



Supply Chain and Logistics

Becoming Future-Ready

Shifts in food consumption pattern are bringing about drastic changes in the food retail industry and spurring bigger value additions for shoppers

By Alagu Balaraman

Food habits are among the most closely held in people, through the ages and across geographies. To many people food defines who they are and what they stand for. It would seem strange then to talk of dramatic changes in food consumption patterns, but that is exactly what we are witnessing in India. There are some industries, like mobile phones, that seem to change completely overnight. It isn't so drastic in the case in foods. For example, a McKinsey report projects an increase of per capita consumption of food of 3% per annum for the next 15 years or so. Most of that is in terms of shifting to "higher value" foods like fruits, vegetables and complex proteins. When viewed in the context of a population that is currently at 1.25 billion, it represents huge shifts in what people will buy, from where it will be sourced and how it will be delivered to them.



The key impediments outlined in the report list policy issues, knowledge issues and the need for large scale infrastructural change. Many of these will interact with each other. If inter-state movement of food products is decontrolled, it would have a large impact on efficiencies and cost to the end consumer. It is likely to be as significant as the expected move towards a nationwide GST would have, which is estimated to impact GDP growth by as much as 1.7% according to NCAER. It would alter the focus of movement of foods and input materials for the food processing industry from state laws and taxes to one of looking for operational efficiencies.

An industry in need of more change

Food products, almost without exception, are better when fresh. The impact of freshness on taste and the nutritional quality of foods is significant. Today, when people talk of supply chains in the food industry the overwhelming picture in the minds of the populace is that of poorly managed warehouses and images of rotting grains stored in the open. The Times of India reported 2,400 MT of wheat have been rotting in Government granaries in the last 2-3 years. The poor public reputation of how food is handled is ingrained due to years of such poor performance.

The same forces that are changing food habits in the country are also leading to increased urbanisation and time starved families. This has changed the retail face of the industry in a manner that is unimaginable 15 to 20 years ago. Suddenly, the power of retail has increased disproportionately and the value added to the shopper has significantly changed. Is it available now? Is it available in the pack size I seek? How fresh is it? Shoppers have become very discerning and very knowledgeable. At the same time, competition and digital comparisons have put pressure on pricing.

Both these trends have increased the need for greater capabilities in designing and operating supply chains crucial. This will increase rapidly in the next few years, requiring significant innovation in design, responsible sourcing, better communication to customers and, above all, execution excellence.

Challenges in supply chain design

In the past, supply chains across the industry were not designed. They evolved. As a result there was neither a strategy nor were scientific concepts applied to detailing each element. This has been responsible for high inventories, incorrect inventories, damage, delay and waste. In short, the final result was the opposite of what is desirable in a well functioning food product supply chain – freshness, responsiveness and low cost.

There were some remarkable exceptions to this, such as the supply chains for milk and bread. These products had efficient supply chains because of the nature of the product and the demands of the customers. Today, broader competition and rising customer expectations are forcing serious efforts in designing efficient supply chains across different product categories.

This is a well studied subject globally. Models such Efficient Consumer Response were introduced by Kurt Salmon Associates in 1985. We are still to implement the principles in a complete manner. The objective of ECR had been to drive down costs in the core, value adding processes of efficient store assortment, efficient replenishment, efficient promotion and efficient product introduction. This has been slowed down by the highly fragmented retail space we have had and the attempts by individual companies to establish their own private versions of ECR to get around the lack of a consistent industry movement. However, the benefits that can be got by agreeing on an industry standard are far more than the perceived competitive edge of going it alone – which is simply too expensive and cumbersome. It is like individual mobile phone manufacturers attempting to be telecom service providers as well.

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Horizontal specialisation and standardisation confers huge industry benefits and, ultimately, consumer benefits. This has been seen in one industry after another. The classic example is the personal computer industry, where separation of hardware, operating systems and application software led to simultaneous rapid innovation, standardisation and dramatic cost reduction. Industry level specialisation and standardisation would change the basis of competition for existing players to products and marketing, rather than delivery. There are some initial moves in this direction as modern trade and manufacturers align plans and strategies through joint business planning sessions. Third party mechanisms for logistics and merchandising have come about. Though they have started, they are still nascent. We should see significant changes in this field in the coming years.

Who will invest in infrastructure?

The traditional Indian warehouse was anything that had a roof and walls. In some cases, warehouses were even repurposed buildings that had multiple rooms, different floor levels and usually too few or no proper loading bays. The Indian logistics space has suffered from a lack of proper infrastructure, leading to enormous wastage of time and money. The challenge is one of procurement of services.

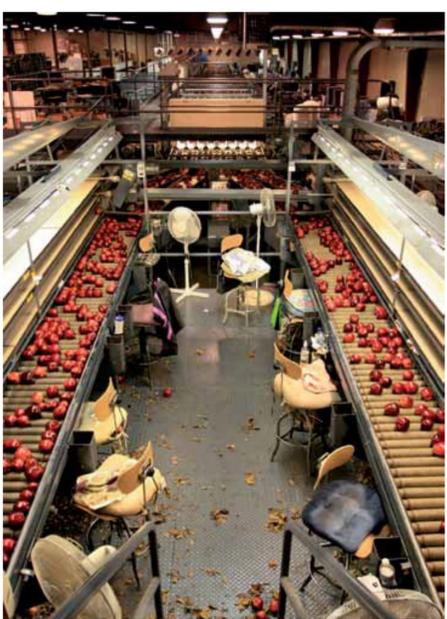
Traditionally, companies were accustomed to dissecting costs into elemental units and minimising each one. As a result, the “per square foot rate” today for a “normal” warehouse simply cannot be matched by a well designed, constructed and modern warehouse. This is similar to the cost arbitrage that was seen in setting up small contract units to make use of lower labour costs. A poor understanding of cost structures lead to underinvestment and a continued reliance on low cost, low efficiency models.

This will not work going forward. As has been well proven in manufacturing, scale and technology can deliver dramatic reductions in cost even as it drives up quality and throughput. Similarly, moving to a model of well designed, rapid turnaround, multilevel warehousing with suitable automation will lead to overall cost reduction and improvement in quality, order fill rates and throughput. We need to remove the queues of trucks waiting to be loaded or unloaded (and the associated costs, both direct and indirect), the large numbers of contract workers (who are poorly trained and cause more damage than good), poor truck utilisation (due to incorrect planning and lack of skills) and appropriate selection of vehicles for each journey type.

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As with poor quality warehousing, our trucking market has also to evolve. Today, companies are placing standards on trucks, going beyond the ubiquitous 10 tonne model and tarpaulin cover. However, standardisation is still poor and reliability not guaranteed. In truck loading, variations in size of inches, pardonable in the past, now cause drops in utilisation as loading patterns cannot be followed. Many companies still don't attempt to optimise loading using easily available tools in any case. Reliability is still not at a premium, leading to excess inventories and loss of sale. Bringing increased professionalism in trucking is overdue and will come only when companies demand it. Will this lead to an increase in a single line item of cost? Possibly, but the impact, if properly measured in other areas like buffer inventory, loss of sales, unutilised labour, will end up in showing a total cost reduction.

It is likely that the main driver of change will be loss of sale and labour cost. One was considered a change of doing business and the other was assumed to be marginal. However, loss of sale is becoming increasingly unacceptable in competitive businesses and will not be pardoned. There is significant scope to plug leakages in this space, helping to inch up revenues and more significantly drive net margins and ROCE. The other factor, labour, has already become a challenge and will get exacerbated in the future. On the one hand, people do not aspire for unskilled work and parents are pushing children to study as the best path for upward mobility. On the other hand, expectations of planning, handling and efficiencies will convert the warehouse into something closer to a factory shop floor, where people need to be skilled in planning work and operating equipment. The day of cheap, illiterate and unskilled labour is coming to an end. The challenges of labour and competitiveness will change the face of our warehouses, as it has already changed our factories.



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The need & opportunity to deploy technology

Now that we have better highways, we can look to set up better quality of warehousing outside the urban areas. If we can use modern day technologies to track vehicles, timing and coordination will allow for better city movement. Cross docking can become a reality. Today, falling technology costs will allow us to execute models that were simply not practical in the past, given congested roadways and unpredictable schedules.

As with many other areas, consumer technology is fast outstripping enterprise application of technology. So, working mothers are using internet based cameras to monitor their children in day care centres, but we do not have remote sensing in our logistics systems. People track movements on mobile phones and use Google maps very naturally, but we cannot identify where a truck is or when it will arrive.

The field of technology continues to evolve at its normal hyper-speed. Capturing the value from this requires close participation between technology teams and the logistics teams. So far, this has been restricted to providing transactional data and, to a limited extent, replenishment based planning data. However, much more can be done. It will require getting out of the traditional IT role of ERPs and moving to devices and the Internet of Things. Again, we are likely to see faster adoption in consumer technologies than in enterprise applications. Those enterprises that latch on to this trend and think boldly are likely to reap a significant competitive advantage.

The biggest challenge remains talent

The reason for many areas of supply chain and logistics lagging behind what is possible is simply a matter of the quality of talent. This is not surprising given that our economy was not a consumer driven economy for a long time. B2B business processes took priority over B2C ones for most of the past 2-3 decades and the business leaders of today did not see these as critical areas in their formative years. However, supply chains cost anywhere between 40-85% the value of sales in companies. This is too large a number not to pay attention to.

Companies are experimenting with supply chain organisation structures in response to the changing expectations from the function. Years ago, it was simply the planning department and largely worried about placing trucks from the market. Today, capacity planning, inventory management and continuous improvement have become more common. There is a realisation that a good supply chain executive can make a big impact on top line and bottom line; leading to sourcing people from more mature markets.

Training has somewhat lagged behind and has limited effect. This is largely because of a lack of standardisation in the industry, leading to unique solutions being deployed by each company. This uniqueness makes it difficult to deliver relevant training programs other than basic conceptual ones. Again, manufacturing industries are going ahead with more standardisation of methods and processes than can be seen in supply chain and logistics, especially when considering the food and beverage industry.

Usage of IT systems is still relatively primitive, with Excel, email and mobile phones being the most critical tools. This must and will change. There is too much at stake and it will be relatively easy to deploy automation, so competitive pressures will see this changing rapidly. We will see sensing technologies, direct system-to-system communication and real time optimisers that will change the level of service and drop costs. They will lead to a completely different profile of work force that will be needed in our planning offices, the warehouses and retail outlets.



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Expect large scale and rapid change

The population of the city of Bangalore grew 40% in the last 10 years. The previous 10 years it had grown 35%. This is the pace and scale of urbanisation that is happening in India. Online sales have boomed in Tier 2 and Tier 3 towns, accounting for almost half the sales of the largest online retailers. Per capita personal disposable incomes have been rising at over 11.7% over a 10-year period. All this will lead to significant changes in consumer expectations and purchases as millions of people cross from one economic stratum to another. This will fuel surges in demand for products and the quality of the buying experience across the country. We need to make sure that our manufacturers and retailers are ready to service it. **PG**