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Research Note

Linking Small Farmers to Emerging Agricultural Marketing Systems in India—The Case Study of a Fresh Food Retail Chain in Punjab[§]

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Abstract

Linking primary producers with global and national markets through fresh food retail chains is seen as one of the emerging agricultural marketing practices in India to improve small producer's livelihoods. The fresh food retail chains are investing from farm to fork to buy fruits and vegetables directly from farmers and sell them to retail buyers. However, fresh food retail chains are largely found working with only large farmers and exclude small farmers for various reasons. In this context, this paper has examined the operations of a fresh food retail chain named 'Easy Day' and its interface with farmers in Punjab. The study has revealed that fresh food retail chain primarily works with small intensive vegetable cultivators. It has been found that the retail chain farmers could realize higher profits compared to non-RC (traditional market supplying) farmers mainly because of higher yield and higher price realization in the traditional market because of better quality produce. The retail chain procures only a part of the farmers' produce and the remaining produce has to be sold in the local markets. The retail chain has not made a genuine effort to provide agri-inputs and extension services to the farmers. The study has proposed a number of strategies to further facilitate the marketing of produce of small farmers.

Key words: Retail chain, small farmers, agricultural marketing system

JEL Classification: Q13, Q10

Introduction

Linking small primary producers with markets has been identified as one of the major issues in both policy and practice for improving livelihoods of millions of poor in the developing countries like India. Recently, there have been many corporate attempts in our country at linking farmers with markets, including those by fresh food retail chains. Retailing presently contributes about 10 per cent to India's gross domestic product and 6-7 per cent of employment. But, only 4 per cent of retail

outlets are bigger than 500 sq ft area and most of them are family-owned in our country. Investments in retailing are constrained since only 51 per cent foreign direct investment is allowed in a single brand retailing. However, the share of organized retailing is likely to go up from the current level of 3 per cent to approximately 15-20 per cent in the next few years with expected investments of more than \$ 25 billion (excluding real estate investment). Of the proposed investment, 60-65 per cent will go towards setting up supply chain for food and groceries (Kalhan, 2007). Food retail chains such as 'Reliance Fresh' of Reliance Retail, 'More' of Aditya Birla and 'Namdhari Fresh' of Namdhari Seed have brought many changes in the supply chain

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management and logistics through the use of quasi-formal and formal contracts to ensure timely delivery of products with desired quality attributes, instant demand and supply and, more commercial nature of production and marketing at the farmer's level.

In India, several exploratory studies have revealed that though cost of production is higher across farmers supplying to retail chains such as Mother Dairy Fruit and Vegetable Ltd. (MDFVL) (Joseph *et al.*, 2008; Alam and Verma, 2007), transaction costs are lower in retail chains such as Spencer's and Namdhari Fresh in Karnataka, resulting into higher profits for farmers supplying to retail chain compared to those supplying to the traditional markets. The prices paid to the producers are also higher in retail chain channels compared to those in *mandi* channels (Mangala and Chengappa, 2008; Dhananjaya and Rao, 2009). It has been found that farmers supplying spinach to MDFVL in Haryana and cauliflower to a supermarket in Bangalore could realize 8 per cent and 12 per cent higher prices, respectively compared to the *mandi*-supplying farmers (Birthal *et al.*, 2005; Joseph *et al.*, 2008).

A significant observation has been that retail chains work mainly with large farmers. The operational landholding size of farmers supplying to retail chains has been found 4.42 acres (through consolidator) and 9.38 acres (directly at collection centre) in the case of a supermarket in Bangalore compared to that of supplying to commission agents (4.39 acres), wholesalers (2.31 acres) and *Shandies*/local villagers (3.75 acres). Similarly, the landholding size of farmers supplying to MDFVL in Uttarakhand was 3.25 acres compared to 2.8 acres in non-retail channel suppliers and 6 acres in the case of Spencer's compared to just 2 acres in non-retail channel (Joseph *et al.*, 2008; Mangala and Chengappa, 2008; Alam and Verma, 2007). In the initial stages of establishment of Spencer's in Karnataka, rejection rate was higher but over time, it has reduced to 8 per cent (Mangala and Chengappa, 2008).

In this context, the paper has examined the procurement channels and practices of Bharti's 'Easy Day' retail chain in Punjab, and has compared the profile and performance of the retail chain supplying farmers with traditional market supplying farmers. It has also outlined the possible policy and regulatory provisions to protect and promote the livelihoods of

primary producers in the presence of retail chains in Punjab.

Methodology

Before starting data collection, the functioning details of the selected retail chain (hereafter, RC), namely 'Easy Day' were collected. The primary data were collected from this RC in the Sirhind town in Punjab, and contact farmers supplying vegetables to the RC. The retailing and processing operations and supply chain management were the subject of discussions with the Easy Day management; and the procurement effectiveness and problems with the farmers. The RC farmers were selected from the list provided by the RC, while the non-RC farmers selling to traditional market were identified with the help of village leaders/key informants. A sample of 100 farmers, 50 each supplying to the RC and to the traditional market (non-RC) was taken from the Malerkotla tehsil in Sangrur district of Punjab for two major crops, viz. cauliflower and okra (25 farmers for each vegetable) as these were the major crops being procured by the RC in terms of volumes and number of supplying farmers.

The Retail Chain 'Easy Day' and its Functioning

Bharti Retail, the retail arm of Bharti Enterprises, opened the first front-end convenience 'Easy Day' store in Ludhiana in April, 2008. Since then, Bharti Retail has opened 43 Easy Day convenience stores and two hypermarket stores called 'Easy Day Market' in Punjab, one each in Ludhiana and Jalandhar. The front-end operations are managed by Bharti Retail while back-end operations are handled by the Bharti-Wal Mart. Each store usually carries 40-45 stock keeping units in fruits and vegetables (F&Vs). About 10 per cent of the store space is usually allocated to F&Vs. Ludhiana and Jalandhar have the maximum number of retail stores in Punjab, with 6 and 5 stores, respectively.

The processing and distribution of F&Vs is done through the Agricultural Corporative Centre (hereafter, ACC) located in Sirhind. The size of the ACC is around 40,000 sq ft. The daily arrival of F&Vs at ACC is around 15 tonnes. Of it, 4-5 tonnes is procured directly from farmers. Potato and onion are procured from Agra and Nasik *mandis*, respectively. Fruits comprise 20-30 per cent of the total procurement and are mainly procured from the Azadpur *mandi* in Delhi. Some of the

Table 1. Farm category-wise distribution of retail chain supplying (RC) and non-retail chain supplying (non-RC) farmers

Farmers linkage	Marginal farms (≤ 2.5 acres)	Small farms (>2.5 to ≤5 acres)	Semi-medium farms (>5 to ≤10 acres)	Medium farms (>10 to ≤25 acres)	Large farms (>25 acres)	All farms
RC farmers	12 (24)	24 (48)	8 (16)	6 (12)	-	50 (100)
Non-RC farmers	8 (16)	12 (24)	16 (32)	10 (20)	4 (8)	50 (100)

vegetables like capsicum, French bean, *arbi* and *palak* are bought from Ludhiana and Chandigarh *mandis*.

All the stores are supplied F&Vs through the ACC only. The average quantity supplied once a day to one store is around one quintal. ACC conducts checking on weight and quality and also conducts another grading if needed, and does store-wise allocation. The procurement of F&Vs directly from the farmers is done through collection centre (CC) located at Jamalpur near Malerkotla. The procurement by 'Easy Day' from the farmers is only through individual, oral and non-registered contacts. There is no written contract between the retail chain and the farmers. The price is paid in cash to the farmers on the basis of daily morning *mandi* price. Farmers are informed about the indent of each vegetable for a particular day by phone or personally. The retail chain picks up F&Vs from the fields of nearly 150 farmers and offers a premium of 7-10 per cent over the Malerkotla *mandi* price. Although Bharti Retail has value chain partnership with Bayer Crop Science and the farmers are provided training on producing good quality, healthy vegetables that meet the specifications set by Bharti Retail, most of the farmers have reported that the RC has not made a genuine effort to provide agri-inputs and extension services to the farmers.

The RC has specified quality norms for each vegetable. The RC procures only A and B grades of vegetables for their retail stores. It does not buy any C grade produce. Generally, 3-4 inch long okra is considered for A grade, 2-3 inch for B grade and below 2 inch for C grade. In okra, rejection rate has been found around 3 per cent. In cauliflower, the retail chain prefers white, compact, disease and insect free, medium to large-sized curds without brown spots and exposure to sun light. Generally, 500-700 g curd is classified in A grade, 200-300 g curd in B grade and less than 200 g curd in C grade. The cauliflower supplied to retail chain is packed in crates which are provided free of cost by it. The rejection rate in cauliflower at CC has been found around 4-5 per cent. The leftover and rejected

produce is sold in the local markets by the farmers and is not the responsibility of the retail chain.

Farmer-Retail Chain Interface

The farm category-wise analysis revealed that about 72 per cent of the farmers supplying vegetables to the retail chain, 'Easy Day' were small and marginal compared to only 40 per cent in the case of non-RC farmers (Table 1).

The average size of operational holding was lower in the case of this RC (6.25 acres) than non-RC farmers (8.53 acres). However, leased-in practice as a proportion of operated land was higher among RC farmers (17%) than non-RC farmers (10%). On the other hand, leased-out land as proportion of owned land was higher in the case of non-RC farmers (24.3 %) than RC farmers (8.5%). Thus, with leased-in and leased-out practices, the average size of operational holding of RC farmers increased to 6.25 acres from 5.68 acres, while that of non-RC farmers decreased to 9.9 acres from 10.15 acres. The ownership of farm machinery was higher among non-RC farmers as compared to RC farmers. The ownership of machinery across both RC and non-RC categories increased with increase in landholding size. The family size of RC farmers was bigger compared to that of non-RC farmers. The proportion of family members working on farm in each farm category was higher among RC farmers (78%) than non-RC farmers (59%). About 84-86 per cent of farmers across both RC and non-RC categories owned milch cattle; however, the income from dairying was higher among non-RC farmers (₹ 2959/month) than RC farmers (₹ 1965/month). Similarly, off-farm income was also higher among non-RC farmers (₹ 2451/month) as compared to RC farmers (₹ 1759/month). The proportion of literates was about 36 per cent in RC farmers compared to 48 per cent across non-RC farmers. Further, decision-makers on farming were younger among non-RC than RC farmers. Thus, it could be concluded that this retail chain was working relatively with small growers who

Table 2. Farm category-wise distribution of RC and non-RC farmers across cropping pattern and cropping intensity in Sangrur district of Punjab

(in per cent)

Farm category	RC farmers					Non-RC farmers				
	Cropping pattern				Cropping intensity	Cropping pattern				Cropping intensity
	Cauli-flower	Okra	GCA under contact vegetables	GCA under non-contact crops		Cauli-flower	Okra	GCA under contact vegetables	GCA under non-contact crops	
Marginal	25.8	17.3	80.0	20.0	218.6	21.7	10.1	68.2	31.8	212.3
Small	20.9	16.3	75.3	24.7	212.9	16.7	15.3	65.0	35.0	204.8
Semi-medium	16.0	11.6	74.6	25.4	193.3	9.9	8.3	48.0	52.0	180.6
Medium	16.3	8.4	66.3	33.7	192.4	8.2	5.8	32.6	67.4	184.8
Large	-	-	-	-	-	6.8	2.5	20.4	79.6	183.8
All farms	19.1	13.3	73.2	26.8	203.3	9.6	6.7	38.0	62.0	185.4

were resource-poor in terms of farm machinery and cattle ownership, were less educated, had lower off-farm income and larger family size as compared to the non-RC farmers.

The proportion of gross cropped area (GCA) under vegetables in each farmer category was higher among RC farmers than non-RC farmers. The share of major vegetables procured, viz. cauliflower and okra in total GCA was also higher across RC farmers than non-RC farmers. The proportionate GCA under vegetables declined with increase in average size of operational holding. Non-RC farmers were dominantly growing non-contact traditional crops like wheat, paddy and fodder as compared to the RC farmers. The cropping intensity was also found to be the higher among RC farmers than non-RC farmers. Thus, RC farmers were the intensive cultivators of vegetables as compared to non-RC farmers (Table 2).

Cauliflower and Okra Production and Procurement

The cost of production of both cauliflower and okra, the major vegetables procured by the retail chain, was found to be higher on RC farmers than non-RC farmers. Across both crops, RC procured only about 20 per cent of A and B grade produce. The average yield and production costs in cauliflower and okra were higher among RC than non-RC farmers. The RC farmers did not incur any marketing costs for A and B grades sold to RC as it picked the produce from the farm itself.

However, marketing cost for the remaining produce sold in the market was higher among RC farmers as compared to non-RC farmers for the total produce. The net returns turned out to be higher for RC than non-RC farmers. Thus, the returns were primarily higher due to the higher yield and higher price realization in traditional market by the RC farmers than that by non-RC farmers (Table 3).

Regarding the major problems in the retail chain linkage, more than 86 per cent farmers reported the low volume of procurement by RC as the major problem, and about 60 per cent reported that prices paid by the RC for A and B grade produce were lower compared to the quality aspect. Time saving, lower transportation costs and less of the bargaining in the local market were reported as the major benefits of linking with retail chains.

Conclusions

The study has revealed that Bharti retail chain has been working largely with less-resourceful small vegetable cultivators who have higher productivity in vegetables and higher GCA under vegetables as compared to the non-RC farmers. The retail chain has been found to pay a slightly higher price for A and B grade produce. The RC has instituted quality consciousness, and package of practices for certain vegetables with the help of value chain partnership with Bayer Crop Science. Farmers have reported the retail chain to be better on transaction cost as RC picks the

Table 3. Crop-wise per acre costs and returns of cauliflower and okra among RC and non-RC farmers in Punjab

Particulars	Cauliflower				Okra			
	RC farmers			Non-RC farmers	RC farmers			Non-RC farmers
	A grade	B grade	Rest		A grade	B grade	Rest	
Yield (quintal)	→ 90.0 ←			85.0	→ 40.0 ←			37.6
Sold (%)	12	8	80	100	10	10	80	100
Quantity sold (quintal)	10.8	7.2	72.0	85.0	4.0	4.0	32.0	37.6
Price (₹/kg)	8.0	7.0	7.6	7.4	14.3	12.6	11.0	10.7
Gross returns (₹/acre)	8640	5040	54720	62900	5720	5040	35200	40232
Production cost (₹/acre)	35200	32550	25225	23535				
Marketing cost (₹/acre)	-	-	2160	2125	-	-	1400	1128
Net returns (₹/acre)	→ 31040 ←			28225	→ 19335 ←			15569
Net returns (₹/kg)	→ 3.45 ←			3.32	→ 4.83 ←			4.14

produce from the farmers' fields which saves farmer's time and cost in selling the produce.

The retail chain has been observed to procure only a limited proportion of the grower's crop without any firm commitment and, more so, on a day-to-day basis. It has made no genuine provision for any agri-input or other services and does not have any formal contract arrangements with the farmers. The produce not accepted by the RC has to be disposed off by the farmers elsewhere. Thus, local markets act as a major market for the producers for selling the vegetables. The RC farmers have been found to realize higher profits compared to non-RC farmers mainly because of higher yield and higher price realization in the traditional market because of comparatively better quality. Hence, infrastructure of these local markets should be improved to reduce the post-harvest losses and markets for F&Vs should be regulated to reduce exploitation of these farmers. Since retail chains use these markets to determine their procurement price, a systematic and quality-based price mechanism should be evolved.

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