RESEARCH ARTICLE

Retailers and Consumers Perspectives Towards Food Retail

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ABSTRACT

The diverse agro-climatic conditions in India offer huge potential for production of a wide variety of crops from cereals, pulses, fruits and vegetables all round the year. The proliferation of organized retailing in India is also altering food consumption patterns, promoting imported foods, branded foods, processed foods and a wider assortment. The study was performed with the main objective that to analyze the trend of fruits and vegetable production export, import and consumption pattern in India. In these four organized retailer formats were contacted and collected data through interview method to analyze the supply of fruits and vegetable through organized retail formats in Coimbatore.

Keywords: *Fruits and vegetables, Production, Growth, Retail formats, Consumer behaviour*

Agriculture provides significant support for economic growth and social transformation in India. As one of the world's largest agrarian economies, the agriculture sector in India accounted for 8.0 percent of the GDP in 2009-10. The diverse agro-climatic conditions in India offer huge potential for production of a wide variety of crops from cereals, pulses, fruits and vegetables all round the year.

Besides, globalization, growing economy, population growth, per capita income, demographic changes etc, have thrown many opportunities for the agricultural marketing. With the development of means of transport and storage facilities, agriculture has become commercial in character and the farmer grows crops for the market. The country at present is characterized by growing customer class, changing life styles by expanding urban population, increasing numbers of nuclear families, dual income families, changing attitudes and tastes with increasing modernization and high level of savings. With a growing population of 1.13 billion and increasing income levels, the demand for value added food products is rising at 13 percent per annum. Trends in food consumption pattern obviously shows the declining trend in cereals and increased consumption of vegetables, fruits, milk, meat, egg and` fish and edible oil.

The organized form of food retail accounts for less than one percent of food consumed in India. Organized food retailing has grown 25 percent per annum for the last two years and the momentum is likely to increase with the entry of large corporate and possible relaxation in the Foreign Direct Investment policies. The proliferation of organized retailing in India is also altering food consumption patterns, promoting imported foods, branded foods, processed foods and a wider assortment. The organized retail is projected to grow at of around 30 percent and is estimated to account for 13 percent to the total Indian retail by 2012 (Technopak 2008).

The changing behavior of consumer and farmer towards the fruits and vegetable leads the growth trend of production and consumption in India. Meanwhile, it reflects in the major cities of India. Coimbatore is a second layer city with high industrialization opportunity and growing population. Hence, the study was performed with the main objective that to analyze the trend of fruits and vegetable production and consumption pattern in India. Followed by the second objective is that to analyze the supply of fruits and vegetable through organized retail formats in Coimbatore city.

MATERIAL AND METHODS

The Secondary data were collected from published sources and analyzed the trend of fruits and vegetable production and consumption pattern in India. Currently in an urban area the fruits and vegetable available in the consumer through a wide range of retail outlets such us farmers shandy, local markets, kirana stores, fruits and vegetables specialty organized retail outlets, organized super markets, fruits and vegetable mandies, mobile vendors etc., These retail stores are different in characters, service provided by them, range of products, prices , quality etc., The consumer has set of options to purchase fruits and vegetables to meet the daily requirement

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of their family. Generally, the expansion of organized retail store would expect to affect the sales and adversely affect the growth of traditional stores, local mandies (Market) and kirana stores. Considering the changes in the economic environment and the consequent changes in the consumer behavior, it is essential to analyze the consumer store choice decision and shopping behavior. The finding of the study will through light strength and weakness in supply of fruits and vegetables of the following retailers viz., National Corporate Retail Chains (NCRC), Regional Corporate Retail Chains (RCRC), Private Sector Specialized Stores (PRSS), Public Sector Specialized Stores (PUSS) and Traditional Mom and Pop (M&P) Stores in Coimbatore, Tamil Nadu. In these four organized retail formats were contacted and collected data through interview method to analyze the supply of fruits and vegetable through organized retail formats in Coimbatore city.

Table 1. Per capita consumption trends in fresh fruit and vegetables (in ₹)

Year	Population (Million)	Fresh vegetables per capita expenditure	Fresh fruits per capita expenditure	Total fresh fruits and vegetables per capita expenditure
1996	934	269	71	340
1997	950	284	83	367
1998	966	330	80	410
1999	981	407	116	523
2000	997	394	116	510
2001	1027	436	106	542
2002	1043	461	117	578
CAGR (Per cent)	1.6	9.4	8.7	9.7

Source: Technopak (2008)

Changes in consumption pattern

The food consumption patterns in India is rapidly changing from cereal based food products to high value food products and slowly from fresh, unprocessed, unbranded food products to processed, packaged and branded products. The strong economic growth and sufficient disposable income, consumers are conscious of the latest trends in health and hygiene, particularly in the fast growing cities. The market attributes like entertainment for children, basic amenities and affordability of the market place are also considered to be important by the consumers.

The per capita consumption of fresh fruit and vegetables increased at an annual compound growth rate of 9.7 per cent per annum between 1996 and 2002 growth in population was only 1.6 per cent during the same period, implying higher demand for fruits and vegetables. The details of population growth and increase in per capita expenditure on fruits and vegetables are given in Table 1.

Table 2. Key statistics of Indian food industry (in ₹ '000 crores)

Particulars	2002-03	2006-07	2010-11*	2014-15*
Food Industry Size	770	880	1100	1320
Food processing Industry Size	308	374	484	660
Size of organized sector in Food Processing Industry	57	101	162	264
% share of Food Processing Industry in total Food Industry	40	43	44	50
% Share of Organized Sector in Food Processing Industry	19	27	36	40

Source: GOI Report (2010) *Projections

Concern for food safety and quality

The recent spur in economic growth and improvement in income, have led to emergence of middle and high income consumers concerned on their health and hygiene and yearn for safety food and crave for consuming fresh produces (especially leafy vegetables) such as salads, cooked or blanched vegetables and juices.

The fruits and vegetables are cultivated even with waste and sewer water generated from industrial areas and the rapid access to city markets. Use of sewage and drainage water for cultivation lead to excessive accumulation and deposits of heavy metals in soils which in turn leads to elevated levels of heavy metal uptake by crops (Karanja *et al*., 2010). Other production level hazard emanate from industrial disposals, vehicle exhausts, dusty winds spread over the crops and use of uncured animal manure (Hide *et al*., 2001). Demand for aesthetic attributes and spotlessness to allure a huge chunk of customer populace, also were driven by the application of toxic chemicals, fertilizers and other substances (Thrupp *et al*., (1995) Okello and Swinton, 2010).

Table 3. Production and per capita availability of fruits and vegetables in India

Crop	2007-2008	2011-2012	2012-2013	2013-14	2014-2015	2015-2016	2016-2017
Production of Fruits (In Million MT)	59.56	62.18	65.91	69.87	74.06	78.5	92.84
Production of Vegetables (In Million MT)	128.45	134.87	144.31	154.42	165.22	176.79	175
Projected Population (In Crore)	112.8	119.2	120.8	122.3	123.8	125.4	126.8
Per Capita Gross Availability of Fruits (In gms/day)	144.66	142.92	149.49	156.51	163.89	171.51	200.6
Per Capita Gross Availability of Vegetables (In gms/day)	311.98	309.99	327.3	345.92	365.65	386.25	378.13
Per Capita Net Availability of Fruits (In gms/day) (25% loss+ 5 % Exports and Processing)	97.00	100.00	105.00	110.00	115.00	120.00	126.00
Per Capita Net Availability of Vegetables (In gms/day) (25% loss+ 5 % Exports and Processing)	209.00	217.00	229.00	242.00	256.00	270.00	286.00

Source: Ministry of Agriculture & Farmers Welfare, Govt. of India. (ON1601)

Overview of Indian food industry

The size of the Indian food industry is estimated at ₹ 8,80,000 crores (US $200 billion) in 2006-07 and is slated to reach ₹ 1,320,000 crores (US $300 billion) by 2015 with the increasing share of the processed food (in value terms) from 43 percent to 50 percent. Indian Food Industry is highly fragmented and is dominated by the unorganized sector. The food processing, being the major sector in the Indian food industry stands at ₹ 74,000 crores (US $85 billion) and gives direct employment to about 20 lakhs or 2 million workers. Fruits and vegetables, dairy products, marine and fish, meat and poultry, edible oils, staples, alcoholic and non-alcoholic beverages, breads and bakery, confectionary and packaged foods are the key sectors in the industry, which offer tremendous growth potential and investment opportunities. Organized food retailing and food services are the other fastest emerging opportunities, organized food retail is expected to grow ₹ 2,33,200 crores (US $53 billion) by 2013 the annual growth rate of 25 percent (Technopak, 2008). Main sectors comprising of the Indian food processing industry are fruits and vegetables, dairy products, marine and fish, meat and poultry, edible oils, staples, alcoholic and non-alcoholic beverages, breads and bakery, confectionary and packaged foods, among others. The growth rates of key sectors of Indian Food Industry are given in the Figure 1. and Table 2.

Table 4.Export of fresh fruits and vegetables

Year	Export (In ₹ in Crore)		Import (In ₹ in Crore)	
	Fresh fruits	Fresh vegetables	Fresh fruits	Fresh vegetables
2010-2011	1355.2	2620.5	3586.51	40.6
2011-2012	1937.2	3023.3	4610.84	7.31
2012-2013	2686.6	3407.2	6180.47	11.24
2013-2014	3645.6	5384.5	7715.96	41.67
2014-2015	3160.1	4666.5	9566.81	11.14
2015-2016	4191.2	5237.1	11071.57	394.45
2016-2017	4974.2	5790.7	11290.62	11.12
2017-2018 (P)	4746.3	4997.5	12524.53	25.64

Abbr. : P : Provisional.

Source : Ministry of Commerce & Industry, Govt. of India

Fruits and vegetable sector

The total production of fruits and vegetables was 92.84 and 175 Million MT in the year 2016-17 and is estimated to grow (Source: Ministry of Agriculture & Farmers Welfare, Govt. of India., 2017). While India is the second largest producer of fruits in the world, it is the largest producer of fruits like mango, banana, papaya, sapota, pomegranate and amla. About 40 per cent of the world's mango and 30 per cent of the world's bananas are produced in India. Vegetables occupy an area of 7.8 million hectares during 2009-10 with a total production of 133.5 million tonnes and a productivity of 16.7 tonnes/ha. (Source: National Horticultural Board, 2010)

Though fruits and vegetables constitute 23 percent of the overall food industry, its contribution of processed fruits and vegetables in total fruits and vegetables market is about 7 percent. Of the total processed fruits and vegetables, 38 percent (₹ 5,374 crores or US $1.2 billion) was contributed by organized sector and the rest of the processing was in the unorganized sector. (Technopak, 2008). Around 38 per cent of the fruits and vegetables processing is done by organized sector.

Table 5. Area and production of fruits and vegetables in Tamil Nadu (1998-99 to 2009-10)

Year	Fruits		Vegetables	
	Area (Ha.)	Production (Ton.)	Area (Ha.)	Production (Ton.)
1998-99	305830	4402240	185800	3785780
1999-00	309800	3601550	201810	4281800
2000-01	315558	3844088	217314	5254247
2001-02	324740	4196751	215515	5038024
2002-03	320538	3796534	159862	2939403
2003-04	327577	3350100	187202	3937518
2004-05	345540	4236982	210314	5479876
2005-06	368485	5488618	229718	5335034
2006-07	377136	6146197	238449	6497232
2007-08	385682	6415065	238895	6783590
2008-09	387939	6059747	223627	5367411
2009-10	390462	5789727	223944	5028505
CAGR (%)	**2.59**	**5.21**	**1.88**	**3.67**

Source: GOTN, Report (1998& 2010)

The vast production base offers India tremendous opportunities for export of fruits and vegetables (Table 4). During 2016-17 India exported fruits worth ₹ 4746.3 crores and vegetables were ₹ 4997.5 crores and imports fruits worth ₹ 12524.53 crores and vegetables worth ₹ 25.64 crores (Source : Ministry of Commerce & Industry, Govt. of India, 2017). Fruits and vegetables are being consumed in both fresh and processed form. The prominent processed forms of Fruits & Vegetables are dried, frozen, dehydrated and canned products. The main processed items are fruit pulp, juices, drinks, jams, squash, pickles and chutney.

Table 6. Area and production of fruits and vegetables in Coimbatore district (2005-06 to 2010-11)

Year	Fruits		Vegetables	
	Area (Ha)	Prodn. (Ton)	Area (Ha)	Prodn. (Ton)
2005-06	9992	335808	7866	183666
2006-07	11065	417930	8761	234997
2007-08	12437	495340	8321	250083
2008-09	13138	577056	7866	183666
2009-10	12938	608132	8761	234997
2010-11	13159	611172	8321	250083
CAGR (%)	5.58	12.98	0.64	3.59

Source: GOTN Report (2005 & 2010)

The area and production under fruits in India increased at a growth rate of 4.34 per cent and 55.87 per cent during the period 2007-08 and 2016-2017 (Table 3). In the case of vegetables, the growth rate was in India increased 36.23 per cent during the same period.

The area under fruits in Coimbatore District during 2005-06 was 9,992 ha. and the production was 3.35 lakh tones (Table 6). The area and production of fruits in Coimbatore District increased at a compound growth rate of 5.58 per cent and 12.98 per cent during the period 2005-06 and 2010-11. The area under vegetables in Coimbatore

District during 2005-06 was 7866 ha. 2005-06 and the production was 1.83 lakh tonnes. The area production under vegetables in Coimbatore District increased at a compound growth rate of 0.64 per cent and 3.59 per cent during the same period. (Source: GOTN Report, (2010). India is the second largest producer of vegetables after China and the leader in the production of peas and okra. It occupies second largest position in the production of brinjal, cabbage, cauliflower and onion and third position in potato and tomato in the world. In India the per capita availability of fruits has increased from 138 gms per day in 2005 to 172 gms per day in 2010. Similarly, the per capita availability of vegetables has increased from 279 gms per day in 2005 to 318 gms per day in 2010. (GOI Report, 2011)

Table 7. Demographic details of sample retail stores*

Particulars	NCRC	RCRC	PRSS	PUSS
Store type	National Chain	Regional Chain	Private Sector	Public Sector
Organized / unorganized/ quasi organized	Organized	Organized	Organized	Quasi Organized
No of years in retail store business	6	14	44	11
Average annual sales (Rs in Crore per Year $^{-1}$)	1	12	10	30
Average Volume of sales (mt. yr^{-1})	0.36	2.94	2.00	38.28
Number of self-service counters	-	-	-	-
Number of manual counters	4	4	6	134
Store format: Supermarket /Hyper/ specialty/ chain sore	chain sore	Chain Store	Specialized store	chain sore
Ownership: Individual/private/State-owned Collectively owned/ Joint venture/MNC	Company	Joint venture	private	State-owned
Merchandise assortment (low / medium /high)	medium	high	high	high
Number of stores in the city	5	7	7	6
Average daily foot print (Nos.)	600	700	500	10000-30000 persons
Total employees worked	20	20	40	4
Fruit sales (%)	30	40	50	15
Vegetable sales (%)	70	60	50	80
Processed products (%)	20	-	-	5
Other products (%)	50	-	-	-
Total area of operations (space) (square feet)	6000	2000	1300	More than 50000
Centralized Air-conditioning	Available	-	-	-
Cold storage (tones)	6	-	-	2
Mobile cold store	-	-	-	-
Collection centers	13	5	2	-
Own Parking facility	Available	Available	-	Available

*Source: Primary Survey

NCRC - National Corporate Retail Chain; RCRC - Regional Corporate Retail Chain; PSSS - Private Sector Specialized Stores; PSSS - Public Sector Specialized Stores

Retail of fruits and vegetables in Coimbatore city

Coimbatore city get all kinds of fruits and vegetables round the year. The area production and productivity of fruits in Coimbatore district has recorded study increase from 2005-06 to 2010-11. In the case of vegetables there was slight increase in production and productivity between 2005-06 and 2010-11 (GOTN S&C Report, 2010). Fruits such as apple, musambi, orange, mango etc., were sourced from both national as well as foreign countries such as Newzland, China, Australia, South Africa, USA etc., The approximate sales of fruits from the city amounts to 120 million tones.

The city lodges 2 major wholesale fruits and vegetable markets. These wholesale markets supply fruits and vegetables to all the organised and unorganized fruits and vegetable retail outlets in the city as well as to Kerala State. Apart from these two wholesale markets, fruits and vegetables are also arriving from neighboring districts of Tamil Nadu, There exist four types of organized Retailers dealing with fruits and vegetables sales in the city. They are National Corporate Retail Chain, Regional Corporate Retail Chain, Private Sector Specialized Stores and Public Sector Specialized Stores. Besides this, innumerable Mom & Pop stores were also available in every nook and corner of the city selling grocery along with Fruits and Vegetables. The vegetable growers in

Coimbatore district also their produce sold directly to consumers without interference of middlemen at Farmers Markets locally called as 'Uzavar Santhai' established at six locations in the city.

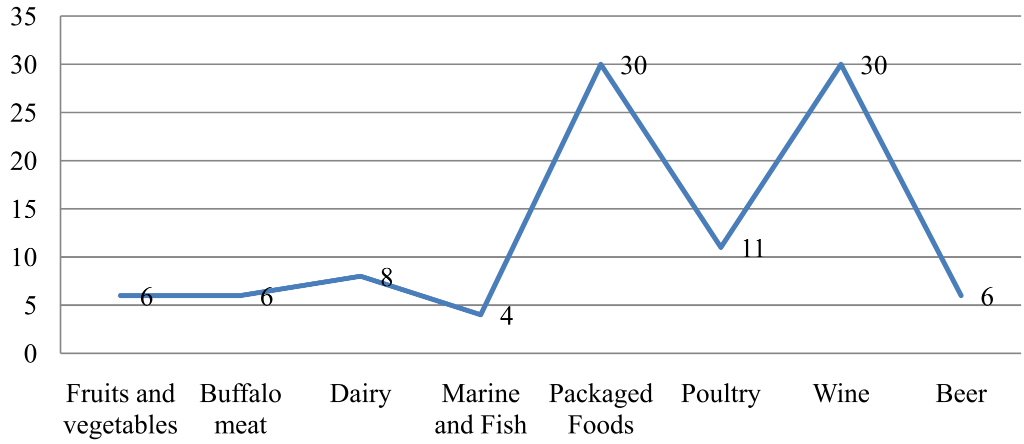

Figure 1. Growth rate (%) of the key sectors of Indian food industry

Source: GOI Report, (2010)

Demographic details of sample retail stores

The retailers were asked to indicate about the demographic details of sample retail stores and the results are presented in the Table 7. It reveals that National Corporate Retail Chains (NCRC) supplied 30 % fruits and 70% of total perishable item sales. Regional Corporate Retail Chains (RCRC) supplied 40 % fruits and 60% of total perishable item sales. Private Sector Specialized Stores (PRSS) supplied 50 % fruits and 50% of total perishable item sales. Public Sector Specialized Stores (PUSS) supplied 15 % fruits and 80% of total perishable item sales.

CONCLUSION

Agriculture sector ensures food security and food grain production increased to an all - time high of 218.11 million tonnes in 2009-10. It is roughly estimated that around 140.3 million tonnes of total food grain production is available as marketed surplus. Markets affect profitability of agriculture and conditions in rural areas. An efficient marketing system can provide better prices to producers and improve the availability of competitively priced produce to the customers. The markets in which the rural people participate are those for products, inputs (labor and non labor, and finance from formal and informal sources). Changes in agricultural marketing system are part of the larger process of economic reforms. Liberalization programs adopted in the past two decades have resulted in developing private, efficient, and competitive agricultural markets. But there are also criticism that the transactions costs and risk remain high, and policies designed to improve incentives for agricultural production and marketing often have had a little impact on small farmers and the rural poor. On the other hand there is growing awareness among corporate houses on the tremendous potential of rural India. For them rural marketing involves addressing around 700 million potential customers, over 40 percent of the Indian middle-class, and about half the country's disposable income. 'The Great Indian Middle Class' consisted of 10.7 million households of which 36 percent lived in rural areas.

The study reports that the fruits and vegetable production in India have sustainable growth over the past decade. Also the consumers per capita availability of fruits and vegetables have increasing trend. At the same time, the consumer preference towards organized retail outlets in the city Coimbatore for purchase of fruits and vegetables is evidenced. In future, the sales through organized retail supply chain with enhanced quality maintenance for the perishables like fruits and vegetables would have the opportunity to increase in sales.

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