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Institute of South Asian Studies
Hon Sui Sen Memorial Library Building
1 Hon Sui Sen Drive (117588)
Tel: 68744239 Fax: 67767505
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FOOD AND RETAIL CHAINS IN INDIA

Professor N. Viswanadham[1]

The Rise of Retail in India

The time has come for Indian retailing. The signals are there all over. The newspapers, business press, the governments, the Chief Executive Officers of large corporations, all talk about it day in day out. The Indian economy is likely to continue its steady growth with enhanced share in global trade and steady agricultural outputs. Booming employment opportunities, rising urban disposable income and credit card ownerships, changing lifestyles and demographic profiles all are showing a favorable skew towards a rising consumerism culture, boding well for retailing growth. Consumer spending is clearly set to accelerate its pace.

Demographics continued to show a positive skew to spur retailing growth. Consumers groups aged between 20-45 years are emerging as the fastest growing consumer group and the mean age of Indians is now pegged at 27, a mean age that reinforces spending across all the retailing channels of grocery, non-grocery and non-store. India's burgeoning middle class will drive up nominal retail sales through 2010 by 10 percent per annum. At the same time, organised retail is becoming more important. At present organized retail accounts for a mere 3 percent of the total; by 2010 this share will already have reached 10 percent. Thus most of India's growth in retail is in the future, not the past.

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[1] Professor N. Viswanadham is the Executive Director of the Centre for Global Logistics and Manufacturing Strategies at the Indian School of Business. He is also an Associate at the Institute of South Asian Studies (ISAS), an autonomous research institute within the National University of Singapore. This paper was prepared by Professor Viswanadham for ISAS.

No day passes without the announcement by one of the corporate houses such as Reliance regarding investment of millions of dollars in retail. Reliance has announced investments in farm to plate infrastructure in the Indian States of Punjab, Gujarat and West Bengal. Reliance is also acquiring shopping cooperatives, super bazaar, etc. Retail giants such as Pantaloons, Food world and Trinetra have all announced big expansion plans.

The structure of retailing is also developing rapidly. Shopping malls are becoming increasingly common in large cities. The number of department stores is growing much faster than overall retail, at an annual rate of 24 percent. Supermarkets have been taking an increasing share of general food and grocery. Several builders have announced plans for development of 150 new shopping malls by 2008. National real estate developers such as Rahejas, Omaxe, Ansals, Uni-Tech, Parasnath, Vatika, Vipul Infrastructure and DLF are also undertaking key retail developments.

The country’s middle class has been expanding due to rapid urbanization, increasing per capita income, increased participation of women in the urban work force and globalization. Although decreasing with rapid urbanization, food is still a major spend in the Indian households. Rural retailing is witnessing explorations by both corporations and entrepreneurs – ITC's Choupal Sagar, HLL's project Shakthi and Mahamaza are some of the models being tried out. While conclusive evidence to identify the winning rural retailing model is not yet available, such experiments are steps in the right direction. Grocery retailers continued to be the staple of retailing in 2005, accounting for three-quarters of overall retailing value sales. India witnessed a breathtaking rise in grocery retailer outlet numbers fuelled by the rapid expansion of modern retail formats, such as supermarkets, hypermarkets and convenience stores.

The State of Agribusiness

Nature has been very good to India. India has 52 percent of total cultivable land as against 11 percent in the world. All 15 major climates of the world from snow-bound Himalayas to hot humid southern peninsula and the Thar Desert to heavy rain areas exist in India. There are 20 agro-climatic regions and nearly 46 out of 60 soil types in the country. Sunshine hours and day length are ideally suited for round the year cultivation of crops. India is the centre for biodiversity in plants, animals, insects, micro-organism and accounts for 17 percent animal, 12 percent plants and 10 percent fish genetic resources of the globe.

Using the above comparative advantages, India has been the second highest fruit and vegetable producer in the world, second highest producer of milk with a cold storage capacity of 70,000 tonnes, fifth largest producer of eggs, and the sixth largest producer of fish with harvesting volumes of 5.2 million tonnes. However, the exports from India are poor. Compared to other countries the land productivity in India is low. Even with in the country, there are tremendous variations among the states in terms of farm productivity. There is a tremendous scope for increasing the farm outputs using state of the art pre-harvest technologies and harvesting techniques. Value added agriculture has not yet caught on with-in the Indian scene. Post-harvest technologies are at a nascent stage in India. Pre-cooling, cold chain, packaging and transport using totes or small containers are all absent, resulting in substandard delivery of groceries and enormous amounts of wastage.

Food Processing Industry

Food Processing Industry has enormous significance for India's development for the vital linkages and synergies it supports between industry and agriculture - the two pillars of the economy. Food processing industries have a crucial role to play in providing nutritious food to the population, increasing the shelf life of the produce and also in the reduction of post-harvest losses. Another most important point in the food industry is that a substantial portion being rural based it has a very high employment potential with significantly lower investment.

Today processed food is considered an elitist item and is taxed heavily. It is more expensive than fresh food which is a paradox. Large scale processed food production and distribution to a one billion strong population will create the economies of scale and would reduce the costs of final delivery. The disease burden of the nation will reduce substantially if one can supply nutritious food to the masses since 60 percent of diseases are water borne and the 10 percent or more is due to malnutrition.

The Scenario in States

Politically, India is divided into 28 states and six federally-administered Union Territories. The political divisions generally follow linguistic and ethnic boundaries rather than geographic transitions. India's huge size sees climatic conditions in Kashmir having little relation to that in the extreme south. Agribusiness also varies from state to state. In this report, we study two states: Andhra Pradesh and Punjab. Both are agriculturally fertile states and have innovative schemes for attracting FDI. Reliance has recently announced vast amounts of capital investments in the state of Punjab in retail and also value added agriculture. There are immense opportunities for investments in grocery retail in all the Indian states. This situation regarding the food supply chains in India is applicable for all states. The research on food supply chain and the plans for innovation and modernization of these chains are done more by the Central Government rather than by the State Governments. This is unfortunate and one would expect to find a changed situation soon when the private sector investments in the Super markets increase and put the states under pressure to improve agribusiness investments.

The Way Forward

One finds that the supply chain that connects the vast natural resources and the farmers to both the organised as well as the unorganized retail is highly inefficient with several intermediaries and manual handling. The result is lots of wastage as much as 30 percent and also less remuneration for the farmers. There is no supply chain integrator or channel master for Indian retail channels.

The plentiful fertile natural resources are under-utilized or not efficiently utilized. Agriculture is a part of Indian rural life for a long time and it has not changed its face over the decades. There is little attention for value added agriculture in the whole country.

Research on improving the farm productivity, pre-harvesting, post-harvest methodologies, processed food product development, packaging, distribution, transport, cold chain, store management, warehouse management and the entire supply chain management are very much neglected both by the central and state governments and also by the corporates.

The research on pre and post harvest methods as well as on efficient harvesting methods is in the domain of national horticultural institutes. The post harvest transport and handling of perishable fruits and vegetables is deplorable in India with enormous amount of substandard produce and marketed products.

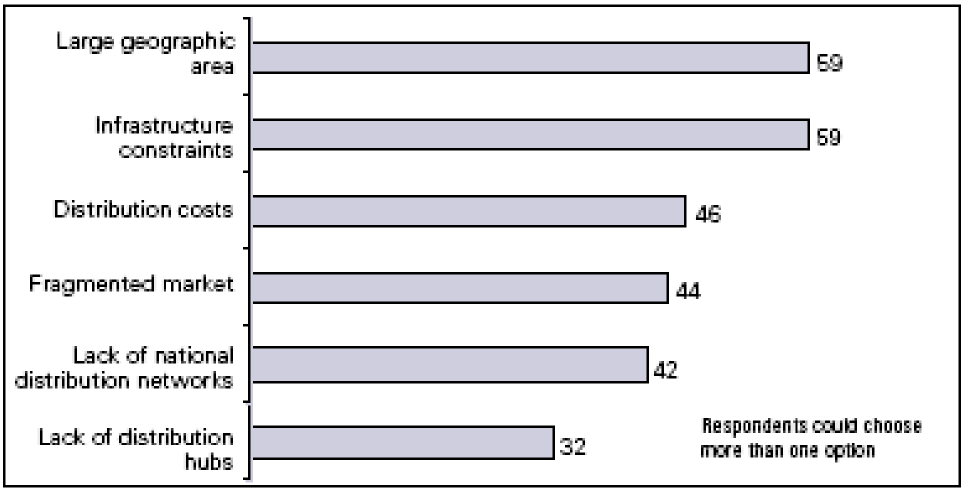
Our concern in this report is on logistics and supply chain management of food products. Cold chains for various products either does not exist or not used because they are very expensive. Development of cold chains, warehouses and refrigerated trucks and railway wagons is a priority item.

Development of processed food products is another important item that requires much attention. India is a vast country with multiplicity of cultures, tastes, food habits, religions and languages. Each region has its own exotic food items and this provides enormous variety for the Indian consumer from east to west, north to south. Currently there are no laboratories for processed food product development and testing. These are usually done in private laboratories or in the households. There is a need for developing these facilities so that all the food processing industries can test their recipes and food products.

The efficient operations of high volume retail supply chains are dependent on the availability of supply chain assets such as containers, pallets, racks, cages, totes, trays, trucks and trailers to meet the day-to-day operational needs of the retailer in supplier depots, retail distribution centers and retail stores. However, a lack of visibility to these assets as they move through the supply chain, or where they may be positioned when not in use, often results in misdirected, misplaced and inadvertent stockpiling of critical supply chain assets.

The two surveys by KPMG last year (2005) (see Figures 1.1 and 1.2) substantiate the above statements. In addition the survey also points out supplier selection not being strategic and also about limited use of IT in retail.

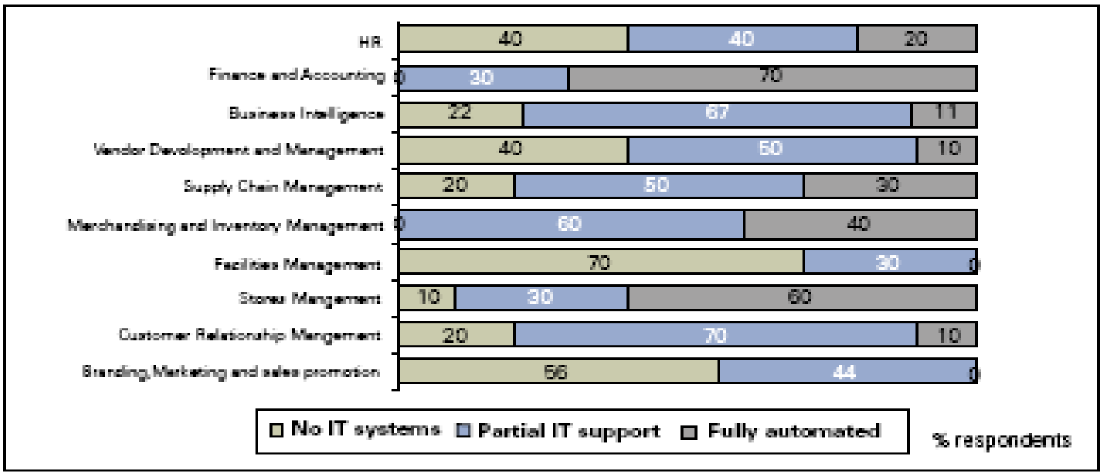
Figure 1.1: Key challenges in the Indian retail market



Source: KPMG International Consumer Markets in India Survey, 2005

Retail Enterprise Resource Planning Systems (ERP) and Warehouse Management Systems (WMS) are unable to track assets beyond the boundaries of the retail supply chain into the supplier base, and often times even into the retail store.

Figure 1.2: Level of IT usage among Indian retailers



Source: KPMG in India Retail Survey 2005

This can cause a significant surplus of asset inventory leading to excessive capital expenditure or lease, rental and demurrage costs. To the other extreme, lack of visibility may also cause critical local shortages that impact both store and distribution center deliveries, and may even cause out-of-stocks at individual stores. Along with these concerns, excessive costs are incurred with an increase in transportation, demurrage and lease costs, as well as an over dependence on error-ridden, labor intensive practices.

Opportunities for Foreign Investors

It can be easily seen that Indian states offer huge investment opportunities in the food supply chain area. The opportunities present themselves in a variety of ways:

a. Asset intensive Malls and Warehouses construction and cold chain transportation infrastructure;

b. Post harvest agriculture practices for preservation of quality and increasing the shelf life;

c. Retail logistics of home deliver; and.

d. Planning and execution software and hardware that induce efficient operation into the supply chain.

Demographics of India

Geography

India is located in the south of Asian continent. The country is bordered by the Arabian Sea to its west, the Bay of Bengal to its east and the Indian Ocean to its south. India lies to the north of the equator between 8.4 and 37.6 degrees north latitude and 68.7 and 97.25 degrees east longitude. The total land area of India is 2,973,190 sq km measuring 3,214 km from north to south and 2,933 km from east to west. It shares land boundaries worth 15,200 km and the coastline is 7516.5 km long. Forested land constitutes 21.6 percent of the total land area.

Politically, India is divided into 28 states, six federally administered union territories and a national capital territory. The political divisions generally follow linguistic and ethnic boundaries rather than geographic transitions. It is difficult to generalize India's climate. India's huge size sees climatic conditions in Kashmir having little relation to that in the extreme south. Climate in India ranges from tropical in the south to a temperate climate in the north. Parts of India in the Himalayas have polar climate.

The fertile Indo-Gangetic plain occupies most of northern, central and eastern India, while the Deccan Plateau occupies most of southern India. To the west of the country is the Thar Desert, which consists of a mix of rocky and sandy desert. India's east and northeastern border consists of the high Himalayan range. India is particularly rich in a variety of natural resources. Along with 56 percent arable land, it has significant sources of Coal (fourth-largest reserves in the world), Iron ore, Manganese, Mica, Bauxite, Titanium ore, Chromite, Natural gas, Diamonds, Petroleum, Limestone, Thorium (world's largest along Kerala's shores).

Petroleum is found off the coast of Maharashtra, Gujarat and in Assam, but meets only 40 percent of India's demand. Increasing amounts of natural gas are being discovering regularly especially off the coast of Andhra Pradesh. Uranium is mined in Andhra Pradesh and gold in the Kolar Gold Fields in Karnataka.[2]

Life Style Changes

Huge population base of 1.08 billion, growing at about 1.6 percent per annum, provides a large and growing domestic market for food products. While food accounts for only 9.7 percent of the total private consumption expenditure for an average American, 15 percent for the Japanese & British, for the Indian it is the principal component of their consumption expenditure, accounting for as much as 53 percent. Further, rising per capita incomes, changing life-styles and a growing younger population with preference for convenience food are the driving factors for this sector. Moreover, with liberalization of trade in the post-WTO regime, India has the opportunity to export agricultural and food products to the world. Over the last decade or so food processing has grown at a rate of 7.1 percent per annum.

According to recent data from India's Marketing White book by Business world, India has around 208 million households. Of these only a little over six million are 'affluent' – that is, with household income in excess of Rs 215,000. Another 75 million households are in the category of 'well off' immediately below the affluent, earning between Rs 45,000 and Rs 215,000. The challenge for organized retailers, distributors and consumer goods manufacturers is to capture more consumers in the large category of 'well off', as well as increasing consumer goods penetration and returns in the small category of 'affluent'. There are considerable opportunities for organized retailers in the kind of rural territories that many

[2] Geography of India (2006) (http://en.wikipedia.org/wiki/Geography_of_India).

companies have failed to address. If infrastructure allows the businesses to reach the new markets at reasonable cost, then retail growth will be absolutely explosive.

A traditional bottom-heavy triangle with most people in the lower income group and a few in the top indicates that the centre of gravity of market consumption and of the reference group, which defines aspirations, is very small. As the shape of income distribution starts bulging in the centre, both the centre of gravity of what is consumed, and of whom the majority that defines aspirations should be, shifts. The main reason for this is India's demographic advantage: India's working age population will continue to grow at least for the next two decades at least, unlike most emerging economies which will see their working-age populations decline as a proportion of the total. Young working population drives the personal consumption and brings efficiency and innovation to retail markets.[3]

State of Agriculture: Major Crops and Farming Sector

Agriculture is the backbone of Indian economy. Agricultural development is central to all strategies for planned development. It contributes 27 percent of the overall GDP and accounts for employment of 67 percent of the Indian population. Vast areas of India have tropical and agro-climatic conditions which are well suited for cultivation of horticulture and plantation crops. The horticulture sector contributes about 24.5 per cent towards agriculture GDP from only about 8 per cent of the cultivated area. Besides, providing nutritional and livelihood security and helping poverty alleviation and employment generation, this sub-sector sustains a large number of agro-industries, which generate huge additional non-farming employment opportunities. The range of horticultural products includes fruits, vegetables, spices, coconut, medicinal and aromatic plants, mushrooms, cashew, cocoa etc. India accounts for 10 per cent of the world production of fruits and stands second after Brazil; and is the second largest producer of vegetables after China, contributing 13.4 per cent of the world's vegetable production. A tremendous boost was given to the development of the horticulture sector during the Eighth and Ninth Plans. The Ninth Plan allocation was raised to Rs. 1,400 crore from Rs. 1,000 crore in the Eighth Plan. This sector has had impressive impact in the wake of economic liberalization. The high level of land productivity in many parts of the country can be largely attributed to the growing of high value horticulture crops.[4]

3 Consumer markets in India-The next big thing, KPMG report, 2005.
4 Tenth Five Year Plan 2002-07,(Chapter 5.1 Agriculture) (http://planningcommission.nic.in)

Transformations in the global food system are causing changes in food production and marketing in India. There is a growing domestic market for horticultural produce, in both traditional and exotic vegetables. Production and marketing arrangements are responding to changing demand, driven by urbanization and diet change. Government-sponsored schemes in horticulture have mixed results, generating more jobs than cereal production.

Beyond direct government interventions, new forms of contractual and sharecropping relationships are emerging between private dealers and farmers.[5]

Comparative Advantages of India

Nature has given India several advantages. It has:

- Second largest arable land in the world
- Diverse agro-climatic zones across the country
- Round the year sunshine
- Potential to cultivate a vast range of agricultural products
- Large marketable surpluses and abundant raw material for processing
- Vast pool of skilled manpower in research
- Vast pool of crops

Table 2.1: Area and Production of Agricultural products

(Production in million tonnes)

	India	India's Rank in World Production
Arable Land **(Million ha)**	151	2
Irrigated Land **(Million ha)**	55	1
Wheat	72	2
Rice, Paddy	124	2
Coarse grains (including maize)	29	3
Milk	91	1
Fruits	47	2
Vegetables	82	2
Edible Oilseeds	25	3
Pulses	15	1
Sugarcane	245	2
Tea	0.85	1
Cattle **(Million)**	186	2

Source: 'Marketing Reforms & Enhancing competitiveness', 2006.

[5] Deshingkar Priya, Usha Kulkarni, Laxman Rao, Sreenivas Rao, (2003), 'Changing Food Systems in India: Resource Sharing and Marketing Arrangements for Vegatable Production in Andhra Pradesh', *Development Policy Review*, Volume 21 pp. 627, September.

If these advantages can be leveraged, India can be a leading food supplier to the world. Progress in agriculture made the country being able to meet its minimum needs for agricultural commodities. In order to safeguard the interest of farmer community, it is essential to have food processing industries and value added agriculture schemes.[6]

However the agricultural sector faces many complex problems and often conflicting issues:

- High consumer prices with low farm incomes
- Overflowing granaries with segments of population undernourished
- Very small but rapidly growing organized agri-business sector
- Inefficient supply chain
- High marketing fees of intermediaries
- Too many varieties of produce often not the type required for global markets due to lack of market intelligence
- Poor quality and wastage due to contamination at post harvest stage
- Volumes lost due to multiple handling and poor storage techniques
- Low technology inputs and sub scale plantation sizes
- Too many processing units with small & medium capacities which lack supply chain management capabilities
- Supply of varieties amenable to processing is limited
- Lack of large organized sector participation, limiting the market size for processed products[7]

These are not unsolvable issues. Other countries have succeeded in agribusiness and India too can. With political will, the intellectuals of the country can address these issues and this can make a leader.

Agricultural Marketing

Ministry of Agriculture had formulated a model law on agricultural marketing in consultation with State/UT Governments to deal with emerging trends in agricultural marketing. This

6 Government of Punjab (2003), Punjab Agriculture in Service of Farmers (http://punjabsewa.gov.in/citizen-services).

7 ‘Creating Wealth from Farm Gate to Food Plate’, Bombay Chamber of Commerce and Industry.

legislation enables establishment of private markets/ yards, direct purchase centers, consumers/ farmers markets for direct sale, and promotion of public private-partnership in the management and development of agricultural markets in the country. It also provides for exclusive markets for onions, fruits, vegetables, and flowers. Regulation and promotion of contract farming arrangement has also been a part of this legislation. A provision has also been made for constitution of State Agricultural Produce Standards Bureau for promotion of grading, standardization and quality certification of agricultural produce. For development of marketing infrastructure, four Central Sector Schemes have been introduced for: (i) developing a Marketing Research and Information Network (MRIN), (ii) a scheme with 25 per cent back-ended subsidy component for construction of rural godowns, (iii) strengthening of agricultural marketing infrastructure, grading and standardization in those States that have amended the APMC Act on the lines of Model Act, and (iv) Venture Capital Assistance scheme by Small Farmers' Agri-Business Consortium (SFAC) to promote agri-business projects. Besides, initiative has been taken by the National Institute of Agricultural Marketing (NIAM) to promote public-private partnership in establishment of state of the art terminal markets for fruits, vegetables and other perishables in important urban centres.[8]

Food Processing Industry in India

Food processing industries have a crucial role to play in value addition to the agriculture, increase the shelf life and also in the reduction of post-harvest losses. The most important point in the food industry is that a substantial portion being rural based it has a very high employment potential with significantly lower investment. The fruits and vegetables farming for processing is not only employment intensive but also enhances the gross as well as net returns of the farmers (Rao 1994;[9] Acharya 1997;[10] Dileep et al 2002[11]). Agro-industry also generates new demand on the farm sector for more and different agricultural output, which are more suitable for processing (Srivastava 1989[12]). On the other hand, the development of

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8 Economic Survey 2005-06,Agriculture, pp 170 (http:/indiabudget.nic.in**)**

9 Rao, V M, (1994), 'Farmers in Market Economy: Would Farmers Gain Through Liberalisation?' *Indian Journal of Agricultural Economics*, Vol 49, No 3, July-September, pp 393-402.

10 Acharya S S, (1997), 'Agriculture-Industry Linkages, Public Policy and Some Areas of Concern', *Agricultural Economics Research Review*, Vol 10, No 2, pp 162-75.

11 Dileep, B K, R K Grover, and K N Rai, (2002),' Contract Farming in Tomato: An Economic Analysis', *Indian Journal of Agricultural Economics*, Vol 57, No 2, April-June, pp 197-210.

12 Srivastava, U K, (1989), 'Agro-Processing Industries: Potential, Constraints and Task Ahead', *Indian Journal of Agricultural Economics*, Vol 44 No 3, July-September.

these industries would relax wage goods constraint to economic growth by enhancing the supply of their products (Desai and Namboodiri 1992[13]).

Food Processing Industry has enormous significance for India's development for the vital linkages and synergies it supports between industry and agriculture - the two pillars of economy. While agriculture sector in India contributes one fourth of country's GDP and provides employment to approximately two thirds of the population, today the food processing industry (FPI) alone accounts for 6 percent of the GDP. The quantity of processed food produced in the country is under 1.6 percent while in countries such as Thailand, Malaysia and Brazil it is 65-75 percent. India's fast growing consumer markets are slated to include 500 million consumers by 2010, with the FPI expected to treble from 6 to 20 percent with its share in the global agro-trade expected to rise to 3 percent. So far, between August 1991 and January 2006 cumulative FDI in food processing has been of the order of 1,177 million US dollars, representing only 3.6 percent of the total FDI inflow. With liberalization of trade in the post - WTO regime, India has the opportunity to export agricultural and food products to the world. Over the last decade food processing has grown at a rate of 7.1 percent per annum.[14] The sector has great potential for employment generation, both direct and indirect, across the supply chain in production of raw materials, storage of produce and finished products and distribution of food products to consumers, besides enhancing the shelf life of agricultural products and reducing wastages. The chain of intermediaries in the marketing of fruits and vegetables is very long and this leads to very small fraction of every rupee of profit to the farmer (World Bank 2003;[15] Pingali and Khwaja 2004[16]).

A combination of reasons, such as high taxation levels, infrastructural inadequacies, long and fragmented supply chain, regulatory distortions, multiplicity of laws including some antiquated ones, poor scale economies and retarded flow of credit for the sector, has stymied the natural and healthy expansion of the food processing industries. In India, due to a variety of factors, processed food prices are substantially higher than fresh food. There is an urgent need to take measures to reduce costs, and make processed food affordable. Lack of

[13] Desai, B M and N V Namboodiri, (1992), 'Development of Food-Processing Industries', *Economic and Political Weekly*, Vol 26, March 28, pp A38-42.

[14] Position Paper on Indian Food Processing Industry, The Associated Chambers of Commerce and Industry.

[15] World Bank, (2003), *Unlocking Andhra Pradesh's Growth Potential: An Agenda to Achieve the Vision 2020 Growth Targets*, Poverty Reduction and Economic Management Sector Unit, South Asia Region.

[16] Pingali, Prabhu and Yasmeen Khwaja, (2004), *Globalisation of Indian Diets and the Transformation of Food Supply Systems,* Inaugural Keynote Address, 17th Annual Conference of the Indian Society off Agricultural marketing, Hyderabad 5-7 February (www.fao.org/es/esa)

continuous availability of raw material remains a critical area of concern for the sector. In the horticulture sector itself there are huge post harvest annual losses of around 30-40 percent of the produce (about Rs. 50 000 Crore). Closer interface between research institutions and the farmers, through aligned responsibilities, is essential for effectively tackling location-specific pre-harvest management requirements of various crops in varied agro-climatic conditions.

Public-Private Sector Initiatives in Agriculture Sector

Contract Farming

There is an underlying paradox of the Indian agricultural scenario. The small farmers are not assured of a market and a remunerative price for their produce. On the other hand the agri-based and food industry requires timely and adequate inputs of good quality agricultural produce. This has given birth to the concept of Contract Farming, which promises to provide a proper linkage between the 'farm and market'.

Contract Farming is an agreement between Farmers and Sponsors (Government Bodies/ Corporates /Processors/Individual Entrepreneurs) to co-ordinate and promote production and marketing of agricultural produce.

- The Farmers produce quantity and quality as per sponsor's requirements and the Sponsor/s provide support in terms of agri-inputs, credit, improved farm practices, markets and fixed price procurement and marketing of produce.
- Contract Farming is essentially demand/market driven unlike traditional farming that first produces a commodity and then looks for its market.
- For a single crop/or commodity, a simple Centralized Model with a single sponsor could suffice, whereas for Multicrop Multiyear Contract Farming, like the one adopted by the Punjab agriculture industries corporation, a Multipartite Model involving a variety of organizations, frequently including statutory bodies, is followed.[17]

Contract farming is one of the most significant and powerful means by which farmers are integrated into national and international commodity markets and agro-industrial markets. The nature and structure of contract farming systems vary widely from country to country,

[17] Punjab Agro Industries Corporation Limited, (http://www.punjabagro.com).

but a fundamental element is the vertical concentration of producers in which the States attempt to supervise and condition the production patterns of growers (Little and Watts 1994[18]). Many researchers view this institutional form as an integral element in the "new international division of labor in agriculture" and the "new internationalization of agriculture". Contract farming considerably increases the power of agro-industrial companies and it 'shifts the control away from the farm towards the agro-industrial enterprise'. Contract production is very prominent in the horticultural and tree crops, floriculture and industrial animal husbandry sectors. In Asia and Latin America, rubber, cocoa, palm oil, tea and banana plantations are generally managed through contract farming by transnational corporations and in certain cases by state run agencies. In the United States, 90 percent of chicken farms and 20 percent of pig farms were integrated into agro-industrial conglomerates in 1994 (Hamilton 1994[19]).

In India, contract farming is also fast developing. One instance is the Kuppam project initiated in 1997 by an Indian Corporation (M/S BHC Agro) with support from the Government of Andhra Pradesh. Export crops such as potatoes, gerkhins and chillies are grown using expensive imported Israeli technologies for dry land farming. The land is leased from small and medium farmers who are offered work as laborers on the consolidated holding managed by the company. Promoted by the government as a model of modern agriculture, the pilot project has nonetheless come under heavy criticism based on environmental and social grounds (Chowdry et. al 2000[20]).

Creating Efficient Linkages

To further strengthen backward linkages between the processing industry and the farmer, existing institutions local bodies, cooperatives and self-help groups, should work in unison. There is an equally urgent need to develop forward linkages of farmers/processors with consumers to remove intermediaries and reduce high cost to the consumer and low returns to the farmer/processor thus creating market-driven linkages across the entire supply chain, integration through partnerships and effective linkages.

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18 *Living Under Contract*. Edited by Peter D. Little and Michael J. Watts. Madison: University of Wisconsin Press (1994). xviii, 298 pp. (http://dizzy.library.arizona.edu).

19 Cited in 'Sowing Autonomy: Gender and Seed Politics in Semi-arid India', by Carine Pionetti , (2005), International Institute for Environment and Development (http://www.iied.org).

20 Cited in 'Sowing Autonomy: Gender and Seed Politics in Semi-arid India', by Carine Pionetti (http://www.iied.org).

The government has to come up with several regulatory changes to promote the agribusiness sector. In India the cost of packaging material is very high, compared to world standards, ranging between 10-64 percent of the product cost. Excise duty on packaging is 18 percent. Both needs to be reduced to enable the Indian companies become more competitive. Freight rates in India are significantly higher (up to 70 percent). This problem is compounded by fragile infrastructure, long supply chains with many intermediaries and uncertain farm produce. Deficiencies exist for grading and packing besides pre-cooling at farm site, which could feed into a formalized cold chain. The cold storage capacity today caters to less than 10 percent of the produce, this too is of rudimentary nature with over 80 percent designed only to handle potatoes. Paucity of chilling infrastructure for milk, meat and fish processing is too evident. India has limited Controlled Atmosphere Storage facilities. The proportion of agri exports to total exports came down from 11.9 per cent in 2003-04 to 10.2 per cent in 2004-05. The same for April-October 2005 is 9.6 per cent as against 9.9 per cent during April-October 2004. Major exports during April-October 2005 included marine products (US$773.6 million), meat and meat products (US $ 291.5 million), fruits and vegetables (US$207.1 million) and processed food (US$224.8million).[21]

Agri-Export Zones

The concept of food parks and agri-export zones (AEZs) has been initiated besides several incentive schemes by the Government of India. The Central Government has released a food processing policy in 2001. However the role of the State is considered vital (Dev and Rao 2005[22]). The concept of AEZ attempts to take a comprehensive look at a particular produce located in a contiguous area for the purpose of developing and sourcing for raw materials, their processing and packaging, and finally their export (Viswanadham 2005[23]). AEZs have been approved by the Government of India with a total envisaged investment of Rs 1,325 crore. A total number of 48 AEZs have been approved in 19 States of India. Since the AEZ was flagged off in the 2001 Export-Import (Exim) Policy, the actual investment flows from both the State governments as also private sector was only Rs 145 crore in 2002.

[21] Economic Survey 2005-06, Agriculture, pp 171 (http:/indiabudget.nic.in).

[22] Dev, Mahendra S, and N Chandrasekhara Rao, (2005), ‘Food Processing and Contract Farming in Andhra Pradesh: A Small Farmer Perspective, *Economic and Political Weekly*, Vol XL, No 26, June 25.

[23] Viswanadham, N., (2005), ‘Cold Chain Management: India-Singapore Initiative, Institute of South Asian Studies, Singapore.

The concept of AEZ's which aims to give fillip to agriculture exports, comprises the following a) Identifying a potential zone based on agro-climatic requirements for a particular crop b) Integrating various assistance programs of Central and State Government agencies and providing fiscal incentives to exporters. c) Implementing the same through involvement of private and public partnership and d) Integrating all the activities till the produce reaches the market.

There were several success stories of AEZs. For the first time, 170 tonnes processed litchi was exported from Bihar in 2003, over Rs 58 crore worth of gherkins had been exported from Karnataka and Export of three tonnes of flowers occurred from a model farm in Tamil Nadu. For the first time, vegetables such as snow peas, snap-peas and okra were shipped in Punjab. The total exports from AEZ were of the order of Rs 460 crore in 2002.[24]

Private Sector Initiatives: Contract farming

The Government of India's *National Agriculture Policy* envisages that "private sector participation will be promoted through contract farming and land leasing arrangements to allow accelerated technology transfer, capital inflow and assured market for crop production, especially of oilseeds, cotton and horticultural crops". There are several initiatives under this scheme. We mention two of them below.

Hindustan Lever Ltd (HLL), Rallis and ICICI formed an alliance with the farmers. Under this alliance, Rallis supplies agri-inputs and know-how, and ICICI finances (farm credit) the farmers. HLL, the processing company, which requires the farm produce as raw material for its food processing industry, provides the buyback arrangement for the farm output. In this arrangement, farmers benefit through the assured market for their produce in addition to timely, adequate and quality input supply including free technical know-how; HLL benefits through supply-chain efficiency; while Rallis and ICICI benefit through assured clientele for their products and services.

Launching its agro-business in India with special focus on exports of value-added processed foods, Pepsi Foods Ltd. ('PepsiCo' hereafter) entered India in 1989 by installing a Rs 22 crore state of-the-art tomato processing plant at Zahura in Hoshiarpur district of Punjab. The PepsiCo model of contract farming, measured in terms of new options for farmers,

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[24] *Agri-export zones potential yet to be fully tapped,* cited in 'Business Line' by G. Srinivasan, New Delhi, Nov. 30, 2003.

productivity increases, and the introduction of modern technology, has been an unparalleled success. The company focused on developing region- and produce-specific research, and extensive extension services. It was thus successful in bringing about a drastic change in Punjab farmers' production system towards its objective of ensuring supply of right produce at the right time in required quantities to its processing plant.

Another important factor in PepsiCo's success is the strategic partnership of the company with local bodies like the Punjab Agricultural University (PAU) and Punjab Agro Industries Corporation Ltd. (PAIC). Right from the beginning, PepsiCo knew that changing the mindset and winning the confidence of farmers would not be an easy task for outsiders. The company's unique partnership with PAU and PAIC fuelled its growth in Punjab. Encouraged by the sweeping success of contract farming in tomato in several districts of Punjab, PepsiCo has been successfully emulating the model in food grains (Basmati rice), spices (chillies) and oilseeds (groundnut) as well, apart from other vegetable crops like potato. The company, which had been involved in the export of Basmati rice since 1990, was the first processor in India to invest and strengthen backward linkages for Basmati rice. Similarly, PepsiCo planned a foray into contract farming in groundnut with the farmers of Punjab with the objective of producing export-quality, value-added groundnut such as roasted and salted peanuts, flavoured and coated peanuts, and peanut butter. Using plastic mulch groundnut (PMG) technology sourced from China has enabled PepsiCo to take up two crops in a year - one in the *kharif* and the other in the *rabi* season. The company has demonstrated yields of 3.0 and 4.0 tons per hectare on field trials for *kharif* and *rabi* crops respectively, much above the national average of 1.0 ton/ha.[25]

Several thousands of alliances as above are needed in all the states to reap the benefits of huge natural resources and India's agri business potential.

Organized Retailing in Urban India

India's upbeat economy presents enormous opportunity. The mood in Indian retailing is bursting with optimism, with the hope that the government will introduce favorable legislative relaxation in real estate and partial FDI reforms in retailing. This will encourage

[25] Contract Farming Ventures in India: A Few Successful Cases, *Spice*, Vol. 1 No. 4: March 2003, National Institute of Agricultural Extension Management (MANAGE), Hyderabad.

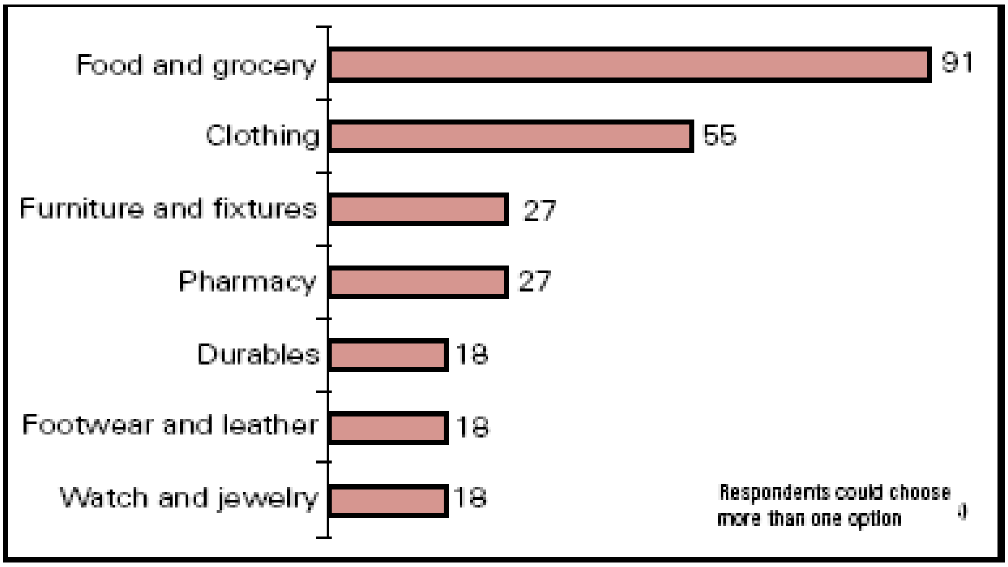
retailing to remain in investment mode. Domestic retailers are likely to exploit the improving economic environment as well as the relatively stable political situation and increase their presence. Industry conglomerates such as Reliance are proposing to invest heavily in retailing and are seeking avenues to establish and expand as they prepare to take retailing in India by storm.

The Indian economy is likely to continue its steady growth with enhanced share in global trade and steady agricultural outputs. Booming employment opportunities, rising urban disposable incomes and credit card ownerships, changing lifestyles and demographic profiles all are showing a favorable skew towards a rising consumerism culture, boding well for retailing growth. Consumer spending is clearly set to accelerate its pace. India is expected to become the most populous country globally by 2050, surpassing China. This points to an enormous nascent consumer base and a potential gold mine for retailing in India. Over the next few years, Indian retailing is expected to expand at a constant value CAGR of 6 percent, approaching Rs5 trillion by 2010. Estimates of the size of the retail sector vary, with recent calculations putting the annual value of Indian retailing anywhere between US$180 billion and US$292 billion in 2003.

Expanding at 8 percent in current value terms over 2004, retailing took a big leap forward in 2005. This was due to strong GDP growth and a stable economic climate that fuelled consumer optimism. Ascending consumer disposable incomes backed by low interest rates and higher ownership of credit cards allowed for inflated spending within key consumer groups in urban and rural India. The AC Nielsen Online Omnibus Survey 2005 rates India in the highest category of Aspiration Index in Asia, along with China, Indonesia and Thailand.

The existing Indian retail sector is largely made up of the unorganized sector. This sector consists of small family-owned stores, located in residential areas, with a shop floor of less than 500 square feet. At present the organized sector accounts for only 2 to 4 percent of the total market although this is expected to rise by 20 to 25 percent by 2010. Many of the companies believe that the potential size of this market is underestimated. They consider that there are considerable opportunities for organized retailers in rural territories that need to be addressed. Companies expect retail growth in the coming five years to be surpass the GDP growth.

Figure 4.1: Fastest growing retail segments in India



Source: KPMG in India Retail Survey 2005

The structure of retailing is also developing rapidly. Shopping malls are becoming increasingly common in large cities. The number of department stores is growing much faster than overall retail, at an annual 24 percent. Supermarkets have been taking an increasing share of general food and grocery. Several builders have announced plans for at least 150 new shopping malls by 2008.

Grocery retailers continued to be the staple of retailing in 2005, accounting for 3/4 of overall retailing value sales as shown in Figure 4.1. Moderate growth of 7 percent in current value terms for grocery retailers in 2005 over the previous year.

Shopping Malls

The emergence of a mall culture and development of malls should come across as a positive development .With all the major retailers planning to double the number of stores and the retail space that they will need in the next three years, availability of real estate space will be a key enabler for growth. Many of the Indian cities are choking under rapid urbanization. And Central Business Districts (CBDs) in many cities today are not capable of supporting the massive growth plans of retailers. High cost of retail space is certainly a cause for concern. Real estate laws in India are archaic in nature and impede the retailing development. The Urban Land Ceiling Act, the Rent Control Act, the stamp duty for the transfer of property ownership are some of these impediments. Six hundred new shopping centres will come up in the Country by 2010, according to Deutsche Bank Research May 8, 2006 (see Table 4.2). Reliance Retail is currently negotiating with realty firms like the Harsh Neotia group and RDB Industries in Kolkata, Baghay.

Table 4.2: Deutsche Bank Research May 8, 2006

Malls and more

Number and mall space in 2008

	Number of malls	gross leasable area (m sf.)
Delhi	96	23.5
Mumbai	55	16.2
Bangalore	14	8.0
Chennai	6	2.5
Kolkata	10	3.2
Hyderabad	12	4.2
Pune	19	5.6
Ahmadabad	7	2.7

Source: Trent Ltd 21

Nagar in Hyderabad, GTC in Mumbai and DLF in Delhi to buy large retail spaces for convenience stores and hypermarkets alone. Including space for rural retail centres and malls, Reliance wants to buy 100m sq ft of land. Reliance Industries Ltd, which plans to launch a retail chain, has submitted a 2.88-billion-rupee bid to revive an ailing shopping cooperative Super Bazaar. Reliance, said in June 2006 it would invest $5.6 billion in retail that would sell everything from food to clothes to travel services.

Technology Implementation and Shortage of Talented Professionals

An agile and adaptive supply chain is the key for success in retail. Logistical issues, constant changes in consumer preferences and patterns, crowded marketplaces, efficient customer responsiveness and swiftly evolving retail formats are the hallmarks of today's retail environment in India and pose a huge challenge for driving growth. In the last 2-3 years, several retailers, ranging from F&B operators to discount clothing, have implemented Supply

Chain Management (SCM) solutions to improve core business processes such as global sourcing, distribution, logistics, innovation, transparency and visibility in financials and inventory, compliance and management of point of sale (POS) data. Going ahead, both FMCG and retail sectors are likely to see an increase in the adoption of SCM. Though the retail industry is expected to create 2 million jobs by 2010, shortage of professionals remains a big challenge. There is a need for developing a number of retail management programs to bridge the gap in availability of talented professionals. There is also a need for senior managers with a vision who can make Indian retail succeed.

Food Safety and Pricing Issues

To ensure a strong presence in global markets, India needs to meet international standards in food safety. The increase in world food trade and the advent of the Sanitary and Phytosanitary (SPS) Agreement under the World Trade Organization (WTO) have also raised interest in food safety requirements. The Government has put more stringent food safety and public health measures on manufacturing, storing and packaging of foodstuffs. The Codex, HACCP (The Hazard Analysis Critical Control Point) and food-hygiene standards have been adopted by the Bureau of Indian Standards, the national standards body in India. Food processing units are being encouraged to adopt these systems on a voluntary basis.

There are extensive controls on packaging, labeling and certification. The Bureau of Indian Standards (BIS) maintains a list of over 17,000 product standards of which only around 3,700 are in line with international norms. BIS health and safety certification marks are obligatory for certain food products. Price controls have been progressively liberalized since 1992, but a small number of items covered by the Essential Commodities Act 1955 remain fully controlled, including coal and petroleum products. Sugar and some foods such as cereals are partly controlled; prices of kerosene and liquid petroleum gas are subsidized by central government. Most packaged goods and all imported goods must carry maximum price tags. In general, prices not controlled by central government can only be limited to a maximum price; minimum price maintenance is not permitted.

Private Label

Private labels are getting retailer attention due to profitability promise. Emulating international counterparts, where private label are increasingly gaining significance, most department stores, supermarket chains, hypermarket chains and discounters in India are promoting private label products. The fundamental reason for this is the much higher margin and profitability on such products, compared with branded alternatives. Indian retailers are increasingly hoping to ride on the attractive proposition of private label products that promise higher quality, lower prices and 100 percent availability to consumers and at the same time offer up to three times higher operating margins to the retailer.

Health and wellness trends are yet to take off in a big way. Pricing and taste continue to rule consumer purchase decisions. High fibre bread, honey, rice, olive oil and soya milk account for almost all of the demand for naturally healthy packaged food in India. Of these, supermarket chains such as Food World, Nilgiri's and Food Bazaar began to offer private label high fibre bread, honey and brown rice.

For customers, private label is generally regarded as comprising products of reasonable quality at lower prices. For retailers, private label translates into higher margins, greater bargaining power with manufacturers and the ability to fill value gaps in consumers' requirements. Almost all the large supermarket chains in South India introduced private label offerings during the review period, especially in commodity items such as rice, wheat, salt, pulses, herbs and spices. Hyderabad-based Trinethra's private label products in staples and groceries proved successful. By 2004, private label accounted for 27 percent of its top line sales and Trinethra hopes to generate at least half of total sales from private label by 2007. Trinethra is also hoping to extend its private label products to include spices, oils and fats, tea and coffee.

RPG's Food World supermarket chain also offers private labels for grocery in a variety of product types including value-added products such as jams and preserves and honey, ketchup and other sauces; bread, rice, noodles and herbs and spices. Food World also offers household care such as detergents and surface cleaners under its eponymous label Food World. Food World often sells its private label products at discounted prices not only in food but also in areas such as household care and disposable paper products. Food World is optimistic about the growth of its private label products, predicting 30 percent value annual growth. Spencer's Hypermarket has six private label ranges, comprising home care, cereals and food; making up 20 percent of the sales turnover of the hypermarket chain.

Internet Retailing

The benefits of internet retailing are unanimously accepted and acknowledged by most manufacturers, retailers and consumers alike. From manufacturers and retailers' perspective, internet retailing offers benefits in the form of cost-effectiveness, profitability and easy accessibility and can be utilized across diverse products and services in grocery as well as non-grocery items. Internet retailing allows greater access to products, enabling second tier cities and suburbs to acquire a wider variety of goods. At the same time, the internet allows consumers to compare and contrast price points and product benefits and thus make informed decisions on purchases. While internet surfing, emailing and other web-enabled services gained vast popularity, the internet retailing and actual purchases are confined to a very niche consumer base. Unlike other developed countries, Indians are not overly enthusiastic about non-store retailing. Indian consumers' prefer to touch and feel items before making their purchasing decisions and prefer to go to a physical store instead. Also the products are not standardized and there could be tremendous amount of variability in products, sizes etc. This proved the key challenge for internet retailing and it therefore enjoyed only a restricted appeal for Indian consumers.

Besides pure play internet retailers, companies such as Fabmall (India) Pvt Ltd decided to adopt a mix of online and offline retailing. Fab Mall's online-offline model is unique in Indian retailing but demonstrates how positive synergies can be achieved between the conventional retail models and the new age online counterparts. Customers can order online and pick up offline. During busy periods, this can reduce crowds and checkout times. The online channel can also help build a customer loyalty program, increase direct interaction at lower costs and help to build the Fab Mall brand making up 23 percent of the value shares in internet retail in 2005. LG Ezbuy was at the forefront of internet retailing. Its success is due to its high value durable goods sales, despite the small volume sales that it contributed. However, it is yet to take off in a big way as a revenue contributor for LG Electronics.

The Distribution Challenge

The large geographical area of India and its relatively weak infrastructure are the most important constraints on distribution. India is a land locked country for internal distribution. High proportion of retail business takes place in the ‘unorganized’ sector and in rural areas that may be many miles from paved roads – which lead to much higher levels of ‘safety stocks' than in organized retailing. The state sales tax regime encourages local stock points in each state, say companies.

The transport and warehousing industry is also fragmented and lacks scale – the average load carried by trucks in India is low by global standards, at around seven tons. Third party logistics is also undeveloped, and most businesses manage distribution and logistics themselves. There is no well designed hub-and-spoke distribution network in India and partly the taxation barriers between states act as barriers to efficient regional distribution. Another big distribution problem is the lack of cold storage chains.

Foreign Direct Investment in Retailing

Foreign direct investment (FDI) in retailing still remains a widely debated and a heated issue on India's economic and political scene. The government stance of protecting local retailers and prohibiting 100 percent foreign direct investment in retailing continued in 2005, restraining international retailers' entry. However, there was gradual economic reform, giving way to easier and faster franchising agreements as well as the loosening of zonal regulations on retail expansion. Prior to 1997, FDI was permitted in retailing on a case-by-case basis. This enabled a few foreign retailers such as Dairy Farm International to enter India with domestic tie-ups.

From 2005, foreign retailers can only enter Indian retailing through franchising agreements. This was the route taken by Marks & Spencer, Planet Sports and also by pharmacy chains such as The Medicine Shoppe and several others. Foreign companies such as McDonald's Corp, Nike Inc and Tommy Hilfiger Corp are others that operate through franchising agreements. FDI is also permitted in wholesale trading. Metro Group obtained the government's approval to enter wholesale trading and in late-2003 established two large wholesale complexes in Bangalore. Subsequently SPAR and Shoprite Holdings Ltd entered India in cash and carry wholesaling.

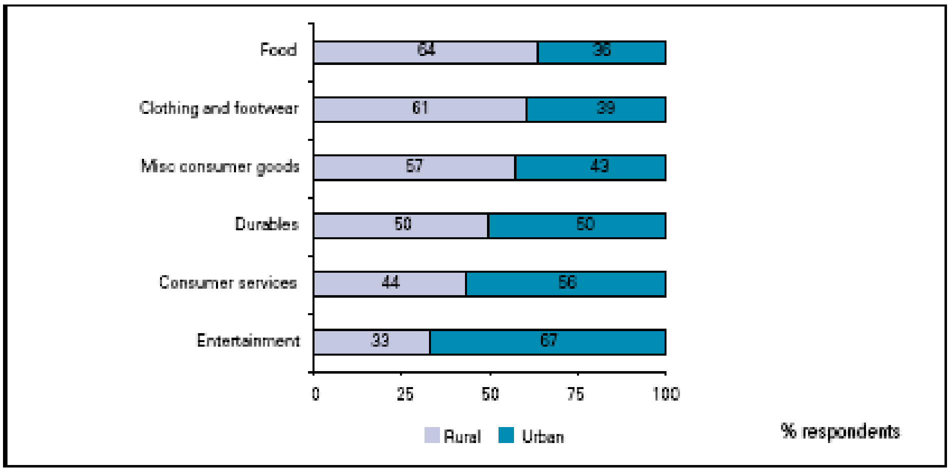
FDI up to 51 percent is also permitted with prior government approval for the retailing of single brand products. Foreign companies are therefore allowed to sell goods sold internationally under a single brand such as Reebok, Adidas and Nokia. Retailing of multiple brands by an FDI company, even if such products are produced by the same manufacturer, is not allowed. However, 100 percent FDI in real estate to include shopping malls and commercial establishments is permitted from March 2005.

FDI up to 100 percent is permitted for e-commerce activities, on the condition that such companies divest 26 percent of their equity in favour of the Indian public in five years, if these companies are listed in other parts of the world. These companies must engage only in business-to-business e-commerce and not in retail trading, suggesting that existing restrictions on FDI in domestic trading are applicable to e-commerce as well.

Rural Retailing

The higher income group in rural India is growing at a phenomenal rate, and the concept of brands and quality are very much prevalent. These current consumption trends provide compelling opportunities for marketers to capitalize on the increasing mass market in India for almost all product categories. Both corporations and entrepreneurs are exploring the rural retailing. ITC's Choupal Sagar, HLL's project Shakthi and Mahamaza are some of the models that are being tried out. Many more such concepts are likely to be tested in the future.

Figure 5.1: Share of Urban versus rural markets



Source: NSSO 5th round; KPMG in India Analysis 2005

The case for Indian retailers to explore rural markets is strong. Given the size of the rural population and the agricultural income growth in rural India, the rural market is definitely an opportunity for retailers with an innovative retail proposition. A clear indicator of this potential is the share of the rural market across most categories of consumption as shown in Figure 5.1.

In the following, we describe three highly successful rural super market initiatives in India.

Mahamaza.com

The company Mahamaza, ended the year with a turnover Rs 1.2 billion. The Mahamaza model is quite simple. Any person wishing to be a dealer can sign up with Mahamaza by making a one-time payment (around Rs 5,000). Then the dealer gets orders from his town or villages and places these orders with Mahamaza. The company further consolidates orders and gets discounts from durables and FMCG companies due to its bulk buying. A part of this discount is passed to the dealer as his commission.

Hariyali kisaan bazaar

Hariyali Kisaan Bazaar is a pioneering micro level retailing effort from DCM Shriram Consolidated Ltd.(DSCL), which seems to creating a positive impact in the way rural India shops and is also revolutionizing the farming sector. This is a chain of centers that aim at providing end-to-end ground level support to the Indian farmer to improve his profitability and productivity.

The first outlet came up at Del Pandarwa (near Shahjahanpur in Uttar Pradesh) in July 2002 and so far 15 “Hariyali Bazaars” have been set up: 6 in UP, 5 in Punjab, 3 in Rajasthan and 1 in Haryana. On an average, each centre is attracting 150-200 farmers a day. Each “Bazaar” operates in a catchment of about 20 km radius and approximately 15,000 farmers live in this area. Each center provides help to improve the quality of agriculture in the area through 24x7 support by a team of qualified agronomists. They provide a complete range of good quality, multi-brand agri inputs, access to modern retail banking and farm credit at reasonable rates of interest, farm produce buyback opportunities and access to new markets.

IT has been a critical backbone to these chain of centers. With support from Polaris Retail Infotech Limited, these outlets make use of IT to provide online support on latest technical advancements, weather forecasts and market prices. Maintaining extensive farmer databases with micro information about the farmers' field to provide them customized services is another innovation. The first phase involves setting up of 30 Bazaars in 2006 and then scale-up to cover 200 locations in the next 6 to 7 years timeframe.

Choupal Sagar

ITC International Business Division (IBD) embarked on a Rural Retail marathon with the launch of its first Hypermarket “Choupal Sagar” on 15 August 2004. IBD is creating a two-layered infrastructure for rural retail: the e-Choupal and the Sagar Choupal. Launched in June 2000, e-Choupal forms the first layer where farmers have access to Internet within walking distance from their villages. The 'e-Choupal' services today reach out to more than 30 lakh farmers in over 28,000 villages through its over 5,000 kiosks across six states (Madhya Pradesh, Karnataka, Andhra Pradesh, Uttar Pradesh, Maharashtra and Rajasthan). ITC plans to extend the initiative to 15 states over the next few years. The physical infrastructure of Choupal Sagar presents the second layer, which brings multiple services under one roof. The core function of this infrastructure is to ensure higher income to the farmer and availability of good quality product and services at most competitive prices.

Choupal Sagar, a farmer's Mall of ITC, is a place where the rural consumer gets almost all of his requirements under one roof. From clothes, FMCG goods, watches, home furnishings and consumer durables to automobiles to tractors, pumping sets, fuel, pesticides, seeds to health care, retail banking to restaurants and much more are available in the Sagars. It also includes the Mandi, providing an ideal setting for farmers to offload their produce at best possible prices. ITC is planning about 25 such malls with investment of Rs.100 crore, in rural India soon. This first Choupal Sagar is located at Sehore, 38 km from Bhopal, the state capital of Madhya Pradesh.

ITC's mall is thus substantially different from a typical urban hypermarket. It provides all allied activities, products and services at one place. The first 7,000 sq.ft mall at Sehore, housed in an eight-acre sprawling complex, has a buying centre for purchasing rural handicrafts as well as agricultural commodities, a hypermarket for selling goods to the rural consumers, a petrol pump, and a farmer facility centre consisting of cafeteria, bank, insurance Company, training centre and a primarily health centre. Reports indicate that the initial response to the hypermarkets has been encouraging and on an average each mall draws about 700-800 customers every day. By end of 2005, Madhya Pradesh is likely to have 25 such malls, and another 25 may come up in other states such as Rajasthan, Uttar Pradesh and Maharashtra.

Many more innovative concepts are likely to be tested in the future as marketers and retailers begin to acknowledge the power of the rural consumer. These concepts are likely to go a long way in bringing a huge rural population within the purview of organized retailing, thereby, increasing the size of the total market.

Conclusions

As discussed above Indian agribusiness and retailing are on the verge of great upheaval. There are developments in urban as well as rural areas in grocery as well other types of retail. While there are significant developments at the organized retail level, the farm-to-shop supply chain is fragmented, inefficient and has no supply chain integrator. The Indian retail cannot be competitive until the supply chain is made integrated, efficient and customer centric. There are thus huge opportunities at various levels. The opportunities range from agriculture and meat products production, food processing, storage and transport and management of supply chains and also retail chains. There are opportunities in retail mall construction in urban as well as rural areas.

The two important problems with the Indian rural economy has been inability to manage the complexities involved in transition of the food and agriculture sector from a supply-driven value chain to a more market-oriented, demand-led value chain, and the failure to ensure growth with equity or inclusion of all stakeholders in the growth process in agriculture. In the past growth experiences have remained confined mostly to large and progressive farmers who have the capacity to invest in transforming their agriculture practices. The small and medium farmers, who have largely remained at the periphery of this transformation, should participate and be the direct beneficiaries of agricultural growth and development. With growing liberalization and globalization of the economy, agriculture has to become more and more market-led and demand driven and in this the role that processed foods and high value crops play is critical.

What we mean is that farmers should produce fruits and vegetables etc with increased shelf life and international appeal and for food processing rather than for raw consumption. For example, out of over 1500 varieties of mangoes grown in India, only 3-4 varieties are available at prices which render processing to be profitable. Export-worthy varieties with higher shelf lives also needs to be developed. Frozen Concentrated Orange Juice is being imported for making juice, as suitable varieties for processing are not available in India. As in the case of oranges, there is need to develop varieties of potato which are suitable for processing into French fries / potato chips, for example, with improved dry matter content. This requires almost a big revolution in the mind set and also in agribusiness management.

The investment by the farmers are for improving the farming conditions such as water for irrigation and also purchase of mechanical equipment rather than any large scale transformation. In States like Punjab, where canal irrigation was developed largely in the public domain, the farmers seemed to have preferred to invest more in machinery, equipment and transport. Households in water scarce States like Tamil Nadu, Karnataka, Maharashtra, Andhra Pradesh, Gujarat, Madhya Pradesh and Rajasthan have invested in developing minor irrigation sources like wells and tube wells.

The Institutes of higher learning should play a crucial role in training the agribusiness managers. This is valid for all states across India. There were private initiatives from ITC, HLL and PepsiCo which we have described earlier.

<u>Product Development: Need Gaps</u>

India has a large repository of traditional foods which have a health benefit. There is a huge opportunity for developing and commercializing innovative forms of traditional Indian healthy foods with long shelf life for exports. e.g. herbal products, ethnic drinks and functional drinks.

Given the increasing demand for global food products in India, there is a need to adapt these products to Indian preferences, using local raw materials. This requires a detailed understanding of the Indian palate across regions and the role played by texture, rheology, mouth-feel and other related characteristics in making food appealing to consumers. They would need to develop appropriate products and packaging to gain competitive advantage in the global marketplace.

Apart from the domestic market, emerging trends in the international processed food market offer tremendous export opportunities to the Indian industry. However, in order to ensure the quality and safety of food with fewer or no additives and preservatives, novel packaging technologies are required

In addition there is a need to:

1. Set up laboratory scale processing plants to enable the food manufacturers to test their new products as well as the development processes.

2. Evolve certification processes for Halal, Vegetarian and Organic foods.

3. Developing food packaging materials.

4. Reduction of the taxes on processed food is also a necessity.

5. Safety and quality control methods.

Mall Construction

Retail boom in India is going to result in mall construction of Rs 112 billion over the next five years (2005-10). Current explosion in investments in retail by Indian power houses will result in additional mall space of 110 mn sqft by 2010. Mall construction in the country is expected to grow at a frenetic pace in the five cites of Mumbai, Bangalore, New Delhi, Hyderabad and Pune. A report on real estate trends by Merrill Lynch said that the number of malls in these cities was expected to grow to about 250 by 2010 as against 40 now. In terms of total area, 12.40 million square feet (mn sqft) of mall space is currently available in these cities, the report said quoting a survey by Knight Frank India. By 2007, the mall space availability was estimated to increase to 55.70 mn sqft.

In the commercial space, business opportunity was led by the unprecedented outsourcing activity in the country. As the trend gathers pace commercial space requirement would expand to 75 mn sqft by 2008 from the present 8.5 mn sqft entirely driven by information technology or IT-enabled services. The boom in mall construction is also driven by organised retail industry. About 200 malls were already under construction in various parts of the country with a combined retail space of 25 mn sqft. The strong potential for the retail industry has prompted entrepreneurs to make big investments in malls. There is immense opportunity for foreign construction companies in this space.

Cold Chain Infrastructure

Investments in real estate and cold chain infrastructure are capital intensive and will yield slow returns. However, 100 percent foreign direct investment (FDI) is allowed in this sector. The Infrastructure consists of items such as Coolers, Warehouses, Refrigerated Trucks, and Carriers. Power disruptions and high petrol and diesel prices make efficient operation of the facilities very expensive. This is the right time for building cold chain infrastructure and giving it for rentals. There are many corporates who have announced investments in organized retail and in agri business. Cold chain is a necessary ingredient for their success. A good proposal might be to form joint ventures with the corporations who are constructing retail malls and also with those who have announced huge investments in retail.

Formats for Entry into India

Direct participation in Indian retail business is still not permitted under India’s regime of FDI controls. A few international retailers in India have adopted different strategies for operating in India. These strategies and models include the following:

1. Franchise agreements: Franchising is the most widely used entry route by international retailers. Some fast food retailers have entered India through the master franchise route, while Pizza Hut has entered India through multiple regional franchises.

2. Cash & carry wholesale trading: 100 percent FDI is allowed in wholesale trading, which involves building of a large distribution infrastructure to assist local manufacturers. The business model is built such that the wholesaler deals only with smaller retailers and not consumers. Metro AG, Germany was one of the first significant global players to enter India through this route. Shoprite of South Africa has effectively used a combination of cash and carry wholesale trading and franchising to set up their first hypermarket in the suburbs of Mumbai.

3. Strategic licensing agreements: This route involves the foreign company entering into a licensing agreement with a domestic retailer. Mango, the Spanish apparel brand has entered India through this route with an agreement with major Brands, a departmental store in Mumbai.

Retail

There is a huge opportunity in this space. However, 100 percent FDI is not allowed for foreign companies. The foreign company needs a joint venture partner. Cold storage is a joint partner with Food World. Here again there are issues that need to be considered. The first one is the products on the shelf: fresh fruits and vegetables, the pulses and oils, and also the processed foods. Since the processed food segment is small and the products are expensive, the retail gets limited to urban elite. Secondly since the cold chain is virtually non existent, procurement of quality supplies from the farmers and selling them quickly is important. The net result is that you are entering a market with dominant players and differentiation is important.

It presents very low barriers of entry for global players and has tremendous market size in both Urban and Rural areas. It provides excellent potential for foreign players with a growth potential of 20-40 percent as in China.

When 100 percent FDI is allowed, several international retailers will enter the Indian market and the retail will go turbulent. This has happened in other controlled markets such as China, Eastern Europe, and South East Asia. There is a huge opportunity for international retailers to open retail stores in the southern or Eastern India. They can move in a cluster with a food manufacturer and a cold chain operator so that the risk is spread.

Logistics

Movement of materials in the food supply chain is an important element for the success. Several international logistics companies such as have expertise in this area. This is an area for active consideration. This is also highly asset intensive. Temperature controlled warehouses, warehouse management systems (WMS) and Transport management systems (TMS), Refrigerated trucks, Hygiene handling of food cartons, etc are involved. Third party logistics providers (3PLs) will be in demand if large international retailers move into India (This will happen when FDI is further liberalized in retail). As happened in other controlled economies, liberalization of FDI will induce joint ventures between retail chains and global logistics multinationals. Home delivery is one of the strong options for big retailers who are located in the outskirts of the city. Customers can order by telephone or Internet and collect the delivery at the nearby outlet. Assistance of logistics service providers will be needed for order fulfillment.

Technology

Safety concerns, competitive pressures and regulatory requirements are creating demand for more traceability in the food service industry than ever before. Also use of IT for tracking the sales and demand forecasting is widely accepted.

The above are some of the obvious activities for collaboration. There are several others such as training, financing, standards development etc where there could be collaborative ventures between Indian and Foreign companies.

The Indian Food and retail story has lots of future and everything points in its favorable growth. There is lot of scope for foreign investment in all aspects of food and retail.

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