CHAPTER - 8

CONCLUSIONS
8. **CONCLUSIONs**

As discussed above, Indian retailing is on the verge of a 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-to-consumer and farm-to-manufacturer/processor-to shop-consumers 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 which must be able to reduce wastage. There are thus huge opportunities at various levels. The opportunities range from agricultural products, food processing, storage and transport and management of supply chains, export of food products and also development of 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 or for the farmers in proximity with urban area. The small and medium farmers or those who are in extreme hinterland, 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. It is necessary that the farmers should produce fruits and vegetables etc. with increased shelf life and international appeal and for food processing rather than for raw consumption.
Effective supply chain management of perishable food products by retailers is influencing the Consumer satisfaction. Today’s vibrant consumers are not only apprehensive about price, quality and service but are also concerned with corporate social responsibility of business, which is an area of concern, as it contributes to as good as 72% loss of perishable food products in terms of quality and 35% wastage in terms of quantity. Optimum satisfaction and value creation through supply chain management in the dynamic environment of consumer behaviour and speckled taste. The requirement of effective supply chain management in order to enhance quality of products for its optimum utilization and reducing wastage is of paramount importance in consumer’s mind.

Now, policy makers have to ponder over why economists of our country are failing to give solutions to inflation and price rise of essential commodities? Some advised solutions would be - check on exports, option of import, rising of interest rate and various other steps which usually RBI adopts time to time. But nobody thinks about the root of the real problem which lies in the supply chain management of perishables. It is a disgraceful fact that despite having first/second positions in production of food products including perishables, millions of people are not getting food in our country. The high rate of wastage is responsible for this, whereas 35% products are getting wasted due to improper supply chain.

Generally it is observed that there is more than five times fluctuation in prices of perishable products. Does the production decrease five times or the consumption increases five times, which leads to five times increase in prices of perishable or vegetable products? Actually, it is chain reaction where traders want to earn more profit and create artificial shortage by hoarding. For example, the decrease in production of onion has given opportunity to onion traders to raise prices. This situation has also motivated tomato traders to earn supernormal profits as the market is becoming lucrative. Raising prices in the name of inflation and encashing on the wave of inflation is a common practice, though there is no actual decrease in
production of tomato or cauliflower or other perishable products. The prices are up for other products too including the product in question. (Say onion).

The role of governments becomes critical here. As government officials start raiding the hoarders, they go on strike, which further leads to a critical situation, as has been seen in Nashik and Delhi in recent past (Dec-Jan 2011). Wholesalers cite the reason for hiked prices by saying that they have to purchase the produce at high prices so they sell it at high price, as they have to accommodate for the losses occurring in transportation due to the perishability of the products. (Traders in Delhi said that they have to purchase onion at the rate of Rs 35/-, so they are not able to sell the product at less than that price.) The co-ordination between food supply department and income tax department is not so strong that they can find out the actual investment or profit of traders due to non-availability of accounting records/data.

It was reported in Indian Express dated Jan 11, 2011, that the Agriculture secretary, Mr. P.K. Basu said that the vegetable production cluster would be developed on the periphery of major urban centres to meet the demand. We have to re-think on the feasibility of the plan. We are aware that on the outskirts of any urban centre, the prices of lands are soaring due to residential or commercial requirements and farmers are selling their lands to builders / developers at high prices. Therefore, economic production of vegetables or perishable products will not be feasible in the long run. This system will also increase the disparity of remuneration earned by farmers located nearer to urban centres verses extreme rural hinterland.

It is also contemporary to mention the vicious cycle in production process of perishable product occurs. It is seen that the farmers are cultivating more produce and expecting better remuneration, but due to high production, the price for the particular product goes down and traders or middleman generally pay very less price to farmer which is sometimes even less than the cost of production. In that case, the farmers leave the produce in their farm as harvesting becomes more costly. Farmers lose their bargaining
capacity due to over production and ultimately become the victim of their own efforts and labour.

One more thing which requires significant attention is the role of middlemen and small retailers in perishable supply chain whose presence makes it more complicated. The 94-95% perishable produce are sold through unorganized retailers which includes middleman, wholesaler and small retailers. There is 70% quality loss and 35% quantity loss occurs due to mishandling of perishable produce and improper supply chain. The retailers are untrained in handling of perishables and worry about their own profit only and return on investment, forgetting the aggregate loss of produce. This is the prime reason why the fivefold increase occurs in price received by farmers and the produce is sold to end consumers. It is quite difficult to stop any one from doing business or politically impossible to make laws /regulations to eliminate middlemen or small retailers from the system till it is lucrative for them.

Therefore, in view of above, the only solution lies with development of infrastructure for efficient management of supply chain of perishable products. This will be a long term solution not only to control inflation but also reduce wastage, appropriate remuneration for farmers for their produce irrespective of their proximity with urban area, reduce fluctuation in prices, increase consumer satisfaction in terms of stable price, continuous availability of products throughout the year, mitigate the problem of seasonal fluctuation in production due to climatic conditions or bad weather or monsoon etc. The other angle of this will be, enhanced processing facility which will also boost export and employment opportunity. This will also enhance our credibility in the international market which often suffers due to frequently changing government policies to ban exports due to domestic price rise of perishable products.

The major question (Yaksh Prashn) is, how to develop efficient supply chain for perishable products? The solution is not straight forward as it needs a multi-pronged approach towards agricultural reforms, macroeconomic policy,
marketing facilities, reforms in APMC act, development of processing facilities, investment in cold logistics infrastructure, storage facilities of perishable produce at hinterland, development and promotion of contract farming and promotion of organized retailing to reduce the role of middleman and small retailers in handling of perishable products etc. The elimination of small retailers/ middlemen is neither feasible nor justifiable as it would increase further complication of un-employment /social security, so they can be better facilitated with adequate training for handling of produce. Their involvement /participation for maintenance of advance infrastructure required for supply chain management will be more fruitful as they have an interest and knowledge in their area of work. The FDI and PPP model can be applied to develop these infrastructures as our country has a good experience in creation of roads, bridges and in the power sector.

In contract farming, organized retailers generally lag in their initiative in providing inputs, skill, technology, extension facilities and financial services to farmers and therefore farmers are unable to gain access to the inputs and finance higher productivity, reduced the risk and reliable access to market. It is therefore becoming ‘contact farming’ rather than ‘contract farming’.

The development of efficient supply chain management will certainly be helpful for government as it will reduce embarrassment for the government in controlling inflation and price fluctuation, improve credibility of the government, reduce wastage, provide better remuneration to farmers and enhance their quality of life and availability of food as basic necessity to general/ poor people. This will also check the undue advantage taken by the hoarders during crisis and pressurizing the government by paralyzing the supply system by strikes and leaving the government machinery helpless.
8.1 **Specific conclusions**

a) **Comparative Present Practices of SCM in Retail:**

As per our first objective of research on comparative present practices of supply chain management for perishable products in organized vis-à-vis unorganized retail, the following conclusions are clear:

- The education level among organized retailer management is very high as they are professionally qualified which makes them more efficient and vibrant in adoption of new technology. In unorganized retail, more than 80% are matriculates or below which proves a barrier in adoption of new and efficient SCM practices.

- Most of the organized retail managers are young & dynamic and are easily embracing organizational changes making the organized retail more agile. 84% unorganized retailers have an experience of more than five years which can be effectively utilized by enhancing their skills with proper capsule training course on handling of perishable produce. Their skill can also be utilized by employing them in cold store/warehouse/cold logistics as facilitators and/or operators.

- 85% unorganized retailers are single owners capable in fast decision making but are also deprived with ideas on innovations and unable to manage large scale operations which requires multiple specialization and higher skill level. In organized retail, the numbers of staff are more than ten, making them more efficient due to skilled workforce.

- Organized retailers are using multiple devices as well as source of procurement which makes them more productive due to low cost & speedy procurement and better negotiation capacity. In unorganized retail, 82% are self-collecting the perishable produce through a middle party or agents which contributes to higher amount of wastage.

- Selling time period is higher in unorganized retail but lower in organized retail. In organized retail, the use of air-conditioning and
other temperature control devices enhances the shelf-life of perishable produce. Non-availability of facility mingled with higher selling time increases the wastage in unorganized retail.

- Use of IT enabled services and computers reduces stock outs and bullwhip effect, making organized retail SCM more efficient in comparison to un-organized retail. Fast and efficient replenishment with low inventory pile-up can be seen as a tremendous contribution of organized retail in reduction of wastage as well as higher level of customer satisfaction with improved quality, product assortment and better merchandizing.

- Only 21% organized retailers are working with fully automated and integrated systems whereas as 79% are working on specially designed ERP packages to cater to particular organization’s needs. Higher level integration like Wal-Mart which integrates producers / farmers to consumers and ‘vendor managed inventory’ is still a long mile-stone for Indian organized retailers.

- 66% organized retailers have their own transport system whereas unorganized retailers are fully dependent on irregular casual hiring which increases the probability of mishandling of perishable products, delay due to freight rate negotiation, exposure to higher temperatures due to inappropriate uncovered transport, un-availability of racks/shelves causes more loss in quality as well as reducing the scope of optimum capacity utilization of vehicles.
b) Effectiveness of Investment for Development of Advance Logistics Infrastructure and its Cost Competitiveness

In our second objective of research, where we intended to find out the effectiveness of investment required for development of advance logistics infrastructure for organized retailers and its cost competitiveness with respect to unorganized retailers, following are concluded:

- 60% of unorganized retailers have monthly sales less than 50,000 rupees per month and very few are having monthly sales levels touching three lakhs, whereas majority of organized retailers have sales levels more than ten lakhs and above. Large scale operations with higher operating costs drive organized retailers towards investment but unorganized retailers don’t find any scope for investment. The public-private partnership (PPP) model induced with government initiative will provide scope for unorganized retailers to be cost competitive in respect to organized retailers. This will help to provide a level playing field to unorganized retail and reduce monopolistic behaviour of organized retail in future. This will also be helpful in tackling with large scale un-employment which may arise with expansion of organized retail. Some of the experienced unorganized retailers can find employment in cold logistics, warehousing, and processing industry with proper training in respective areas.

- Majority of respondents from both retail have a positive opinion regarding the threat perception to unorganized retail from organized retail due to large scale investment in integration and infrastructure development in the area of cold logistics, pack houses, warehousing, permanent selling space with covered shade, cold storage for short-term as well as long term utilization, packaging, grading & processing, marketing infrastructure for price discovery mechanism. Unorganized retailers are also aware of the benefits of investment, its impact on waste reduction and changing consumers behaviour. As it is apparent
that unorganized retailers are unable to make any investment, they want government support for infrastructure development.

- Andersen Consulting report on supply chain infrastructure also advocates about financial viability of investments where NPV (Net present value) are shown positive with return on capital employed (ROCE) would be 20%\(^9\). Other social benefits are also attached with investment in perishable cold logistics infrastructure such as high standards of hygiene, cleanliness, and reduced risk of disease, employment opportunities, inclusive growth of suburban and rural hinterlands in and around developed cities/metros.

- The key in reducing costs is to address the challenges of wastages, shrinkages and to increase visibility across supply chain which by itself brings the costs down. As the country looks to increase the share of agriculture to GDP, logistics will again come into sharp focus. This would particularly be the case with regard to fruits & vegetables production where robust cold chain infrastructure is required. Cold chain costs in India are on the high side currently. The capital cost of cold chain in India is Rs 8,000 per MT compared to Rs 5,000 per MT in the developed countries. The operating cost per cubic feet per year is $2 in India, which is double that of $1 in the developed countries\(^9\).

- The end result is that today’s supply chains are more a network of two-way relationships than a linear chain. Developments in one area tend to affect other areas, whether positively or negatively. To understand and manage new interconnected supply chain, retailers need a holistic view of investment risk across the stakeholders. Even if either retailers or government are considering supply chain investment, a risk, they often look at it in silos, missing across-the-


\(^9\) CII Newsletter dated 23 Feb 2011
chain view that would enable them to recognize similar risks that should be managed from a wide perspective. It is the holistic view on investment that generates real value because it can show how a decision taken in one function may affect the entire economy of the country in the long run. This needs a robust action plan funded with the appropriate resources to address the core of the issues and implementation, not just symptomatic relief. Given that risk is a business constrain, holistic supply chain management of perishable products remains one advantage yet to be tapped fully. Government and organized retailers should evolve new operating and revenue models in order to adjust to the investment risk interdependencies of the supply chain as they strive to achieve high performance. This state of affairs is the legacy of the pressure due to inflation, price rise and concern for wastage but it has left the government as well as retailers perilously exposed.

c) Consumer Satisfaction and Value Creation Through SCM for Perishable food Products in Retail

In pursuit of our third objective to assess the level of consumer satisfaction and value creation through supply chain management in organized vs unorganized retail for perishable food products in Pune, the following conclusions are met:

- The consumers of organized retail prefer branded and private level products which clearly show their perception towards quality and brand consciousness whereas consumers at unorganized retail generally prefer loose products. Lower grade products are purchased by lower segment consumers at unorganized retail more dominantly which supports the ideology that there is no absolute wastage but everything is consumed in some form. The levels of wastage are
much higher at unorganized retail and the disposal process creates embarrassment for consumers and also are a matter of civic concern.

- Food quality and safety norms are well adhered at organized retail as 84% & 93% consumers respectively express satisfaction over transparency about quality and safety norms in organized retail.

- The services offered by organized retail are more satisfactory and majority of Consumers are happy with service level which comprises of various promotional schemes, billing system, parking facilities, entertainment facilities, ambience and professional behaviour.

- The information search for product and services, checking at exit point, distant locations of stores and customized relationship with consumer are the gray area for organized retail where majority of consumers were shown dis-satisfaction.

- As far as price is concerned, the consumers are indifferent to decision making as only 56% say that prices for perishable products are lower at organized retail. It shows that price variation is not so large which can make high significance for consumers during perishable product purchasing. Consumers are highly concerned about price fluctuation of perishable products.
8.2 Critical Observation on SCM of Perishable Food Products in Pune

At last, on the basis of visits and personal interaction with unorganized & organized retailers, agents, middlemen, street and cart vendors and farmers and consumers at various mandis in and around Pune, APMC market yard, Hadapsar, Ranjangoan, Chandannagar, various collection & distribution centres, following points are concluded in a nutshell about SCM of perishable products in Pune:

i) There is absence of true supply chain management in both retail systems. Despite this, the organized retail has a comfortable position in respect to unorganized retail.

ii) Since organized retailers are also procuring the items from the wholesale market of APMC market yard/ Chandannagar / Hadapsar market, there is an absence of linkage between farmers and organized retailers.

iii) There is no pricing policy for produce which really ensures the minimum price for farmers. A lot of things were said to increase the productivity and production (Refer statement of PM Manmohan Singh on 01 Feb 2010 in the meeting of CII), but in absence of proper marketing and SCM policy, the farmers feel cheated as after arrival at mandis, they come to know that due to oversupply, they are hardly able to recover even the cost of transportation.

iv) Skimming price policy are used by retailers in organized as well as unorganized retail.

v) The farmers’ decision to move to mandis is based on pure anticipation rather than any forecasting technique which results in oversupply for a particular day or short supply on another day creating price fluctuation in retail market. This requires effective marketing information system as well as cold storage facility at market yard for short term.

vi) The trading takes place in open space which contributes further deterioration in the quality and the life of produce becomes shorter.
vii) There are no defined standards regarding the quality and variety of produce which leads to high level of bargaining, longer time period requires to settle the transaction, exposes the product to sunlight reducing the life of produce due to drying of moisture content in produce.

viii) Handling of produce at the time of loading and offloading is quite rough which contributes to wastage. The produce is dumped at mandi or market till the transactions are done and this is also a significant reason for wastage.

ix) Though the Government is making full efforts to stop wastage and is giving training to farmers, nothing has been done for the training of Agents / Unorganized retailers / middle men / wholesalers who are the major handlers of produce where wastage occurs at maximum. (No training facilities reflected on the website. (http://www.msamb.com/english/activities/publications.htm dated 25/12/10).

x) The consumers’ taste and preferences are rising for branded / private label processed / packaged perishable food products which are required to be tapped through better retailing practices.

xi) The value loss of the perishable food products like fruits and vegetables is high, but volume loss is not as high as commonly perceived, which implies that this volume is consumed in some form and may be vulnerable for epidemics.

xii) The cold chain business model has been supply driven rather than demand driven. This enforces price fluctuation in peak/off peak seasons.

xiii) Shortage in power supply which compels cold storage owner to arrange for standby power supply with DG sets ultimately increases the cost of operation.

xiv) Poor road infrastructure is causing loss during transit.