaling 25 non-beneficiary farmers from each district.

In terms of categories, 20 were marginal farmers, 37 small farmers, 29 medium farmers and 14 were large farmers. The 50 non-beneficiary farmers comprised 15 marginal farmers, 13 small farmers, 15 medium farmers and 7 large farmers. The reference period for survey was the agricultural year 2015-16. The study showed that the agri-ventures established by agri-entrepreneurs had a positive impact in Maharashtra since the beneficiaries of agri-ventures generated substantially high income from crop enterprises as against that by their non-beneficiary counterparts. The benefits rendered by agri-ventures to their member farmers in terms of access to farm technology, information on cropping practices, advice on plant protection measures and even on prices prevailing in various markets helped them to derive higher income from crop enterprises as against that by non-members. The agri-ventures not only extended various inputs, advice and service facilities but also provided various remedial measures to farmers, especially with respect to low germination of seeds, crop damages, and created awareness about indiscriminate use of fertilisers. Further, the input supply ventures provided information to farmers on new ideas developed by agricultural research stations, improved crop varieties, improved water management and plant diseases. These extension services helped the beneficiaries to increase their productivity as well as income. However, as for the functioning of agribusiness entrepreneurs, one of the suggestions of the study is to enhance their outreach which would consequently provide access to their services to more farmers and benefit them in terms of rise in farm productivity and income.

A similar paper by K. Choudhary *et al.*, examined the financial feasibility of investments in AC & ABC scheme projects in Gujarat based on a survey of 100 established agripreneurs under the scheme during 2018 to 2020. It was found that majority of the agripreneurs established agri-ventures by their own investment which ranged from ₹5-10 lakh each. Majority of the agri-ventures like nursery, dairy farming, custom hiring center and seed processing and marketing were found profitable, economically feasible and financially sound. It showed that these agri-ventures provided good income opportunities at various levels of investment.

IV

PUBLIC-PRIVATE PARTNERSHIPS

K. Mavi and Anurag Chaudhary's paper explored the role of public-private partnership for foodgrain storage at the conceptual and policy levels. The warehouses or godowns lack the required conditions like proper temperature and moisture. This seriously harms the standard of grains, resulting in damage and wastage of the stocks. The dearth of suitable safe and scientific storage practices leads to avoidable damage to foodgrains in the central pools maintained by the Government agencies in Punjab and Haryana. The absence of proper Cover and Plinth storage facilities during the procurement seasons leads to stocks being simply deposited into the open spaces with no protective measures to preserve these grains. This results in damage to stocks because of the seepage of water from the ground due to the lack of proper plinth and the incidence of floods and rains. Due to inadequate infrastructure, the government is hiring private players to set up storage structures but they are proving to be very costly. Farmer interactions, though not stated as to how many were interviewed, revealed that lack of tractor availability, no parking space, and long waiting hours besides weather issues led to farmers not using private buyers for selling their produce at such locations. The authors recommended that silos which were being rented by the government agencies from private players could be set up by the government in the marketing yards in each district.

V

EXPORT MARKET POTENTIAL ASSESSMENT

Shilpa and Ajit Sharma's paper studied the Indian grape export market and assessed export competitiveness of Indian grapes in the export market destinations in terms of net terms of trade, revealed comparative advantage and Markov chain analysis for export data from 1999-2019. The estimation of net terms of trade and revealed comparative advantage showed that India had comparative advantage in export of table grapes. Further, Germany was found to be the most loyal buyer for Indian grapes as it retained 60 per cent of its previous year export. The authors recommended policy and practice focus on market demand and specifications of stable markets for Indian grapes namely; Germany and Bangladesh.

VI

RESEARCH AND POLICY ISSUES FOR DISCUSSION

The major research questions regarding innovations and business models include: How do various innovations like product, process, and organisational, especially institutional and business model innovations take place and what makes them scale

up, inclusive and sustainable? The role of institutional innovations is important to understand and analyse as only dynamic and innovative organisations and institutions can grow and sustain in a changing context. These studies of innovations in value chains in India are more of an exception (Neilson and Pritchard, 2009; Singh, 2017) which need to be multiplied across different value chain settings.

Contract farming, group contracts, and franchising are institutional innovations in the market co-ordination mechanism that have not been given due attention in India until recently. For example, four sector co-operation plan in Thailand for leveraging contract farming for agricultural development (Singh, 2005) can be considered as a case of public-private partnership. Pepsi following five different models across different states of India for procuring the same crop under contract farming arrangement due to institutional variety and diversity and differences should be instructive enough to examine the mechanism and policy around it.

On the entrepreneurship front, why not examine entrepreneurial failures which can offer great lessons in how not to undertake and promote entrepreneurship individually or collectively? Further, the movement of farming communities and households towards agribusiness entrepreneurship needs to be understood more clearly as that can help frame policies and programs to target those with potential. There are only a few studies of such trends and their explanations (Singh, 2013). Studies of entrepreneurship in specific agro-business sectors like primary and secondary food and fibre processing also need to be taken up from a value chain perspective to examine what works and what constraints such entrepreneurs face in scaling up or diversification.

The agri start-ups are the current policy and practice focus where case studies of such enterprises and entrepreneurs can help understand the process and the business models better. Kanitkar and Prasad (2019) have attempted such a collection of case studies as editors which highlights some of the challenges and coping strategies, but such documentation analysis is not very common as yet. The agri start-up cases and initiatives - whether individual or collective - need to be understood from multiple angles of economic, social and environmental perspectives for their role in sustainable agriculture and agribusiness.

So far as innovations and business models of producer organisations like co-operatives and producer companies are concerned, major research and practice questions include: Is there a design aspect of these institutions which matters and should be provided for adequately in an intervention? Is there any specificity about the crop or enterprise or activity which matters e.g. commodities or high value crops? What conditions are necessary for business and economic viability of such organisations? It has been also suggested that farmer organisations with higher levels of skills and capabilities are more successful in working with modern markets (Hellin *et al.*, 2009) as scale and scope become important to do viable business. Does scale really matter in all situations? What kind of policy treatment do the PCs need to grow as vibrant producer entities and to make an impact on the livelihoods of small

producers? Which model of promotion is more robust and viable? Are there best governance and management practices which matter for performance and are they replicable?

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