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Trade Induced Growth Impacts of Corporate Entry in the Food Sector: A Case Study of Fruits & Vegetables Sub sector in the Punjab State of India

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Abstract

Study indicated that the entry of corporate sector in the Punjab State is both in retail and wholesale trade of the fruits & vegetables sub sector. At the organized retail stores these companies have provided its consumers a single window service for the various product assortments while within the fruits & vegetables category (have minuscule scales) widened the product selection choices. Corporate entry in wholesale trade has linked several product specific production belts with medium to high income consumers through various market segments such as organized stores, traditional wholesale/retail markets and the food service. These companies have also provided product variety through imports while opportunities for crop diversification towards higher value crops through exports. In the fruits & vegetables sub sector companies engaged in the retail trade have adopted for short to medium while those in wholesale trade for medium to long-term more sustainable approaches for the sourcing of supplies to build up competitive advantages. This has started generating growth in the Punjab state that has manifested in terms of higher incomes for as the partner farmers and creation of employment for the skilled, semi-skilled and unskilled manpower throughout the supply chain. As the market sizes of these companies expand and diversify in the domestic/global markets it shall enhance growth thereby magnify its impacts.

Key words: Fruits & vegetables trade, corporate groups, growth

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1. Introduction

Amongst the various factors, ongoing increases in income levels and urbanization contribute to an increase as well as structural changes in food demand. Thus, food consumption patterns have been shifting both in developed and developing countries and the fruits & vegetables category has been emerging important (Goel 2010). This necessitates reallocation of scarce productive resources along these demand patterns at the farm level, creation of requisite infrastructure for storage and transportation and institutions through directed policy changes. Further, establishment of the WTO has opened up cross border markets whereby increased trade opportunities have provided an incentive for the development of integrated supply chains for the new product lines (Goel 2011). Fruits & vegetables sub sector being labour intensive has thrown immense avenues for the developing countries to exploit these. However, integration of this sub sector from farm to the global markets necessitates massive investments for R & D, creation of requisite physical and institutional infrastructure and strict adherences to quality controls to meet the growing market challenges (Ibid). Several international development agencies have also proposed an increased role for private sector participation in areas traditionally dominated by government and nongovernmental organizations to address the developmental aspirations (UNDP 2004). This is because the private sector can introduce commercial business principles and market development approaches to rural development strategies (Arora and Romijn 2009). Studies also indicate that moving towards private marketing networks benefits farmers, for example, farm incomes increase about 30% - 40% by growing fruits & vegetables rather than wheat and rice (IFPRI 2008, World Bank 2007).

India, a developing country, is amongst the world's leading producers of fruits & vegetables and its diverse agro-climatic conditions are conducive to the growth of various horticultural crops. However, country is among the most inefficient as an estimated 25% - 40% of farm produce (about \$12 billion) rots every year (Dagar 2007). And, agricultural marketing being a state subject is governed by the respective state's APMC (Agricultural Products Marketing Committee) Acts. Country's growth kicked off during the 1990s with the liberalization of the economy when government introduced several economic reforms such as reduction in corporate taxes, abolition of price controls, etc. Thereafter, policy initiatives had also been taken for agricultural/horticultural development. These included the formulation of New Agricultural Policy during 2000 that envisaged private sector participation at farm level, investment in infrastructure to create a fair playing field for the private sector, setting up of National Horticulture Mission during 2005-06 and amendments in the Foreign Trade Policy (2004-09). Ministry of Agriculture also formulated a model APMC Act during 2003 to encourage private sector investment for direct procurement from farmers.

Such measures have provided an incentive for the several corporate houses to pave a way in the fruits & vegetables sub sector. Concomitantly, these have also started making huge

investments in infrastructure and the setting up of own farms for the development of integrated supply chains for several product lines in several potential areas in the country such as Maharashtra, Karnataka, Andhra Pradesh, etc. However, introduction of new crops particularly for exports necessitates forging alliances with the Agricultural Universities for R&D, farmers in different agro-climatic zones for maintaining a regular flow of the market supplies, importers/exporters and various service providers (Goel 2011). Besides, country's huge middle class of over 300 millions and retail sector with its share of about 10% of GDP has also thrown open opportunities to exploit the domestic retail/wholesale trade as well.

In the country rapid retail sector growth in the organized sub sector has been witnessed during the early 2000s with massive investments by several kinds of players. For example, corporate conglomerates such as Reliance, Aditya Birla, RPG, etc; companies that were non-food retailers such as Pantaloons; agribusiness forward-integrated companies such as Namdhari seeds and ITC; regional chains such as Big Apple in Delhi, Trinethra in Bangalore but bought by Aditya Birla, Apna Bazaar and Magna chains in Bangalore; and the global multinationals such as Wal-mart, Tesco and Metro that have come in 'cash & carry' chains either in joint ventures (JVs) such as Wal-mart with Bharti and Tesco with Tata group or in sole stance such as Metro. Among these, the corporate group has added thousands of stores spreading from Tier 1 to Tier 2 to Tier 3 cities and taken several store formats such as malls, specialty stores, discount stores/factory outlets, department stores, hyper marts/supermarkets, convenience stores. Among these, hypermarkets and supermarkets are the self service outlets, catering to shoppers' varied needs, located in/near the residential areas and contribute about 30% of all food & grocery sales. Several of these corporate groups have added the fruits & vegetable section to provide a one stop single window service to its target customers and draw them to stores for frequent visits. However, organized retailing has been subject to a plethora of laws and regulations at the central, state and local levels add to its fixed cost liabilities. In contrast, several corporate groups have positioned at wholesale trade either domestic/global or both, for example, Adani group, Mahindra & Mahindra, etc. There are still several groups that have set up separate companies for the wholesale and retail levels, for example, Reliance group. However, the nature and dimensions of such developments vary across regions and the product categories due to factors such as cultural diversity, agro-climatic conditions, farm sizes, state controls and scale of operations. So region specific studies are required to delineate such distinctive characteristics.

This study has been carried out for the Punjab state of India for the fruits & vegetables sub sector. Objectives of this study are to examine the nature and dimensions of corporate entry in this sub sector and its growth impacts.

2. Literature review

According to classical economists foreign trade promotes economic growth by improving optimal distribution of resources and productivity and enabling a country for an access to raw materials and equipments which it could not produce. New-growth school (Romer,

Lucas and Svensson (its representatives) advocated that international trade could promote economic growth through technology spillover and external stimulation because it provides broader market, frequent exchange of information and increases competition. As owners of advanced technologies would gradually make other countries learn these through foreign trade it will force each country to develop new technologies and products that could ensure long-term growth. New-trade theory proponent Haierpoman Paul Krugman believed that international trade promotes economic growth through economies of scale and improving the optimal allocation of resources between the materials and knowledge production sectors.

Several empirical studies have examined the relationship between trade and economic growth. Kwan and Kwok (1995) concluded that exports promote economic growth but it was marked by regional differences. Yaghmaian and Ghorashi (1995) found that employment and manufacturing sector output could promote exports and economic growth. Ghartey (1993) indicated that GDP promoted exports in USA, exports promoted growth in Taiwan while relationship was two-way for Japan. Jung and Marshall (1985) analyzed the relationship for thirty seven developing countries but found no causal relationship except for Israel. Chengxiang Shen (1999) found a two-way causal relationship between trade and economic growth but did not find empirical support for the long-term and stable relations between the two. With the development of new growth theory during the mid-1990s focus of the empirical studies shifted from export growth to more sophisticated measures of openness. So, these studies also included policy variables along with technological change or human capital. For example, Sachs and Warner (1995) combined several policy variables to a single dummy variable and found that the index was strongly and positively related to the growth of per capita GDP. Rodrik and Rodriguez (1999) replicated Sachs and Warner's work with an updated database and found that sustained liberalization within a country had a strong impact on growth. But the study concluded that the relationship between the two seemed to break down during the 1990s which it concluded perhaps because of change in the nature of protection. However, they found. O'Rourke (2000) and Clemens and Williamson (2001) found a positive relationship between protection and growth in the recent past while negative prior to World War II. In contrast, Berg and Krueger (2003) pointed out that growth is a complex phenomenon and it is unlikely that a relation between the two could be captured by simple linear regressions relying on imperfect proxies of trade policy. Several studies have also examined the relationship between imports and growth. For example, Levine and Renelt (1992) found that imports and total trade could equally well explain growth. Jiadong Tong (1995) recognized that imports contribute to economy differently at different times but on the whole relationship between the two was positive. Chengxiang Shen (1999) indicated that imported products will encourage domestic enterprises to improve product quality and production efficiency.

Studies indicated that the impact of trade on growth needs to be assessed in relation to other reforms, policies and institutions because a most of trade reforms have been undertaken as part of broader reforms. And, trade reforms appear to have a long-term impact on growth only if these are sustained and accompanied by other reforms (Berg and Krueger 2003, Bolaky and Freund 2004). Chang, Kaltani, and Loayza (2005) found

that the positive impact of trade on growth is larger if it is accompanied by increased education, infrastructure, financial, institutional and regulatory reforms. Bolaky and Freund (2004) found that the impact of trade liberalization is increased if it is accompanied by a regulatory reform.

In the context of present study liberalization of the economy thereby initiation of several reforms to enhance internal and external trade for an expansion in the sizes of food markets have assumed importance for agricultural growth in the Indian economy. Internal trade could be distinguished into wholesale and retail. Retailers' attributes include location, store atmosphere, merchandise and service (Mazursky and Jacoby 1986). Store's breadth of products and services offer wider range of situations in which the retailer is recalled that strengthens its salience, pressurizes to broaden assortments for one-stop shopping convenience, enhances unplanned purchases of consumers' total shopping basket and influences consumers' perception of the store image (Messinger and Narasimhan 1997). Depth within a product category such as assortment of brands, flavors, and sizes will increase utility for variety seeking consumers (Kahn and Wansink 2004) and flexibility in choices for those with uncertain future preferences (Kahn and Lehmann 1991). Best retailers are finding new ways to expand the markets, attract and retain customers by tailoring products and services to their needs and restructuring the business processes for delivering products and services efficiently and effectively (Shin 2001). Development of private labels (PL) whereby retailers sell products under their own brands enables them to pursue their own marketing strategies to maintain a competitive edge. This is because a building up of own brand equity insulates retailers from competitors as it differentiates their products (Berges-Sennou et al. 2004), provides them higher percent margins (Hoch and Banerji 1993) and engenders customer loyalty (Steenkamp and Dekimpe 1997).

Corporate entry in the fruits & vegetables trade at the wholesale and retail levels thereby linking the farm sector with consumers particularly from medium to higher income groups can plough back investments in agriculture by paying higher to the farmer. In addition, fresh fruits & vegetables sub sector absorbs large chunks of the population through direct and indirect linkages throughout the supply chains. So additional employment thereby enhanced incomes increase its purchase capacity that can also generate growth. Even though several studies have examined the relationships between trade (both imports and exports) and growth and also established two way causation between the two but the relationship is not always positive. Recent studies have established that the relationship between the two is strengthened if it is accompanied by overall reforms and investments in external factors such as education, infrastructure, institutions, etc. However, scant literature is available that analyses either sector specific or internal trade and growth relationships. So this study has been a modest attempt in this direction. It has been carried out to examine the dynamics of corporate entry in the fruits & vegetables trade internal as well as external. How has the induced growth manifested itself upon income and employment generation in the economy and what lessons could be learnt from it?

3. Methodology

This study is based upon data obtained from the websites of various corporate groups that handle fruits & vegetables in the Punjab State. Interviews were held with the category specific Supervisors and Managers of supermarkets, Section Managers at the regional offices, Managers at the DCs and collection centres (CCs) and the wholesalers/suppliers in the wholesale markets of Ludhiana and Chandigarh cities dealing with companies. Interviews were also held with the companies' Managers dealing with wholesale internal/external trade, farmers (about ten) selling vegetables to companies and service providers. Interviews were varied for each company and stakeholder depending upon its operational level. Trade practices of various corporate groups had also been observed by personal visits to the stores. Data pertains to the period from December 2009 to December, 2010.

3.1 Terms and concepts

The term trade (also called commerce or financial transaction or barter) has been defined as the transfer of ownership of goods and services from one person to another through markets. Trade exists between regions because of comparative advantages in production due to specialization and division of labor or larger scale, however, its benefits are not equally distributed. Trade has been distinguished into international and internal; former is the exchange of capital, goods, and services across borders or territories while latter is within a sovereign state's borders or territories. Two are similar as the motivations and behaviors of parties involved in a trade are concerned. But international trade is more costly because firstly, border imposes additional costs of tariffs, border delays and country differences such as language, legal system or culture; secondly, immobility of factors of production such as capital and labour and thereby it is restricted mostly to goods and services and to a lesser extent to other factors of production. Trade has also been distinguished into wholesale i.e. .an intermediate step and retail i.e. final step in merchandise handling. Wholesaling involves selling merchandise, generally without transformation and rendering incidental services to other businesses while retailing involves selling merchandise in small quantities or individual lots for direct consumption by the purchaser. Wholesalers normally operate from a warehouse or office while retailers operate mainly through a store and non-store.

Economic growth is a positive change in the level of production of goods in a country over a certain period of time. It is measured as the percent rate of increase in real gross domestic product (GDP) and depends upon domestic demand usually brought about by technological innovations and positive external forces

4. Findings and discussions

4.1. Retail trade

4.1.1 Store formats

Among the various companies at the retail level three, namely Reliance, Bharti and Aditya Birla¹ handle fruits & vegetable sections (table1) at its stores in the Punjab state. Retail stores of all the three groups are located in urban areas throughout the state but its number depends upon the population sizes. Each group has a neighbourhood store format i.e., ‘supermarket’ such as ‘Reliance Fresh’, ‘More’ and ‘Easy Day’. But the store sizes (vary from 1500-5000sq.ft) depend upon its location, potential market sizes and space availability. Reliance also has mini-mart i.e., ‘Reliance Super’ and such stores are located only in three cities, namely, Ludhiana (two), Jalandhar (one) and Amritsar (one). Aditya Birla’s minimart i.e. ‘Easy Day Market’ stores are also located in three cities, namely, Ludhiana, Patiala and Jalandhar (one each). Minimarts have a larger floor area, provide broader product selection choices, parking spaces and are centrally located for a larger catchment area. Bharti group has its wholesale store format² i.e. ‘Best Price’ that are joint ventures (JVs) with Walmart. Such stores are located only in three cities, namely, Amritsar, Zirakpur and Jalandhar cities (one each). All the stores are air conditioned and self service formats that provide a colorful shopping ambience, friendly staff for assistance and electronic billing/payment facilities. Store layouts have been modernized with cantilevered shelves that allow shoppers to stack goods efficiently. Each group has introduced several schemes to increase store traffic flow and win customer loyalty for

Table 1: Corporate groups in retail trade of fruits and vegetables in Punjab

Group	Company	Chain	Sourcing	
			Source	Company
Aditya Birla	Aditya Birla Retail Ltd (2007)	Supermarket - ‘More’	Farmers	Reliance
			Wholesale markets	Reliance, Bharti, Birla
Reliance Inds	Reliance Retail Ltd (2006)	Supermarket - ‘Reliance Fresh’ Minimart - ‘Reliance Super’	Other companies	Reliance, Bharti
Bharti Enterprises	Bharti Retail Ltd (2007)	Supermarket - ‘Easy Day’		
	JVs -Bharti & Walmart-	Minimart - EasyDay Market’ Wholesale - Best Price’		

Notes: Figs in parentheses indicate when the company was set up.

Source: Interviews and websites

1. The other two companies in the Punjab state that handle fruits & vegetables are Future Group and Namdhari Fresh. But Future group has only two hypermarkets and each has a super market i.e., ‘Food Bazaar’ while Namdhari Fresh that had only one store and that too had been closed down last year i.e. during 2010.

2 Reliance has wind up all its wholesale stores, namely, ‘Ranger Farm’ that had been located in the Ludhiana and Jalandhar cities (four each).

repeat transactions. These include product exchange policies, product replacements within a specified time period, special price discounts for store card holders, festive promotional schemes, traditional favorites, celebratory promotions to win attractive prizes, gift hampers, etc

Stores stock both food and non-food items; within food category each has separate sections such as basic lines of dry grocery, beverages, food additives, dairy products, dry fruits, bakery, fruits & vegetables, etc. Each group has positioned its store brand in several product categories. However, these stores focus primarily upon the FMCG products that have a share of about 85-90% while of fruits & vegetables sections it is only about 10-15%. This is because within this product category consumers' preferences for touch, feel and product appearance are important in their purchase choice decisions (Goel 2006a, b) whereas low product shelf life adds to its handling costs. These stores also face stiff competition from the well rooted existing traditional retailers within this product category who operate primarily from the roadside with minimal operational costs. For example, at these stores prices of various items within fruits & vegetable category are only about 5%-10% higher (lower only sometimes for the few seasonal items) but prices remain fixed throughout the day though these vary on daily basis. Even though Bharti group at its stores sometimes puts several seasonal items at discount rates but the quality is not always good. In contrast, roadside retailers maintain product freshness throughout the day by sprinkling water several times particularly during summers. Besides this, they also oblige loyal customers for repeat transactions by negotiating prices, giving supplementary items such as chilies, coriander leaves free of charges and not charging extra for over weighment even up to 100gms, etc. Since the traditional retailers operate with minimal operational costs this attracts a larger traffic flow to their business premises while reduces sales from the organized stores. So, all the companies have with gradual market learning experiences customized product stocking patterns for the fruits & vegetables category at each store in terms of its product range and lot sizes. However, depth and breadth of product range at a store depends upon its size, location, potential market size, taste preferences of the target consumers and their purchase capacities. For example, store located in a high income area has a much wider product range that includes off season and exotic items and bigger lot sizes because of larger traffic flow and faster product movement.

All the three groups have set up distribution centres (DCs); DCs of the Reliance and JVs of Bharti group are located at Sirhind, Bharti groups' at Banur while of the Birla group at Sahnewal. The size of a DC depends upon the nature and size of its inventory, area coverage and value of revenue generated. DCs handle invoices, maintain records of expiry dates of stocks in hand, schemes from manufacturers, place direct purchase orders (mainly for fresh produce) that depend upon their sales patterns at stores, etc. DCs receive merchandise both direct from manufacturers as well as its own units and maintain a regular flow of supplies. Each company has linked its DC to all the retail stores in its catchment area to take a stock of the inventory situation of all its SKUs and replenish these just in time

Such developments on the retail front have drawn time starved and variety seeking consumers from the middle and higher income groups who make on the spot product purchase decisions for unplanned lot sizes and item selections. Earlier, they used to send domestic servants with pre-prepared lists for purchases who could not exercise any choices in such decisions (Goel and Bhaskaran 2002).

4.1.2 Sourcing

All the groups have established alliances with manufacturers in Punjab as well as other states for direct sourcing of branded items while small and medium sized enterprises for introducing store brands. However, for the sourcing fruits & vegetables these companies have opted for several options. These include purchases from the wholesale markets, farmers and other companies. But the source selection choice depends upon the lot sizes, price competitiveness, product quality and its range. So all the sample companies purchase various fruits & vegetables from the major wholesale markets in the state as these get the daily supplies of all the items from various growing areas from within as well as outside the state. Birla and Bharti groups purchase these items through their designated suppliers who collect the supply orders (both item and store specific) electronically each evening. On the following day they make purchases from the market, prepare the store specific lot sizes with the help of hired labour. In the afternoon these are dispatched directly to the retail stores of Birla group while to the DCs of the Bharti group and its JVs. Reliance group has also opted for a centralized system for the purchases as well as distribution of this product category. And, the company purchases several vegetables directly from farmers on a daily basis through its CCs that have been set up in the major production areas such as Jandiala Guru in Amritsar district and Sirhand in Patiala district. Company also purchases several off season vegetables during summers and apples from the adjoining state of Himachal Pradesh (HP). This has helped the company to establish alliances direct with farmers in the major vegetable growing belts. As a result, the company has built up its own network with growers through mutual trusts conducive for the long term business interests of both the partners. This provides the company an edge over its competitors as a sustainable source of farm fresh supplies that enhances its image in the purchase choice decisions of its loyal customers. This generates higher revenue for the company because of increased traffic flow thereby higher sales and its customers' willingness to pay higher. The company purchases several vegetables from the major wholesale markets of Jalandhar, Ludhiana, Malerkotla, Chandigarh through the commission agents (CAs), for example, those vegetables for which either it falls short of its requirements from the CCs or come from other states such as lemon, tomatoes, chillies, etc. Both Bharti and Reliance groups purchase several fruits & vegetables items such as potatoes, bananas and exotic fruits also from the wholesale companies in the state. But Reliance purchases particularly exotic items primarily from the Delhi wholesale market. This is because of its large market size that offers it the benefit of negotiating prices as its operational scale is larger compared to the other two groups in the state.

4.2 Wholesale trade

There are four companies³ that handle wholesale trade of fruits & vegetables in the state (table 2). Among these, Bharti group has a separate company, namely, Field Fresh Foods (a JV with Del Monte Pacific) and its farm of 300 acres leased from the Punjab government is located at village Ladhawal near Ludhiana city. The company has launched two brands, namely, *Field Fresh* for fresh items and *Del Monte* for processed foods & beverages. Other companies that handle wholesale trade of fruits & vegetables are Khet Se Agri Produce and IG International. Khet Se Agri Produce, a JV of the Tata Chemicals Ltd and Total Produce, has set up its DC at Malerkotla in the State on a pattern similar to that at Dublin. It has four banana ripening chambers (each with a capacity of 10 metric tones and four cold storage chambers (each with a capacity of 25 metric tones). IG International is a joint company with two partners who had earlier been handling fruits from the wholesale market in Ludhiana city. Namdhari Fresh (of Namdhari Seeds) deals with the production of fresh vegetables both exotic and organic and its farm is located at village Kohara near Ludhiana city. Sample companies focus primarily upon the selective items of mass consumption from the fruits & vegetables category and emphasize quality. For example, Field Fresh Foods from about 52 SKUs in the beginning has pruned its list to four items such as apples, bananas, pineapples⁴ and onions.

4.2.1 Domestic trade

4.2.1.1 Sourcing

The companies handling wholesale trade of fruits & vegetables have opted for several options for the sourcing of selective items. These include alliances with CAs/traders in the wholesale markets/auction centers, village panchayats and growers in the production areas. For example, FieldFresh Foods purchases selective items during the post-harvest period from the wholesale markets in the production belts through its designated CAs such as apples from Kashmir, bananas from Maharashtra and Gujarat while onions from Maharashtra. This is because of greater availability, larger production selection choices and highly competitive prices. The company has customized its purchase pattern conducive to the region specific institutional set up. For example, it purchases apples from auction centers through CAs and has recently established alliances with the village panchayats' leaders and large sized growers. Purchases through the CAs helps to keep low its transaction costs of handling with large number of tiny farmers. Besides, CAs also extend trade credit to their client farmers either directly (Goel and Kaur 2008) or through post harvest contractors particularly for fruits that helps farmers to meet their cash contingencies for the purchase of operational inputs as well as consumption needs. Farmers in return oblige the CAs by selling produce through them during the post harvest period and make credit adjustments from sales proceeds. Such relationships based upon

3. Adani Agri Fresh and Unifrutti India have also entered into the wholesale trade of fruits but both these companies operate only on a small scale in the State. Adani Agri Fresh deals mainly with apples and sells through its designated agents while Unifrutti deals with exotic fruits and sells through the CAs/wholesalers.

4. The company has recently entered into pineapple production in the West Bengal (Siliguri) state but its production is meant primarily for its own plant located in Tamil Nadu at Hosur.

Table2: Companies handling wholesale trade of fruits & vegetables in Punjab state

Group	Company	Sourcing		Disposal	
		Source	Company	Source	Company
Bharti	FieldFresh Foods Ltd (2007)	Own farm	FieldFresh Foods, Namdhari Fresh	Corporate groups	IG International, FieldFresh Foods, Khet-SeAgri Produce
Tata Group	Khet-Se Agri Produce India Ltd. (2008)	Contract farming	FieldFresh Foods	Wholesale markets	IG International
Partnership	IG International (2000)	Orchards/ farmers	FieldFresh Foods, IG International, Khet- SeAgri Produce	Food service segment	IG International, FieldFresh Foods, Khet-SeAgri Produce,
Namdhari Seeds	Namdhari Fresh	Wholesale markets	Field Fresh Foods	Roadside retailers	IG International, FieldFresh Foods, Khet-SeAgri Produce
		Imports	IG International	Exports	IG International, FieldFresh Foods, Khet-SeAgri Produce* Namdhari Fresh

Note: *Company exports bananas from Maharashtra state

Source: Interviews

mutual understandings between the stakeholders have been established over long periods (that extend even up to generations). In contrast, companies being new to this business line do not prefer to take such financial risks. Hence this practice generates benefits for the company that saves its interest liability for paying advances to farmers. On the other hand, purchases directly from large sized farmers provide monetary gains to both the chain partners, save handling charges, reduce wastage and introduce efficiency. Besides this, it provides a scope to introduce new vegetables/varieties, build up competitive edges in the markets thereby capture the consumer markets on a sustainable basis. Company has started using 'Controlled Atmospheric' (CA) technology to enhance the shelf life of apples and maintain regular flows of its market supplies that matches its demand throughout the year. So apples are shipped directly to these chambers after purchases. The company purchases onions from the wholesale markets through traders and farmers while bananas from the wholesale markets through traders. This is because of small sized holdings of the farmers that add to its transaction and shipment costs. In the Punjab State⁵ the company has been negotiating with growers in the potential belts for bananas to pick up these directly from orchards once enters into commercial production. Presently, the company at its farm has been testing for the suitable varieties of bananas that can be grown in the state because of its extreme weather conditions both during summers and winters. This will reduce shipment costs for the company and help it build up competitive advantage in the markets. On the other hand, farmers shall be able to shift from the traditional wheat-paddy rotation and enhance incomes while the state shall benefit from the reduced consumption of ground water.

Khet Se AgriProduce handles primarily bananas⁶ and has developed a chemical free ripening technique for it so has also introduced its own brand 'Khet Se'. Company sources unripe bananas directly from growers from the states of Maharashtra (about 80%) and Gujarat (about 20%) through its purchase team. Its members go to the production sites to identify bunches that meet its quality specifications such as bunch weight, size, colour, length, etc. Later, these are picked up from orchards, packed in cartons to avoid blemishes and shipped directly to the DC at Malerkotla through hired shippers. After sorting, these are shifted to the cold and later to ripening chambers. Ripe bananas are again sorted, wrapped in newspapers and then packed.

To gain market foothold, market penetration and generate additional revenue the company also sources green vegetables⁷ from farmers for which presently it has only the sorting/grading facilities at its DC. Company has developed a network of about 400 farmers⁷ from several villages, of whom only about 150 farmers sell during a season to the company because all farmers do not grow either same crops or all vegetables. Company has at its premises a retail outlet on the roadside that stocks all its agricultural inputs such as fertilizers, pesticides and herbicides for sale to farmers at low profit margins i.e. up to 10%. Its main purpose was to develop a network with farmers for sourcing vegetables because of farmers' tiny holding sizes and large numbers that added to the company's initial transaction costs for negotiating with them. Initially the company

5. Even though its quality will not be good because of small size and lesser bunch weight

6. Company also purchases during the post harvest period at its CCs directly from farmers other fruits such as mangoes from UP while pomegranates and grapes from Maharashtra.

had also formed producers' companies⁷ (in Malerkotla) through the Ministry of Corporate Affairs. Its purpose was to encourage farmers for the adoption of new crops and make them self-reliant by enabling better utilization of farm resources through sharing and had provided them requisite training. Of the six registered companies only one/two having innovative member farmers are presently functional. The company had initially built up only commercial relationships with farmers but gradually it has started developing long run sustainable business relationships to strengthen its base at the grass root level. To this end, the company provides them a complete farm level solution and extends facilities such as technical know-how, crop specific recommendations based upon soil sample testing at its lab (located in Sunam) for the primary, secondary and micro nutrients and intends to introduce precision farming⁸.

However, the company encourages its client farmers to grow only seasonal vegetables because of its presently small market sizes for this product category. This provides them the option to sell in the wholesale markets when companies own demand dwindles and this does not strain its relationships with farmers. Company quotes its prices each evening/morning, makes on the spot payments in cash/cheque and provides its client farmers free packaging materials such as plastic crates, polythene bags and sacks. Farmers themselves ship sorted vegetables to the DC from morning till about 3.30 to 4.30 PM in their own/hired vehicles and use several means of transport such as tractor trolleys, bullock carts or autos depending upon the lot sizes. Vegetables are again sorted at the DC according to the company specified grades such as premium, A, B and C and the market specific lot sizes are prepared.

4.2.1.2 Distribution

All the sample wholesale companies emphasize regular flows of market supplies and sales penetration through multiple channels both modern and traditional to tap consumers from various socio-economic groups and market segments to dispose off produce of various grades. However, prime focus of these companies remains upon the medium to high income consumers. So the companies have established alliances with wholesalers/semi-wholesalers in the wholesale markets, roadside retailers, food service providers and retail companies⁹. Khet Se AgriProduce collects purchase orders from other companies and retailers on a daily basis through its dealers' network (they have offices located at the wholesale markets in Ludhiana, Jalandhar, Patiala and Chandigarh in Punjab). Fruits & vegetables are shipped direct to the destinations in hired vehicles of various sizes depending upon the lot sizes. The company disposes off rejected bananas from the DC through roadside pushcarts who can sell these to the lower income groups either from roadsides or residential areas. On the other hand, discarded vegetables are sold through the CAs from the wholesale markets of Malerkotla. In contrast, IG International exploits its rich market learning experience and networks to push off sales.

7. Company has not yet entered into contract farming because of low value addition to this category so its sale prices have to move closer to market prices.

8. Company has identified ten states and introduced it for potatoes in West UP, recently started for wheat and plans to extend for several other crops such as sugarcane, paddy, maize and mintha

9. Khet Se AgriProduce has also set up its own wholesale outlet in Ludhiana city.

It acts as a trader from the Ludhiana wholesale fruit market, aligns with other wholesalers, retailers/retail companies, institutions and also sells direct to consumers. The company appoints hired sales persons in the wholesale markets who show samples of various fruits to their potential buyers and also book orders that are dispatched direct from its cold stores. Namdhari Fresh has not yet tied up with any other retail company because it is interested in setting up own counters at the organized stores to project its own brand image. However, only a few resource rich designated wholesalers deal with companies particularly for sales of fruits. It is because of narrow price margins quoted by these companies compared to the real mechanisms of the open markets that are highly volatile owing to the continuously changing demand situations even on the same market day. Company specific sales channels are flexible and undergo changes with its market learning experiences. For example, FieldFresh Foods has shifted from retail stores to roadside retailers for bulk sales to generate higher revenue. The company books purchase orders direct at its cold store in Ludhiana city.

4.2.2. External trade

Presently only two companies¹⁰ have entered into the exports of exotic vegetables from Punjab State¹¹. Of these, FieldFresh has its main focus upon baby corn while of Namdhari Fresh is upon snow peas. Even though both the companies grow and export several other exotic vegetables but presently its production and markets are only on a trial basis. To meet the stringent quality requirements of importers both these companies emphasize own production, Namdhari Fresh also takes land on lease from farmers while Field Fresh has aligned with farmers for the major product line. Both these companies source seeds for exotic vegetables from the MNCs because Namdhari Seeds has not yet entered into the seeds production of exotic vegetables. Both the companies have set up on farm state of the art technology for the processing, packaging and storage of selective vegetables that are shifted in refrigerated vehicles to the airports. These companies have established alliances with importers in the global markets particularly UK and the Middle East (FieldFresh has presently withdrawn itself from the Middle East). FieldFresh Foods has established an alliance in the National Capital Region through with vendors and CAs in the wholesale markets for the disposal of 2nd grade baby corn unacceptable in export markets. On the other hand, Namdhari Fresh dumps the rejected produce in its field

IG International imports exotic fruits like apples, pears, guava, grapes, etc. from several countries such as China, Thailand, USA, etc. The company has also set up its liaison offices in these countries, built up its own/hires physical infrastructure such as cold stores and refrigerated vehicles at the major port cities such as Mumbai and Chennai and the major wholesale markets such as Ludhiana in Punjab. So consignments from the seaports/airports are shifted directly to the cold stores to reduce wastage during storage

10 KhetSe AgriProduce exports bananas while IG international has entered into the exports of mangoes and grapes but these are exported from the other major growing areas of the states such as Maharashtra and UP.

11. This is because the cropping pattern has shifted primarily to wheat- paddy during the Post green Revolution period due to the availability of assured markets, technology and irrigation facilities for the two.

and transit. Its early entry to this market segment has enabled the company to gain a strong foothold in the global market and emerge as a leading importer in the country.

5. Growth effects

Corporate entry in the fruits & vegetables trade thereby several endogenous factors such as the setting up of retail stores, DCs, initiation of chain coordination mechanisms with upstream and downstream chain partner, sourcing materials, creation of requisite physical and institutional infrastructure have generated growth. This has manifested at the farm and market levels in Punjab State, other producing states and also in the importing/exporting countries in terms of income and employment generation. This makes it difficult to measure its total impact. Besides this, companies are reluctant to divulge with quantitative information. However, the nature and direction of these effects can be gauged with its focus upon the Punjab state.

5.1. Income effects

In the fruits & vegetables sub sector corporate entry at the farm level has manifested in two forms, i.e., contract farming and market purchases. Former has linked farmers to the high value export markets for the new product line while the latter in the domestic market with the middle to upper income groups for the traditional product lines. For example, Field fresh Food's alliances for baby corn production with farmers have started encouraging innovative farmers for its cultivation in several parts of the state. This generates higher incomes for them compared to the traditional wheat-paddy rotation. And, its crop residues can also be sold as green fodder to dairy farms for additional income (Goel 2011). Farm level purchases of vegetables by the companies has opened up an alternative marketing channel for farmers to divert supplies and enhance returns in the major vegetable growing areas such as Malerkotla, Sirhand, Jandiala Guru, etc.. This has generated several tangible and intangible benefits for the partner farmers. These include correct weighments, market price offers at their doorsteps, crop specific advice for the selection of suitable varieties, etc. And, farmers have responded positively by shifting area from other crops to vegetables. They have also started learning the significance of shipping sorted produce because the inferior produce that companies do not accept adds only to its labour and shipping costs. But at the farm this can be used either as fodder for own cattle or sold in the wholesale market that generates revenue. However, a larger majority of farmers irrespective of the holding sizes still prefers to sell vegetables in the wholesale markets through the preferred CAs. This is because companies accept only the selective produce whereby it becomes difficult for farmers to sell the lower grade produce in the wholesale market. In addition, farmers have built up long term relationships with the CAs who oblige the client farmers by providing credit in times of all contingencies. So CAs also want farmers to sell produce through them as well.

At the market level, on the day a company or its suppliers enter the wholesale markets increased demand for the medium/superior grades of fruits & vegetables pushes up its prices. As this increases the purchase prices for roadside retailers they find it difficult to shift these in enhanced sale prices upon customers. So they are left with no choice except

for shifting to the other items. Some roadside retailers in the cities have also started establishing alliances direct with farmers in the adjoining vegetables growing areas and project the image of 'farm fresh' to realize higher returns.

Of its indirect income impacts, corporate entry in the food sector has led to an exorbitant increase in land prices both in the rural and urban areas throughout the state. No doubt, this has increased the incomes of landowners but has adversely affected the landless.

5.2 Employment generation

As the corporate entry in the retail as well as wholesale trade has started setting up new institutions to link the farm sector with the export/domestic markets. This has generated massive employment particularly for the younger age groups from the various socio income groups. They seek employment for purposes such as to supplement incomes, pursue higher education or primarily as a profession. Bharti group provides flexi-hour work schedules, multi facet career opportunities to the youth, those who could not complete education and also employs ex-servicemen, physically challenged persons and women. It has also opened up an Academy to provide requisite training to its employees and it is operational in the Ludhiana and Jalandhar cities. Bharti and Birla groups hire man power from the local communities and prefer persons located closer to stores for easy access and keep the commuting costs low.

Each of the three sample companies engaged in retail trade has its Head Office outside Punjab state. Regional offices of the Birla and Bharti groups are located in Punjab while of Reliance group outside the state but the company has a separate office for the Punjab state. These offices have separate merchandise sections for each product category, finance, real estate and human resource so require manpower with various technical qualifications from agricultural and business backgrounds. At the retail level each supermarket (of the Bharti and Birla group) depending upon its size requires 12 to 15 persons¹² (20-22 persons at a Reliance store) for the various in-house operations such as store keeping, merchandise handling, billing, etc. This includes a store Manager (M) and Assistant/Deputy Store Manager (ASM/DSM) - one each, Customer Service Supervisors (CSS) - two and Customer Service Assistants (CSA) - six to nine. All the five to six stores in a city have a Cluster Manager. Educational qualifications for the man power vary from Matriculation (for CSA) to Senior Secondary (for Supervisors) to Graduation (for AM/DM and M). Companies provide in-house training to all its employees but its duration varies for the different groups, for example, it is about two weeks for the latter three groups while about a week for the former group. Both young males and females are hired at a retail store while primarily males are hired at the offices, DCs and CCs because of different work culture that requires frequent field visits and locations of these farther from the cities. They are the permanent employees of a company and each employee depending upon his/her rank is entitled for an incentive from the sales realizations in

12. Minimart and wholesale stores require a manpower of about 25-30 persons.

commensurate with the targets' achievements. For example, Birla group has fixed it on monthly basis at Rs2000 for M, Rs1500 for AM, Rs 1000 for CSS and Rs500 for CSA.

All the four companies engaged in wholesale trade have generated demand for man power particularly males. Two of the four companies engaged in exports, namely, FieldFresh Seeds and Namdhari Fresh (but to a lesser extent) have generated employment for the rural women from the adjoining villages at its own farms and partner farmers farms for several manual operations such as crop harvesting, as well as at its ACEs for processing and packing. This has also generated demand for skilled manpower for handling research, extension, quality management, on farm supervision and also semi-skilled manpower for loading/unloading, shipping and other marketing operations. In addition, an increased demand for the packaging materials, supportive physical and institutional infrastructure, has also started generating employment at the secondary and tertiary levels.

Corporate entry thereby enhanced employment opportunities accompanied by higher wages and fixed working hours has drawn labour particularly at the bottom end of the hierarchy from the unorganized sector. Resultantly, reduced labour supply to this sub sector along with reduced inflow from the poor regions of the adjoining states has led to an increase in wages, lesser working hours and commitment to work.

6. Conclusions

Study indicated that liberalization of the Indian economy thereby loosening of the regulatory framework and thrust upon horticultural development has led to corporate entry in the fruits & vegetables sub sector. However, presently corporate entry in this product category both in retail and wholesale trade in the Punjab state is only on a small scale and oligopolistic in nature. These companies have provided the convenience for one stop shopping and offered multiple product selection choices at its retail stores that has drawn consumers from the middle to high income groups. To cope up with stiff market competition from traditional roadside retailers in the fruits & vegetables category these companies have geared up own supply chains that are scale specific and thrust is primarily upon the short to medium term measures. The companies engaged in wholesale trade focus upon the selective product lines and have started developing integrated supply chains through upward and downward chain coordination. This has extended the operations of these companies over several product specific production areas within the country as well as global markets from importing to exporting countries. These companies emphasize upon medium to long term sustainable measures to build up competitive edge as these companies have started addressing the issues of product quality and regular market supplies, creation of requisite physical infrastructure, introduction of new crops and carry on farm R&D. Thus these companies both at the retail and wholesale levels have provided a genesis for growth in Punjab state. This has manifested in terms of higher incomes for farmers and employment generation for the skilled, semi-skilled and unskilled manpower throughout the supply chains. Expanding markets for the fruits & vegetables sub sector with growing disposable incomes and changing food habits are expected to give a boost to this phenomenon. This shall open up opportunities for the

existing companies to expand and diversify its operations to gain strong market footholds and meet competitive threats while for the new companies to establish alliances or enter in sole stance.

6.1. Lessons Learnt

From this study for the Punjab State several lessons could be learnt for the Indian economy, BRICs and other countries.

Firstly, the role of traditional roadside retailers in the fruits & vegetables category in the country shall remain important because of negligible fixed costs and the services it renders such as easy access, product freshness, price negotiation, lower grade produce disposal, etc. So the government shall have to include them as an integral part of urban planning. Secondly, CAs in the wholesale markets shall continue to play a crucial role even for the development of modern integrated supply chains (also redefine its suppliers/traders) and exploit theirs' long learning experiences and networks for sourcing supplies as well as its distribution. This is because of farmers' small holding sizes, cash contingencies and long-term business relations of the chain partners based upon mutual trusts that shall reduce the risks and the transaction costs for the companies. Thirdly, corporate sector with its market expansions and diversifications shall absorb large chunks of population from the various age groups both males and females, educated and uneducated, rural and urban and may also establish alliances with smaller companies as well as rural/traders for sourcing. So, as a corporate social responsibility to safeguard the interests particularly of women employees and children this shall require the creation of appropriate institutions such as crèches and schools as well as facilities such as transportation, housing, sanitation, etc. Besides this, government intervention shall be needed for the framing of rules for timely payments of salaries, payments of sales proceeds within stipulated times, etc. Fourthly, as companies handling wholesale trade extend operations beyond the national boundaries and increase penetration in the global markets for imports/exports these shall require enhanced government support. It shall be required for a larger participation as well as organizing global events such as exhibitions, farm fairs, etc. to build up competitive edge and project country's image.

In the context of BRICs, large sized economies thereby large market sizes of these, abundant labour supplies, etc offer several similar advantages. However, food habits thereby the food production patterns, government policies for market intervention and its nature differ in these countries. India has its unique advantage of wide diversity in her agro-climatic conditions that are conducive to the production of several fruits & vegetables. Besides this, a larger majority of the population is vegetarian. This opens up several choices for the Indian companies for the selection of fruits & vegetables items from the tropical, subtropical and temperate regions to build up competitive advantages or gear up production in the different potential areas to maintain year round supplies to capture the markets on a sustainable basis..

Indian companies shall have to build up sustainable competitive advantages for the export items to meet continuously the growing market challenges from competitors in the global

markets. To this end, these shall have to establish alliances with the importers for learning the consumer, market access, on farm research thereby collaboration with universities and research institutes for the development of region specific suitable varieties for commercial exploitation, alliances with farmers for technology transfer, investments in infrastructure and alliances with MNCs for technology transfer/sharing. On the other hand, companies importing fruits & vegetables from other countries shall have to strengthen its bases in the producing countries to maintain year round supplies of the selective product lines and stay competitive.

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