INDIA
POST-HARVEST MANAGEMENT AND AGRIBUSINESS

Background Report: Modern Food Retailing in India

South Asia – Agriculture, Irrigation and Natural Resources

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Chapter 1: Background

Retail has strong potential for development impact

Retailing of primary and processed agriculture produce is a $649bn industry in India of which modern format retailing[1] accounts for only about 9.8% currently[2]. Since the purpose of all agribusinesses[3] is to eventually, directly or indirectly, ensure that consumers receive the food they demand in the desired form, quantity and quality, the role of retailing in the development of agribusiness and post-harvest management cannot be overemphasized.

From the policy-maker's point of view, the healthy development and growth of Retailing is essential given its strong impact on practically the entire population of consumers (across economic and social strata), large numbers of individual and small scale suppliers (given that food comprises ~60% of all retailing activity, a significant proportion of these suppliers are eventually farmers) and the significant employment generation[4] that comes from the sector[5].

It is therefore important to understand what shape and form Retailing in India should take to maximize this impact in a positive manner while ensuring that the sector continues to attract commercial investments by providing returns to private investors.

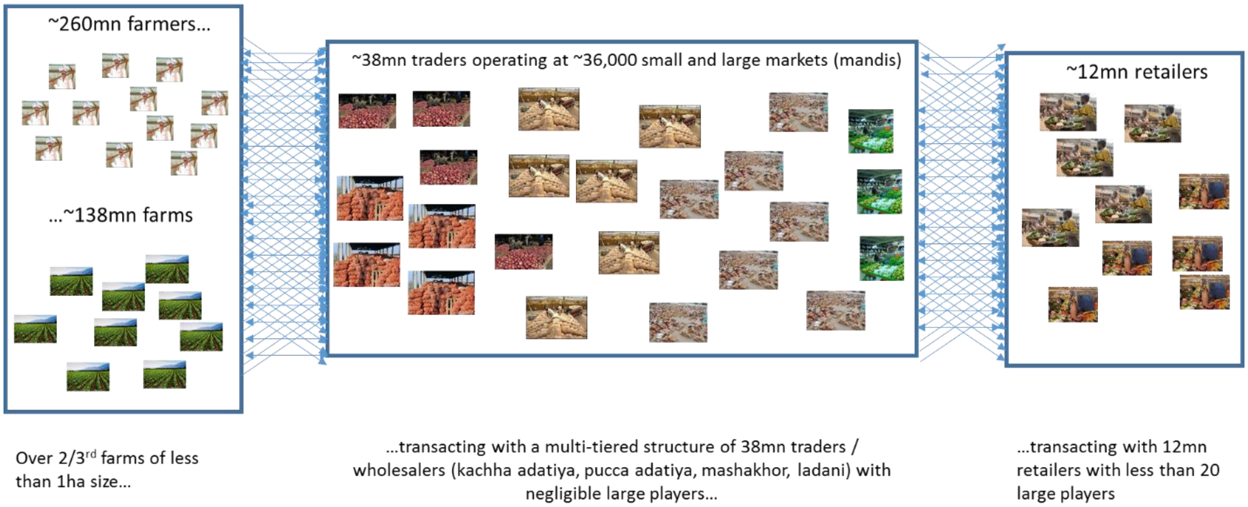
However, retail and its supply chain are not efficient in the current context

The current context of Retailing in India reveals pronounced fragmentation not only at each node but also along the chain, with the existence of multiple tiers. When it comes to food products, especially food products that are typically sold in the unprocessed or less processed form (like fresh fruits and vegetables), not only is Retailing largely fragmented and unorganized, even the other end of the Retailers' supply chain – the farming community - is extremely small scale and fragmented.

As illustrated in Figure 1, this results in a situation where the supply chain from an individual producer to an individual retailer can be extremely complex, chaotic and opaque (in terms of information flow) with an unreasonably high number of touch points, each with limited scale.

Figure 1: The complex food supply chain in India

[1] Though the definition of "modern format retailing" is ambiguous, it is generally understood to include four formats viz hypermarkets, supermarkets, discount stores and convenience stores in the organized space that allow self-service
[2] As of FY14; derived using the National Account (GDP) Statistics in "India Retail Report, 2015" by Images Multimedia Pvt. Ltd.
[3] The term "agribusiness" includes the diversity of commercial activities conducted both on farms, as well as off farms and importantly, between farms and off-farm partners. In developed countries, agribusiness is defined as the total output arising from farm production and product processing at both pre and post farm gate levels. In developing countries like India, the agribusiness sector encompasses four distinct sub-sectors, viz. agricultural production, agro-processing, marketing and trade (Acharya, 2007). The focus of this report is on the last three.
[4] Retail is the second largest source of employment in India, with a share of 8% of total employment (Source: National Informatics Center, Government of India : http://indiainbusiness.nic.in)
[5] India has about 263mn farmers (119mn people directly engaged in cultivation, 144mn employed as agricultural labor) 40mn traders and 1250mn consumers. (Source: Census of India, 2011)



Source: Census of India, Agricultural Census of India, 2011

Small scale at each touchpoint limits the ability and willingness to invest in better infrastructure and improved professional practices (contributing to waste and value erosion), multiple touchpoints increase waste by forcing more handling and extending the time to market (which can be catastrophic in the case of perishables) while opacity and the consequent lack of predictability and aggregated volumes limits the confidence to invest in infrastructure for fear of low utilizations. In addition, opacity in the flow of accurate demand information from the consumer to the farmer / supplier prevents demand-linked production (cultivation) planning and discourages value addition.

It follows therefore, that consolidation at key nodes in the supply chain complemented with greater integration along the supply chain can boost the positive outcomes for all value-adding stakeholders. Global experience shows that other developing markets are at various stages in the evolution from fragmented and disintegrated supply chains to more consolidated, dis-intermediated and seamless supply chains. For example, in the case of Brazil this evolution was given a strong impetus by modern retailers through their actions to establish direct backward linkages (Farina, 2002). China and Thailand have also witnessed consolidation driven by centralization of modern retailer's procurement. This evolution has led to better outcomes in these countries with greater adoption of standards and improved practices leading to lower wastages through the establishment of direct procurement relationships with farmers, farmer cooperatives and large wholesalers (Reardon et al, 2005).

A pertinent question in this backdrop is – What are the factors that have led to this situation of high fragmentation across the chain and what could be done to rectify the same?

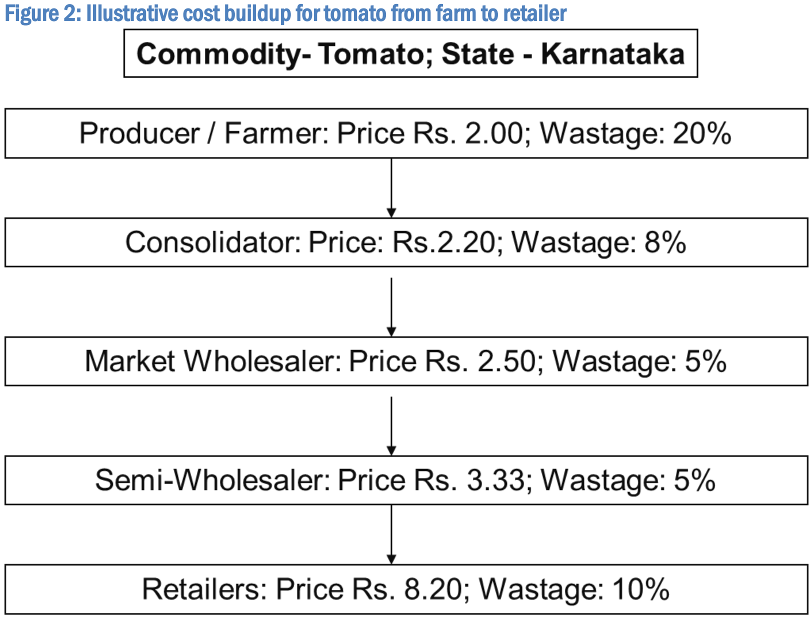
Fragmentation at the farm end is the result of traditionally small land holdings with no incentive for consolidation, prohibition of corporate farming, political and policy barriers to contract farming and limited success of cooperatives and farmer producer organizations.

At the other end, the continued fragmentation of retail is because modern format retail, with its significantly higher overheads and capital requirements, has hitherto failed to demonstrate profitability with a majority of modern format retailers in India in significant losses despite close to a decade of operations[6].

As far as the middle layer of traders, wholesalers and agents is concerned, one of the key reasons for fragmentation is the regulatory setup for agriproduce marketing with each state having its own different requirements and often each mandi (agriculture market) within each state requiring a separate license and conditions for permission to operate at those mandis. Additionally, the absence of an institutionalized system of micro credit for farmers (an indispensable need for a majority of small farmers given seasonal nature of production), has ensured that small farmers have traditionally leaned on personal relationship backed credit doled out by local traders and agents. This has made the local traders / agents most well positioned in sourcing the produce while at the same time limiting their ability to scale.

The most detrimental impact of this proliferation of fragmentation across the chain is the high levels of waste and value erosion even while the chain is successful at delivering diverse products from geographically and temporally spread out locations to a vast and even more diverse consumer base. (See Figure 2)

Figure 2: Illustrative cost buildup for tomato from farm to retailer



Source: NV Ramana, S Raghunath, D Ashok, Confederation of Indian Industry (Southern Region) "Building Competitiveness of Indian Horticulture: An Analysis and Recommendations" April 2005.

[6] Business Standard, May 2014

Modern format retail can drive efficiencies along the supply chain

Modern format retail chains have an incentive (refer box below) to establish direct backward linkages in proportion to scale at the frontend, which in turn is necessary for their growth and profitability. The disintermediation that comes about as a result of these backward linkages can catalyse the much needed larger consolidation and integration referred to above thus driving greater efficiencies and lesser waste.

Why are direct linkages important for modern format retail?

A look at the financial statements of key modern format retail chains reveals that while they have reasonable gross margins, the key elements dragging most of them into losses include heavy overhead costs and the expenses of developing and maintaining the front end – storefronts and the utilities associated with them. Given that the retailing business model is essentially that of trading, the only ways for retailers to turn profitable would be either to limit front end capital investment and operating overheads or expand gross margins by driving down backend operating and procurement costs.

	Gross Margins	EBITDA	EBIT	PAT
Reliance	14-15%	4%	2%	1%
Future	25-29%	9%	6%	0%
Trent	45-50%	7%	5%	4%

Source: Latest available company Annual Reports

Avenues for reducing frontend investments and costs are limited – store locations need to be conveniently located for consumers to access them and large enough to cater to a basket of consumer's needs. Rentals at such locations are market determined and end up being high given that these locations are typically densely populated. As far as the cost of utilities is concerned, shopping convenience requires the stores to be well equipped. Besides, overheads arising from compliance, professional practices, corporate costs, merchandizing, category management, branding etc. are unavoidable. It can be argued that these costs can be brought down by locating larger stores in less densely populated areas (for example on the outskirts of cities) but not only does that limit the consumer's convenience, rapidly expanding cities ensure that relatively lower rental costs are sustained only for a short period of time and longer term fixed rate rental contracts are not easy to come by.

When it comes to backend costs, however, the potential for expanding gross margins by driving down operating and procurement costs through disintermediation and establishment of direct linkages with farmers and by increasing value addition through improved grading, storage, handling etc or through processing, is immense. This is substantiated by the fact that gross margins of modern retailers in India are lower than their international counterparts. However, the potential to save costs here is amply illustrated by several well-known examples of very high price differentials between farm gate and retail shelf prices (as illustrated in Figure 2: Illustrative cost buildup for tomato from farm to retailer). However, it is important to note that a large part of these savings are realizable only if the scale of direct procurement is large since a majority of the costs incurred in developing backward linkages are

Existing modern retailers have already begun to establish backward linkages but are only able to do so in a limited way being severely constrained by several factors including the existing regulatory context.

Objective

The objective of this background paper is to examine the factors limiting growth of modern food retailing and to describe how unconstraining the growth of modern food retailing could spur backward linkages in value chains and investments in agribusiness and post-harvest management.

Conceptual Framework

The structure of the retailing industry has been significantly influenced by the policy environment not only pertaining to retailing per se but also the policy and regulatory environment pertaining to the supply chain of procurement for retailing.

We will first examine the evolution of this policy environment and then move on to evaluate its impact on the way the industry is organized and on the behaviour (conduct) of market participants – both modern format and traditional retailers. In addition to policy, various other existing conditions which influence structure and conduct of enterprises will be examined. The resultant performance of the industry, particularly with regard to benefits to consumers, suppliers, employees and society as a whole will be assessed.

Chapter 2: Basic conditions affecting modern food retailing in India

The overall liberalization process led to sporadic successes in agribusiness

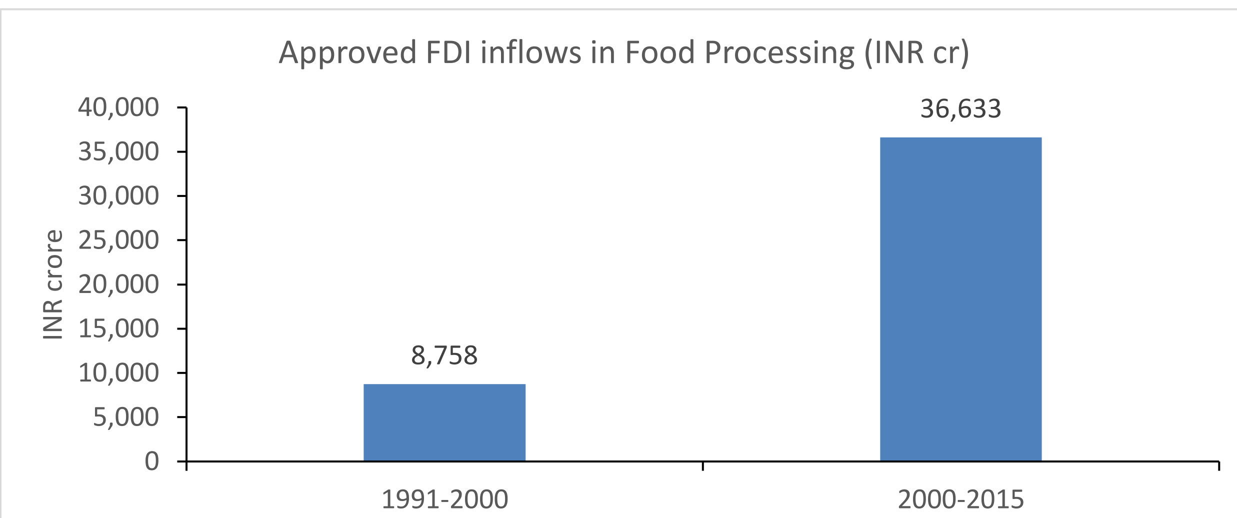
The process of liberalization which started in India in 1991 with the goal of making the economy more market-oriented and expanding the role of private and foreign investment did not include any reform package specifically directed at the agribusiness sector (Sen, 1992).

Nevertheless, reforms in key policies that impacted agriculture marketing and food processing have been introduced intermittently[7] since around the same time. Key reforms amongst these include

- Delicensing and FDI in Food Processing Industries (1991 onwards).
- Policy for 100% FDI in wholesale trade (1997)[8]
- Release of Model APMC Act for marketing reforms (adopted in various forms by several state governments, 2003 onwards)
- Futures trading in agri-commodities permitted (2003)[9]
- Food Safety and Standards Act notified (2006)[10]
- Warehouse (Development & Regulation) Act (2007)
- Policy for 51% FDI single brand retail trade (2006) and 100% FDI in single brand retail (2011)
- Policy for 51% FDI multi-brand retail trade (2011)

Delicensing and FDI in food processing has led to a cumulative investment of over INR 45,000cr (see Figure 3)

Figure 3: Approved FDI inflows in Food Processing



[7] For a longer list of all key policy reforms undertaken since 1991 please refer World Bank Report, “India : Accelerating Agricultural Productivity Growth (Annexure 1)
[8] With prior approval of GOI; in 2006, FDI in wholesale trade was brought under the automatic route, requiring no approval from GOI
[9] GOI subsequently restricted and freed futures trading in certain commodities (wheat, rice, soy, sugar) from time to time. (Source: G20 Development Agenda: An Indian Perspective, 2015)
[10] Food Safety and Standards Authority of India (http://www.fssai.gov.in/)

Source: Prepared from data from Department of Industrial Policy and Promotion (DIPP), Government of India

One of the most visible impacts of the policy reform in food processing has been the development of the organized potato processing industry which was triggered by Pepsico's patient approach to developing the market. The company's approach involved partnering with local bodies, working with farmers' to gain their buy-in and trust for the cultivation of processing varieties of potato and developing "partnering" models with farmers for sourcing of processing quality potatoes[11]. As success of the model was demonstrated, several Indian processors (Balaji Wafers, Parle, ITC, Haldiram etc) replicated it, magnifying the positive impact of these direct farm to processor linkages.

Liberalization in FDI policies for hotels and restaurants also permitted several "quick service restaurants" (QSR) to enter India from the 90s. While the QSR's direct role in farm linkages was limited, the case of McDonalds' aggressive expansion and how it facilitated the entry and expansion of McCain as the key supplier of french fries to McDonalds is well known. McCain, like Pepsico, established significant direct farmer linkages for procurement of their primary raw material - potato.

The policy to permit 100% FDI in wholesale cash & carry services has led to the entry of multiple global players in the space. There are now over 100 cash and carry stores in operation across the country distributed largely between MNCs including Metro (17), Wal-Mart (20), Booker (6), Tesco (19) and the Indian conglomerate, Reliance (43). Another international player – Carrefour – exited India after opening 5 stores and 4 years after it entered for various reasons including inability to find a suitable partner to expand footprint and to consolidate its global position. Even though these stores have a minimal share of fresh agri produce, their role in organizing and disintermediating the distribution chain for the larger food products and FMCG categories is noteworthy. The related policy to permit wholesale trade on an online platform through internet portals (eg. www.amazon.in, www.flipkart.com, www.snapdeal.com etc), commonly referred to as "business to business" (B2B) e-commerce, has also led to significant inflows, in particular from the global ecommerce major, Amazon and more so into Indian e-commerce companies in the form of Private Equity investments from internationally funded Private Equity (PE) funds. Key examples include Flipkart, which has seen fund infusion of over USD 3bn from as many as 16 international PE funds since 2009 and Snapdeal, which has seen fund infusion of over USD 1.5bn from as many as 20 international PE funds since 2009[12].

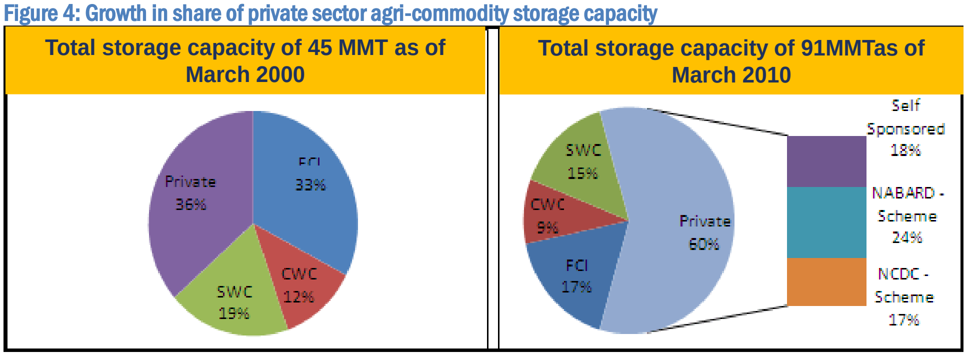
Reform of the Agriculture Produce Marketing (APMC) Regulation, which was set in motion with the release of a Model APMC act by the Central government in 2003 as a guidance for the State governments to reform their respective acts, was intended to significantly improve the state of the agriproduce supply chain by removing restrictions on sale and movement of produce, opening up the space for private investment and easing the procedural and compliance requirements by stakeholders in the chain. However, disparity in the nature and extent of adoption (or lack thereof) of the reforms outlined in the model act by various states along with the lack of clarity on the rules associated with the new Act has led to a mixed impact on the ground. So while key successes, triggered by specific reform actions, have been achieved for eg. the ability to procure directly from

[11] In various states more than 24,000 farmers are involved with contract farming of potato over an area of at least 16,000 acres. Association with farmers is long term and more than 90% farmers are repeat farmers.
[12] https://www.crunchbase.com/organization/flipkart#/entity; https://www.crunchbase.com/organization/snapdeal#/entity

the farmer facilitated a revolution of sorts in direct procurement of potato for processing referred to above in certain states like Punjab, UP and West Bengal and boosted direct apple procurement in Himachal Pradesh and the provision for private markets led to investment in private markets in Maharashtra, broadbased impact at the scale and spread that is necessary has not taken place. Key constraints have been the limited improvements in the actual working of existing APMC markets (which remain largely the only platform for spot transactions) viz. transparency in issuance of licenses and auctioning, provision for e-trading, reforms in appointment and composition of market committee, the complexity of dealing with disparate rules and ambiguities and challenges faced by early investors (World Bank, 2014). APMC reform and its impact on the Retail sector specifically is discussed further in the next section.

Permitting futures trading along with the enactment of a warehousing act to facilitate a negotiable warehouse receipt system, has led to sizeable private sector investment[13] (see Figure 4) in farm-based or near-farm warehousing[14].

Figure 4: Growth in share of private sector agri-commodity storage capacity



Source: Credit Analysis & Research India Ltd.

The Food Safety and Standards Act was notified with a view to rationalize the multiplicity of existing food laws to bring about clarity and ease in doing business in the food sector. The Act brought together the provisions of several existing laws and paved the way for greater professionalism and organization in the sector. Key features include unified licensing procedures, common application forms, registration of food businesses, setting standards for safety, sanitary and hygienic conditions.[15]

Permitting 100% FDI in single-brand retailing has evinced sizeable interest from several global brands with proposals worth $260mn being approved between 2010 and end-2014 despite reservations around the 30% local sourcing requirement.

The policy for FDI in multi-brand retail and its impact is discussed in the next section.

Besides the direct impact of these reforms, the larger overall liberalization process stimulated rapid income growth which, along with the concomitant consumption growth (fuelled by favourable

[13] Interview with S Sivakumar, Divisional Chief Executive, Agri Business Division, ITC Ltd. published in Indian Institute of Management, Bangalore Review, 2015
[14] Outlook Business Magazine, November 2014
[15] Food licensing regulations, Confederation of Indian Food Trade and Industry (CIFTI)

demographics) also indirectly impacted agribusiness by boosting demand for relatively higher value and processed agricultural products.

Reform impacting modern food retailing has however been extremely limited

As outlined in the first section, the development of modern food retailing is contingent upon reforms spanning along the entire supply chain given that the very premise of the business model of modern retailing is backward integration upto the upstream supplier.

Therefore, to understand the basic conditions affecting modern food retailing, policies that encourage or limit this integration backwards upto the farm must be analysed. We will first examine the policies that create challenges for this integration and then, in the next section, will do so for the policies and schemes that act as enablers.

Key disablers

Ambiguity and conditions attached with the FDI policy

The flow of much needed capital required to expand the footprint of modern food retail has primarily been restricted to domestic sources. While Indian business houses that have forayed into multi-brand retailing have made some investments, their ability and willingness to do so has been restricted on account of the sheer lack of availability and higher cost of capital they face as compared to the returns that they have been able to achieve vis-à-vis their other businesses.

Given that the very business model of modern format retail entails long gestation periods before returns start flowing in, growth of modern retail will necessarily require high capital infusion making it more amenable for foreign investors with their lower cost of funding. It must be noted however that a significant part of modern retailers' investments go into developing storefronts (frontend) and that the "investment" in both the front and backend comes in the form of high operational expenditure on piloting and developing models of efficient procurement and supply chain besides the relatively higher costs of logistics that must be incurred for reliable services as against only capital expenditure (World Bank, 2014).

Several ambiguities and conditions attached with the policy for FDI in multi-brand retailing have created uncertainty and have accounted for a large part of the reluctance of foreign retailers in committing the requisite amounts of capital needed to expand this footprint and drive consolidation upto the farm. This is despite the fact that their lower cost of capital ought to make the investments more viable for them than for domestic companies besides opening up one of the largest and fastest growing retail markets for them.

Until September 2012, FDI was entirely prohibited in multi-brand retailing. In a press note issued on 20th September 2012, the government for the first time announced 51% FDI but loaded it with several conditions. Key conditions included were as follows:

1. A minimum investment of $100mn must be brought in by the foreign investor
2. At least 50% of the investment brought in must be infused as capital investment in backend infrastructure[16]

[16] Any investment in storefronts would not be counted and backend infrastructure would include processing, logistics, distribution, packaging, quality control etc.

3. At least 30% of the value of procurement manufactured / processed products purchased must be sourced from Indian "small businesses" with total investment in plant and machinery not exceeding $1mn. If the "small business" grows beyond this investment after starting supplies to the Retailer, it would no longer be counted towards the 30% requirement
4. Retail outlets may only be setup in and around cities with a population of at least 1mn[17]
5. As far as fresh agricultural produce is concerned, the government would have first right to procurement and Retailers may only sell these in unbranded form
6. Retailing through the ecommerce channel would be prohibited

Importantly, the policy stated that it was only meant to be an enabling policy with no compulsion on any state government to accept it. Thus, the decision to implement this policy was delegated to the individual states.

No foreign retailer made any announcements or investment commitments pursuant to the release of this policy though their high interest level in the policy development was demonstrated in the form of multiple clarifications on the conditions that were sought from the government.

In June 2013, the government released clarifications to some pressing concerns and incorporated these and other changes into the revised FDI policy released in August 2013 – key amendments in the further revised policy released in April 2014 (and retained without changes in the policy released in May 2015) included

1. 50% of only the initial $100mn to be invested (as against the overall investment) would need to be invested in the backend. Any further backend investments were left at the discretion of the Retailers
2. "Small businesses" from which at least 30% of the value of procurement of manufactured / processed products would need to be would include those with investment in plant and machinery of up to $2mn as against $1mn earlier. Such company would continue to qualify as a "small business" even after it outgrew this size after starting its relationship with the Retailer
3. Investment made in backend facilities even in states that do not decide to implement the FDI policy would count towards the $50mn required investment
4. Those states which agree to implement the policy will not have the flexibility to change the existing conditions prescribed in the FDI policy. They would however be free to impose additional conditions which fall under the purview of the state laws and regulations.
5. The decision on which cities these Retailers could operate in and around of was delegated to the states as against limiting these to those with population over 1mn earlier
6. The 30% sourcing requirement from "small businesses" which did not include procurement of fresh farm produce was relaxed to include "procurement from agricultural and farmer cooperatives"
7. Karnataka and HP were added to list of states that had agreed to permit FDI

[17] According to some modern retailers interviewed for this study, limiting setup of stores to only larger towns limits the retailers' ability to buy all grades from farmer, therefore limiting impact. This is claimed to be so because the demand for B and C grade produce is higher in smaller towns.

Other clarifications / requests by the private sector that were turned down and therefore did not impact the policy include

1. The entire $50mn required to be brought in for backend investment would necessarily have to be invested in greenfield facilities. Any amount brought in as investment to buy out or take equity stake in existing backend infrastructure / company would not count towards the 50% investment required in the backend.
2. Operations of the multi brand entities were required to remain confined to multi-brand retail stores only and would not be permitted to engage in any wholesale trading or B2B activities.
3. All stores would necessarily have to be owned and operated by the investing company and no franchised stores would be permitted
4. Sales through online channels (ecommerce) by FDI Retailers will not be permitted

Soon after the announcement of these changes which amounted to some relaxation in the policy, one foreign retailer – Tesco – setup a 50:50 joint venture with one of India's largest conglomerates – Tata Group.

However, several other large retailers that have been interested in the Indian market for long – key ones include Wal-Mart, Metro, Carrefour – have refrained from making any moves in establishing a multi-brand retailing presence. Feedback from discussions with industry players, Federation of Indian Chambers of Commerce and Industry (FICCI) and the Retailers Association of India has indicated that the key reasons for the reluctance of foreign retailers to enter the space is related to the still existing restrictions and ambiguities in the policy. Another reason could be the inability to find a suitable partner capable and willing to bring in the 49% share and the concomitant capital necessary for building the business given that several large business houses with the ability to commit such high investments are already independently present in the space independently.

In his budget speech made in Parliament in February 2016, the Finance Minister made an announcement that has been construed in several quarters as an intent to permit 100% FDI in multi-brand retailing of processed food products[18]. While an extract of the Finance Minister's speech (below) indicates that such a move may be imminent, no formal policy announcement has since been released nor has a change in the FDI policy circular been made to this effect.

"Food processing industry and trade should be more efficient. 100% FDI will be allowed through FIPB route in marketing of food products produced and manufactured in India. This will benefit farmers, give impetus to food processing industry and create vast employment opportunities."[19]

It is believed that such a move, if formalized, could encourage foreign investment to increase, potentially in food-only multi-brand stores, which, in turn could provide some impetus to backend investments in food processing.[20]

Nevertheless, some of the stumbling blocks to unleashing substantive investments that have been cited as still contentious include

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[18] Economic Times, February 2016
[19] Ibid
[20] Ibid

1. Disparity in the outlook towards modern retail between various states not only limits the ability of modern retailers to build scale at a pan-India level, it also gives rise to uncertainty since different state governments have the right to impose additional conditions on their own. This can create significant challenges for Retailers in establishing reliable and efficient supply chains.
2. The requirement for Retailers with FDI to own and operate all their stores on their own does not allow them to expand through the franchising route. It is noteworthy in this context that the revolutionary growth of quick service restaurants in India was fuelled by foreign brands like McDonalds, Pizza Hut etc primarily on the back of franchising arrangements with Indian entrepreneurs.
3. The entity that operates front end stores is not permitted to also engage in wholesale activities and even if a wholesaling entity is housed in a separate company by the same retailer, the wholesaling entity is not permitted to supply more than 25% of its sales to the retailer. This limits the leverage that retailers can obtain to expand and drive efficiency in the supply chain by sourcing from their own wholesaling arm located in any state irrespective of its stance on FDI in retail.
4. The requirement to infuse the entire $50mn mandated for backend investment only in the form of capital investment will not take into account the sizeable operational expenses in piloting and developing models of efficient procurement and supply chain besides the relatively higher costs of logistics that must be incurred for reliable services (World Bank, 2014)
5. Inability to makes sales through ecommerce channels further limits the FDI Retailers' ability to achieve volumes at the front end which can justify the backend investment. In this context, it is noteworthy that significant amounts of FDI (over $1.3bn as of June 2014[21]) has been infused in to ecommerce companies that operate on a "marketplace" model since 100% FDI in these online marketplaces is permitted. However, there have been allegations of these entities operating like online retailers[22]. If this is true, it leads to a non-level playing field for offline retailers who are unable to access foreign funding while online marketplaces (purportedly functioning as retailers) have no such restrictions[23].
6. The requirement to infuse the entire $50mn mandated for backend investment only for greenfield projects and any acquisition of existing facilities or investment in equity stakes in companies owning such backend infrastructure not being included is also perceived as a challenge

[21] Business Standard, June 2014
[22] The Hindu (newspaper), May 2015
[23] Taking cognizance of the perceived ambiguity in the definition of B2B e-commerce, a clarification was released by the GOI in March 2016, specifically and explicitly barring FDI in B2B e-commerce models that do not operate as marketplaces (Source: http://dipp.gov.in/English/acts_rules/Press_Notes/pn3_2016.pdf)

Compared to the restrictive FDI policies for Retail, the FDI policy for food processing is far more open with 100% FDI being permitted under automatic route in almost all categories[24]. However, practically no FDI or even domestic private sector corporation involvement in primary production is permitted[25].

Lacklustre and disparate agriculture marketing reforms

Since agriculture is a state subject, the marketing of agricultural produce is governed by the Agricultural Produce Marketing Acts of respective State governments[26]. The Act empowers state governments to notify the commodities, designate markets spread geographically across the state and market areas where the regulated trade must take place. The Act also provides for the formation of agricultural produce market committees (APMC) that are responsible for the regulation and operation of the markets.

Introduced mostly in the 1960s, the APMC Acts were conceived to provide a platform (at the designated market areas) for farmers to receive fair prices based on competitive bidding only. The Act required all farm produce to necessarily be sold through this platform only. The intent behind this was to ensure that intermediaries (and money lenders) would not be able to exploit farmers by compelling them to sell their produce at the farm gate at extremely low prices. To operate at these markets, every buyer (trader, wholesaler, food processor etc) was necessarily required to have a license issued by the respective APMC market.

The market were typically established with initial investment in the infrastructure and facilities being provided by the government. However, sustained operations, development and maintenance of infrastructure was meant to be funded by market fees and license charges collected by the committee from agents and traders operating at the market.

Each Committee has a catchment area – a sphere of regulatory influence crowned with physical marketing facilities (APMC markets) where transactions are carried out and under the purview of the Committee.

The benign intent of mandating all produce to go through the regulated platform thus monitoring prices and ensuring that farmers are not exploited has been belied over the years. By forcing intermediation, only auction based spot sales to be carried out only at designated market areas, the system built inherent barriers to information, money and produce flow between the producer and the ultimate consumer, prevented supply chain efficiencies and risk reduction from longer term price and offtake arrangements by institutional buyers and created high level of dependence of farmers on intermediaries while limiting their options for channels through which to make sales.

The result was an inefficient system in which farmers are divorced from market feedback and often must wait for months to be paid. Many farmers routinely go into debt to the very traders who buy their produce and then sell them seeds and fertilizers for the next crop.

By giving only licensed market functionaries the right to purchase directly from the farmer, the APMC acts ended up creating a long chain of intermediaries. Farmers sell their produce to

[24] Except alcoholic beverages where an industrial license is required even though 100% FDI is permitted.
[25] However, FDI in Agriculture and Animal Husbandry for some crops is allowed if undertaken "under controlled conditions". FDI is also permitted through the government approval route in tea plantations.
[26] Except Kerala, Manipur, Andaman & Nicobar Islands, Dadra & Nagar Haveli, Daman & Diu, and Lakshadweep

middlemen at the APMC mandis. These middlemen resell the produce to wholesalers at the APMC market in urban areas. At these urban markets, the produce passes on to retailers and then to the end consumer at urban retail markets (Singh, 2010).

While the product suffers deterioration and waste as it passes through multiple hands (several of these hands being only agents who have little incentive to maintain quality since they never own the produce), flow of information through the chain back to the farmer gets distorted or lost while flow of money to the farmer gets delayed and eroded paying for the margins of each intermediary not all of whom add commensurate value to the produce (Refer Figure 1 and Figure 2: Illustrative cost buildup for tomato from farm to retailer). Often even the core premise for bringing about the regulation – provision of a fair price to the farmer – is severely compromised when the licensed intermediaries collude and corruption leads to barriers being created for entry of new players into the market. Further, studies have reported that often funds collected at the market by way of issuance of licenses and fees for transactions is siphoned off Public Ledger Account of State governments as against being deployed for its intended purpose of market development[27].

Until reforms were initiated in agriculture marketing after the release of a Model APMC act in 2003 by the Central government to act as a guide for respective states to model their respective reformed acts on, the prevalent setup described above prevented backward integration by Retailers.

The Model Act recommended key reforms to specifically address the shortcomings of the prevalent setup and provided for the development of an efficient marketing system, promotion of agri-processing and agricultural exports and laying down procedures and systems for putting in place an effective infrastructure for the marketing of agricultural produce. Salient features of the Act include[28]:

Creating options for farmers

1. Entities beyond just the state governments (consumers, buyers, companies, farmers, local authorities) were permitted to apply for the establishment of new markets for agricultural produce in any area.
2. The compulsion on growers to sell their produce only through existing markets administered by the Agricultural Produce Market Committee (APMC) was removed.
3. Provision made for the purchase of agricultural produce through private yards or directly from agriculturists in one or more than one market area.
4. Provision made for the establishment of consumers'/ farmers' market to facilitate direct sale of agricultural produce to consumers

Capacity building

5. Separate provision was made for notification of 'Special Markets' or 'Special Commodities Markets' in any market area for specified agricultural commodities (like onion, fruits and vegetables, flowers etc.) to be operated in addition to existing markets.
6. Market Committees permitted to use its funds among others to create facilities like grading, standardization and quality certification; to create infrastructure on its own or through

[27] Economic Survey, Government of India, 2014-15
[28] Department of Marketing and Inspection, Ministry of Agriculture, GoI

public private partnership for post-harvest handling of agricultural produce and development of modern marketing system

7. The State Agricultural Marketing Board made specifically responsible for
   (i) setting up of a separate marketing extension cell in the Board to provide market-led extension services to farmers;
   (ii) promoting grading, standardization and quality certification of notified agricultural produce and for the purpose to set up a separate Agricultural Produce Marketing Standards Bureau.
8. Funds of the State Agricultural Marketing Board were permitted to be utilized for promoting either on its own or through public private partnership, for the following:
   (i) market survey, research, grading, standardization, quality certification, etc.;
   (ii) Development of quality testing and communication infrastructure.
   (iii) Development of media, cyber and long distance infrastructure relevant to marketing of agricultural and allied commodities

Bringing about transparency

9. The committees were made specifically responsible for:
   (i) ensuring full transparency in pricing system and transactions taking place in market area;
   (ii) providing market-led extension services to farmers;
   (iii) ensuring payment for agricultural produce sold by farmers on the same day;
   (iv) promoting agricultural processing including activities for value addition in agricultural produce; and
   (v) publicizing data on arrivals and rates of agricultural produce brought into the market area for sale.
   (vi) Setup and promote public private partnership in the management of agricultural markets.
10. Provision was made for the appointment of Chief Executive Officer of the Market Committee from among the professionals drawn from open market
11. For the Chairmanship of State Agricultural Marketing Board, two options provided namely Minister in-charge of Agricultural Marketing as ex-officio or alternatively to be elected by the Chairman/ members of Market Committees

Formalizing contract farming

12. Provision for compulsory registration of all contract farming sponsors, recording of contract farming agreements, resolution of disputes, if any, arising out of such agreement, exemption from levy of market fee on produce covered by contract farming agreements and to provide for indemnity to producers' title/ possession over his land from any claim arising out of the agreement. A model specification of contract farming agreements was also provided.
13. Provision made for direct sale of farm produce to contract farming sponsor from farmers' field without the necessity of routing it through notified markets

Easing procedures

14. Provision made for imposition of single point levy[29] of market fee on the sale of notified agricultural commodities in any market area and discretion was provided to the State Government to fix graded levy of market fee on different types of sales
15. Provision was made for licensing of market functionaries to be dispensed in a time bound manner, the procedure for registration for which was to be laid down.
16. Registration for market functionaries provided to operate in one or more than one market areas as against only in the market from which license is obtained.
17. Provision for prohibition of commission agency in any transaction relating to notified agricultural produce involving an agriculturist with no deduction towards commission from the sale proceeds payable to agriculturist seller.
18. Provision made for resolving of disputes, if any, arising between private market/ consumer market and Market Committee
19. State Governments were conferred power to exempt any agricultural produce brought for sale in market area, from payment of market fee

Even years after the release of the Model Act, the agriculture marketing setup in the country remains highly dependent upon the traditional APMC markets which continue to function in largely the same manner. A key reason for this is the differential extent and progress of reform across states which has led to lack of clarity and procedural issues in establishing backward linkages. Most states have accepted the suggestions under "Creating options for farmers" but little or no change has been observed on the areas particularly those relating to capacity building, transparency and easing of procedures. Also, some states have chosen to not amend the act but make specific exemptions on a case by case basis while others have made the changes but left implementation ambiguous by not formulating the rules associated with the Act (World Bank, 2014).

Lack of uniformity in implementation of reforms has limited the ability of Retailers to build seamless supply chains across state borders. Even within the state, procedural issues have limited their ability to gain from backward integration. One of the largest modern retailers interviewed mentioned that the paperwork associated with ensuring that the APMC levy was applied only at a 'single point' was so onerous that the company has decided to instead pay the levy at each market to avoid delays and complexity associated with the procedure for the same.

In addition, modern retailers have had to contend with government actions undertaken to purportedly protect small retailer and traders' interests often yielding to protests from trader lobbies (see box below).

A true reform of the APMC Act will require huge political will to break cartels that often influence operations of the key existing APMC markets, in addition to harmonising the implementation of the Act in the different states that create market distortions. But unless state-level APMC laws are altered and implemented to conform to the spirit of the model APMC law, the benefits from the increased investment in the retail sector and new infrastructure creation won't reach the small farmers and small agro-processors.

[29] In the existing setup, market levy was imposed in each APMC market that the produce went through in the state.

Creating an effective choice of multiple and competitive market channels for farmers by means of APMC reform and, at least until the other channels mature, making the functioning of existing APMC markets more accountable and efficient will be the first step towards fighting the persistent inflationary conditions assailing the country (Chandrasekaran et al, 2014).

Inability to directly engage in or significantly influence primary production

One of the obvious ways for Retailers to integrate backwards is to engage in production themselves (corporate farming through leasing or buying of land) or directly control it (contract farming) so as to have the ability to monitor quality, quantity and other aspects of production in addition to creating a direct link from the farm to Retail stores thus controlling waste, saving intermediary margins and leveraging scale economies.

Corporate farming

The system of agricultural tenancy in which a land owner does not cultivate his land himself and leases it out to others for cultivation against payment of rent has been present in all open agrarian economies. However, leasing of agricultural land is either legally banned or highly restricted in most parts of India for the past several decades.

Prior to independence, land leasing was considered to be a part of the feudalistic, unproductive and exploitative agrarian system. Between the landlord and the tenant who actually cultivated the land, there were several layers of rent receiving intermediaries all of whom had to be supported by the labor of the tenant. They system was also marked by rack renting and exploitation and consequently the actual cultivators lacked both incentive and ability to improve productivity of the land. After independence therefore, almost all state governments passed laws for abolition of intermediaries and also either abolition or regulation of agricultural tenancy (Haque, 2012).

Impact on modern retailers of resistance from local traders influencing government action

Regulation of the retail sector is mainly in the domain of the state governments. Different state governments had taken different regulations to 'protect' the small unorganized retailers from organized retailers in the era of "retail revolution." For instance, in July 2006, the Kerala state government had tightened the regulatory framework for large organized retail companies and announced a special 10 per cent tax on the profits earned by the supermarkets (Franz 2010). In August 2007, the Uttar Pradesh government had also closed down 10 Reliance Fresh outlets without meddling with other supermarket chains. As a result in September 2007, Reliance Retail had cancelled its planned investments to construct another 200 supermarkets and expand its supply infrastructure there.

Resistance of local retail chains in India was also able to influence government policies to favor them. In Orissa, Reliance had given a break on expansion and shut down its only supermarket, which had become an instance where ferocious resistance of small retailers backed by political sanctions had directly influenced the movements of Reliance. The ferocity of the protestors had not only gained media attention but also gave a huge constant pressure on different big organized retail companies. This has been done by continuously creating the threat of the demolition of their buildings and the safety of their staffs and customers. In this way, the corporate power of the big organized retailers had remained restricted by the help of the execution of collective power within the production network. As a result, Reliance had cut back its enlargement target of 2000 to 1500 outlets by 2011 (Bailay 2007).

In 2008, German TNC (Transnational corporation) Metro, which operates Metro Cash & Carry wholesale markets (two in Bangalore, one in Hyderabad, one in Mumbai and one in Kolkata), had also faced the resistance from local small unorganized retailers campaign. This had been done with the view that metro is grabbing a market share from traditional wholesalers and illegally doing the activity of a retailer irrespective of the fact that Metro was having only a wholesale license. Metro had previously faced resistance in 2003, when it opened its first market in Bangalore. When hundreds of local and regional middlemen went on strike, the Karnataka state government had banned its sale of fresh fruit and vegetables. At last Metro had regained its license to trade in fruit and vegetables in Bangalore in 2008.

In case of Kolkata, though Metro had gained a license for selling fresh fruits and vegetables in 2005, it had again been withdrawn in 2007 due to public protests and only regained the silence in September 2008 but with strict conditions4. Further, the opening of the Kolkata Metro Cash & Carry in September 2008 was again accompanied by protests.

Similar thing happened while opening up Cash & Carry outlet in the Mumbai market in the same year.
So the evidence of the cases of Reliance Fresh and Metro Cash & Carry had shown that the resistance has had an obvious direct impact on the production networks in the Indian retail market.

In 2007, the Communist Party of India (Marxist) made the demand that big retail businesses should be licensed, to protect small unorganized retailers. Policy makers wanted to make licensing mandatory for those stores with an area of 10,000 sq ft or more and selling food and grocery items such as Atta, edible oil, fruits and vegetable. The local urban bodies would be empowered to grant the licenses. The United Progressive Alliance (UPA) Government had initiated the process of chalking out the licensing regime immediately after getting the suggestions from CPIM).

Source: Extract from Mukherjee, 2011

Tenancy reforms have since been undertaken since but leasing of agricultural land by corporations remains challenging. Based on the current legal position of on land leasing, various regions of India can be broadly grouped into five categories.

- First, the states of Kerala and Jammu and Kashmir banned agricultural tenancy altogether without any exception.
- Second, the tenancy laws of several states including Telengana, Bihar, Himachal Pradesh, Karnataka, Madhya Pradesh and Uttar Pradesh banned leasing out of agricultural land except by certain disabled categories of landowners, so as to vest the ownership of land with the actual tillers. But concealed tenancy continued to exist in all these states.
- Third, States like Punjab, Haryana, Gujarat, Haryana, Maharashtra, Assam did not ban tenancy as such. But tenants after continuous possession of land for certain specified years, acquired the right of purchase of the land they cultivated. In the case of Gujarat and Maharashtra, once tenancy is created, it cannot be terminated.
- Fourth, states like West Bengal, Orissa, Tamil Nadu and Andhra Pradesh did not ban leasing-out of agricultural land although in West Bengal only share cropping leases are legally permitted.
- Fifth, in the scheduled tribe areas of Andhra Pradesh, Bihar, Jharkhand, Chhatisgarh, Orissa, Madhya Pradesh and Maharashtra, transfer of tribal land to non-tribal lands even on lease basis can be permitted only by a competent authority.

The other restrictions on land leasing in most states include fixation of fair rent and also no legal permission to eject tenants except on certain certified grounds.

Given the complexity, restrictions and uncertainty associated with tenancy laws pertaining to agricultural land, corporate farming through leasing of land becomes very challenging. So while Retailers and processors can control the quality of cultivation and supply chain of produce by directly engaging in it through leasing, landowners are fearful of leasing for fear of losing their land.

While there are notable examples where corporates have been leased land and professionalised cultivation these are limited to the states of Gujarat, Punjab and Maharashtra and have been more an exception than the rule (Singh, 2006).

As far as corporate farming through purchase of land is concerned, it is not legally permissible as a non-farming entity is not permitted to own agricultural land as per the Land Ceiling Act.

Contract farming

Contract Farming can be understood as a firm lending "inputs" — such as seed, fertilizer, credit or extension — to a farmer in exchange for exclusive purchasing rights over the specified crop. It is a form of vertical integration within agricultural commodity chains so that the firm has greater control over the production process and final product.

Arrangements that displayed characteristics of standard contract farming agreements have been prevalent in India for long. In the wake of economic liberalization, the concept of contract farming in which national or multinational companies enter into contracts for marketing of the horticultural produce and also provide technologies and capital to contract farmers has gained importance.

However, for a long time there existed no legal and regulatory framework for these arrangements which meant enforceability of these "contracts" was suspect leading to frequent defaults on terms by both the farmers and the corporate.

The Model APMC act of 2003 attempted to plug this gap by laying out guidelines for states to follow with respect to these arrangements. The Act required the contract farming sponsor (buyer) to register with the Market committee or "prescribed officer" and also to have the agreement recorded with the said prescribed officer. It also provided a guideline for dispute settlement and specifically barred the transfer of land rights under any circumstance to the sponsor. It also exempted from market fees any transaction carried out between the parties to the contract that would not be carried out at an APMC market. A model contract farming agreement was also included as part of the Act.

However, adoption of these guidelines remains partial and even where the same have been adopted, there is little faith in the enforceability of terms of the contract. Other problems include undue discounts on value for quality (as perceived by famers); delayed deliveries and payments; mixed experience with the provision of extension services, including competitive pricing and the poor quality of seed or inputs provided; unequal or unshared production risk; an insufficient premium relative to open market prices or for quality, including for organic produce (World Bank, 2014). So even though there exist several examples (Kulkarni, 2015) (see Table 1: Select state-wise contract farming initiatives by private companies in India for State wise Contract Farming initiatives by private companies in India) of corporates engaging in some form of contract farming[30], these are at best informal, brought about by specific characteristics and efforts at a local level with limited standardization and challenges to scale.

Table 1: Select state-wise contract farming initiatives by private companies in India

[30] Often referred to as "contact" farming given the informality of arrangements

State	Company	Crop	Area (ha)
Karnataka	Himalaya Health Care Ltd.	Ashwagandha	700
	Mysore S N C oil Co.	Dhavana	400-500
	AVT Naturals Products Ltd.	Marigold and Caprica Chilli	4000
	Natural Remedies Pvt. Ltd.	Coleus	150
	20 Pvt. Companies	Gherkins	8000
Maharashtra	Tinna Oil and Chemicals	Soyabean	154,800
	ION Exchange Enviro Farms Ltd.	Several fruits, vegetables, cereals and pulses	19
Madhyapradesh	Cargil India Ltd.	Wheat, Maize and Soybean	17000
	Hindustan Lever Ltd	Wheat	15000
	ION Exchange Enviro Farms Ltd.	Several fruits, vegetables, cereals and pulses	12098
	ITC	Soybean	1200
Punjab	NIJJER Agro Food Ltd.	Tomato and chilli	250
	United Breweries Ltd.	Barley	2270
	Satnam Overseas, Sukhjit Starch	Basmati, Maize	4000
	Satnam Overseas, Amira Indian Foods Ltd.	Basmati	14700
	PepsiCo India Ltd.	Basmati, groundnut, potato and chilli	6000 (around)
	Nestle India Ltd.	Milk	65000000 kg. / day
Tamil Nadu	Super Spinning 570 mills	cotton	570
	Bhuvi Care Pvt. Ltd.	Maize	800
	Bhuvi Care Pvt. Ltd.	Paddy	200
	Appachi Company	Cotton	260

Source: "Nature and Scope of Contract Farming in India" by H.S. Satish, 2012

As detailed later in this paper, there are a few instances of Retailers engaging in contract farming for direct sourcing but feedback from discussions with Retailers indicated that the above mentioned issues make them tread cautiously.

Others policies that create hurdles

Some of the other laws that contain provisions that negatively impact the growth of modern retail include (FICCI, 2014)

1. Essential Commodities Act
2. Legal Metrology Act
3. Shops and Establishments Act
4. Food Safety and Standards Act

Essential Commodities Act (ECA)

The ECA provides for the regulation and control of production, distribution, and pricing of commodities which are classified as "essential" (for maintaining or increasing supplies or for assuring equitable distribution and availability at fair prices). Under the Act, various ministries/departments of central government, and under the delegated powers, the state governments/union territory administrations issue orders for regulating production, distribution, pricing, and other aspects of trading with respect to the commodities declared as essential. The enforcement/implementation of the provisions of the ECA lies with the state governments and union territory administrations.

The ECA gives the government wide-ranging powers to control the production, storage, transportation, and pricing of essential commodities. Although these controls (for instance, limits on the stocks that can be held by private players or restrictions on the movement of commodities) are imposed sporadically and usually in inflationary situations, they can change suddenly in a short period.

The list of scheduled commodities under the Act changes from time to time. In recent years the list has been pruned significantly and presently includes the seven broad categories of commodities (compared to 70 commodities in 1989), including foodstuffs, seeds, and fertilizers.

These specified commodities cover practically all processed and unprocessed foods and can be amended by executive orders from the central and state governments. The result is a multiplicity of Control Orders and frequent changes of rules and restrictions.

While all this is done with the intent of preventing hoarding by unscrupulous traders, the limits imposed often prevent retailers from creating efficiencies in the supply chain. For instance, Maharashtra Scheduled Commodities Wholesale Dealers' Licensing Order, 1998 prescribes that the wholesale dealers in Mumbai-Thane Rationing Area, Nagpur and Pune Municipal Corporation areas, shall hold the maximum stock of one hundred fifty metric tonnes of wheat for a maximum period of ten days and shall also submit the fortnightly returns to the Licensing Authority. Such a stocking limit on a staple food can be very low for large modern retail formats like hypermarkets and forces modern retailers to open multiple warehouses or have more frequent replenishments to meet their growing requirements which drive up operational costs.

Also, the stocking limits of various commodities differ based on the location of the Distribution Center (DC). If the DC is located within the Municipal Corporation Area then the stock limit is higher as compared to if it is located in other areas of the State. To ensure uninterrupted and reliable flow of commodities to their stores, modern retailers are thus compelled to push their DC's further into the city. This is not only detrimental towards the larger objective of decongesting cities, since space within the city is costly and scarce, keeping larger stocks within the city as against outside the city raises costs for the Retailers.

Even though the Removal of (Licensing requirements, Stock Limits and Movement Restrictions) on Specified Foodstuffs Order ("Order") of 2002 was passed with the objective of abolishing the need for permit or license pertaining to stocking, selling or transporting certain commodities (i.e. commodity edible oils, edible oilseeds, rice and paddy) by wholesalers and retailers, provisions of this Order have been kept in abeyance since August 2006 for certain commodities (i.e. commodity edible oils, edible oilseeds, rice and paddy). This appears to have been done to enable State Governments to continue to take de-hoarding operations under Essential Commodities Act. The Cabinet had initially approved this only for a period of 6 months. However, the validity of this Order has been extended from time to time incorporating also some more essential commodities.

Another onerous requirement of this Act is that of mandatory maintenance of registers in physical form. The Act requires persons engaged in the production, supply or distribution of or trade and commerce in any essential commodity to maintain and produce for inspection such books, accounts and records relating to their business.

Despite attempts to modify the ECA, its essential provisions remain intact. The multiplicity of control orders issued by multiple agencies (at the central and state levels) creates uncertainty and raises transaction costs. The lack of transparency prevails, restricting trade.

The government has periodically modified the ECA provisions to ostensibly pare down the list of "essential commodities." Again, with limited central government control over implementation and authority for each state to establish its own regulations and controls, progress on removing the ECA's restrictions on domestic markets and trade is not known.

Legal Metrology Act

The Legal Metrology Act, 2009 was implemented with effect from 1st April, 2011 as an act to establish and enforce standards of weights and measures, regulate trade and commerce in weights, measures and other goods which are sold or distributed by weights, measure or number and for matters connected therewith or incidental thereto.

Several ambiguities exist with respect to interpretation of the various prescriptions of the Act including pack sizes especially when it comes to promotional packaging and bundling, registration and compliance requirements.

Shops and Establishments Act

The Shops and Establishments Act is designed to regulate various operational aspects, payment of wages, hours of work, leave, holidays, terms of service and other work conditions of people employed in shop and commercial establishments. Interviews with modern retailers have revealed misuse of the punitive provisions of this law for alleged harassment.

Food Safety and Standards Act (FSSA)

The FSSA is an act to consolidate the laws relating to food and to establish the Food Safety and Standards Authority of India for laying down science based standards for articles of food and to regulate their manufacture, storage, distribution, sale and import, to ensure availability of safe and wholesome food for human consumption and for matters connected therewith or incidental thereto.

Frequent notifications have been issued in the recent past by FSSAI without envisaging the impact on and providing sufficient lead time for the industry to act on the notifications. One such instance was on labeling where regulation was notified in a piecemeal fashion even when the original regulation on labeling (and packaging) was under amendment. For example, the lead time provided to act on the notification of making mandatory to print the License embedded in FSSAI logo on all product labels was 6 months while it was only 2 months for notification making it mandatory to separately print Trans and Saturated fats on labels of packaged foods. Intermittent amendments in labeling require many changes in supply chain system and hence needs to be anticipated well in advance since packaging materials are printed in bulk to cater the requirement for many months.

Issues with the product approval process which has also been amended time and again with a high backlog of pending approvals has also been cited as a challenge.

Other laws that create hurdles include the Drugs and Cosmetics Act and long pending reform to the act is required to be actioned. For example the absence of a single licensing authority for manufacturing, sale, export, import distribution or stocking of certain drugs and cosmetics creates challenges. While this was proposed under 2007 amendment, it is not yet implemented. Similarly, the requirement to obtain different licenses for Sale or storage at more than one place creates procedural challenges which can be addressed through a unified license.

Other business environment issues

India ranks 142nd amongst 189 countries of the world when it comes to ease of doing business. On key business environment parameters critical for development of the Retail sector like registering property, enforcing contracts, dealing with construction permits, getting electricity, and starting a business activity, India's standing vis-à-vis its peers is abysmally low as seen in Figure 5 which depicts India's rankings on *Doing Business* topics amongst 189 countries.

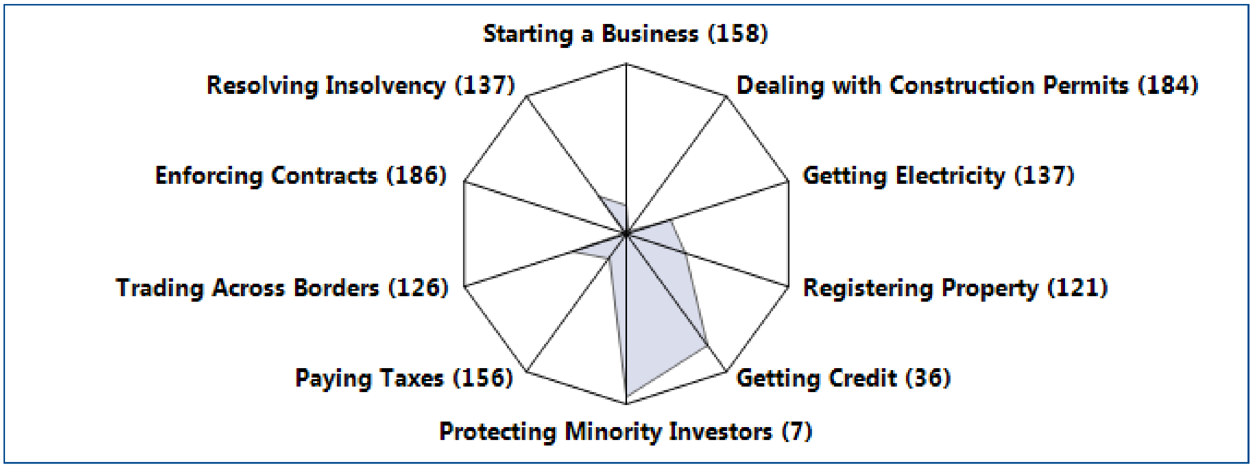
For example, for a business in the construction industry obtaining all the necessary approvals to build a warehouse in a city like Mumbai or Delhi, connect it to basic utilities and register the warehouse can take over 6 months, going through over 25 procedures ending up costing upto 28% of the value of the warehouse. Similarly, all procedures required for a local business to obtain a permanent electricity connection and supply for a standardized warehouse, as well as the time and cost to complete them can requires 7 procedures and takes upto 3-4 months.

The full sequence of procedures necessary for a business to purchase property from another business and transfer the property title to the buyer's name can take over a month, requires 7 procedures and can cost upto 7% of the cost of the property.

The administrative burden of complying with taxes in India is also very high - on average, firms make 33.0 tax payments a year and spend 243 hours a year filing, preparing and paying taxes.

Contract enforcement, which is a supreme importance for modern retailers given the fact that in the course of their business they have to engage in a multitude of contracts ranging from lease contracts for storefronts to supply contracts with vendors to construction, labor, utilities supply contracts to name a few. In case of a dispute on contract adherence enforcement through the existing legal setup can take several (over 4 years in a sample case taken by the World Bank in its "Doing Business" assessment), cost almost 40% of the value of the claim and requires over 45 procedures. In this context, it is relevant to quote a senior management official of the largest retailers on the question of contract enforcement – "We can reduce our storefront rental costs by setting up large stores outside city limits but we have no assurance of adherence to long term rental rates agreed in the contract if with the expansion of the urban area of the city, rates in the vicinity go up beyond what was envisaged in the contract"

Figure 5: India's position on various "Doing Business" factors



Source: Doing Business 2015: Going beyond efficiency, World Bank

Key enablers

Global experience shows that modern retailers dominate processed food markets well before they are able to penetrate and dominate fresh food markets, as they can use economies of scale in procurement and and marketing to reduce costs and can use economies of scope to differentiate quality and thus appeal to different segments of consumers (Reardon et al, 2012). In an assessment of the basic conditions that exist for modern retail, it is therefore relevant to also understand the same for food processing. Therefore, in this section we will lay out the enabling policies / schemes / incentives for both food processing and modern food retail.

Government initiatives to support food processing

Recognizing the vast potential of the Food Processing industry especially given India's status as one of the top food producers of the world, the government has not only reformed the Food Processing sector and permitted 100% FDI, several schemes and incentive programs have been rolled out to boost the growth of this sector. Key among these are described below:

Mega Food Park Scheme

The Scheme of Mega Food Park aims at providing a mechanism to link agricultural production to the market by bringing together farmers, processors and retailers so as to ensure maximizing value addition, minimizing wastages, increasing farmers' income and creating employment opportunities particularly in rural sector. The Mega Food Park Scheme is based on "Cluster" approach and envisages a well-defined agri/ horticultural-processing zone containing state-of-the art processing facilities with support infrastructure and well-established supply chain.[31]

- The scheme envisages a onetime capital grant of 50% of the project cost (excluding land cost) subject to a maximum of Rs. 50 crore in general areas and 75% of the project cost (excluding land cost)subject to a ceiling of Rs. 50 crore in difficult and hilly areas i.e. North East Region including Sikkim, J&K, Himachal Pradesh, Uttarakhand and ITDP notified areas of the States.
- A Program Management Agency (PMA) is appointed by the Ministry to provide management, capacity building, coordination and monitoring support. For meeting the cost

[31] Ministry of Food Processing Industries, GoI

of the above and also other promotional activities by the Ministry, a separate amount, to the extent of 5%of the overall grants available, is earmarked.

- In addition, inclusion of the Food Park Scheme under the list of infrastructure sub-sectors makes these eligible for an income tax holiday of upto 10 years along with other incentives like service tax exemptions and access to affordable credit to Nabard

One of India's largest modern retailers – Future Retail – is developing a Mega Food Park near Bangalore which will, for a large part, provide the backend support for its retail operations. The group is planning two more Food Parks in other states in the future. In all, over 40 projects for Mega Food Parks have been approved till early 2015.

Assistance for development of Cold Chains

The scheme aims to facilitate the establishment of a strong cold chain facility for agricultural, horticultural, dairy, fish & marine, poultry & meat products by establishing linkage from farm gate to the consumer, end to end, to reduce losses through efficient storage, transportation and minimal processing.

Financial assistance (grant-in-aid) of 50% the total cost of plant and machinery and technical civil works in General areas and 75% for North East region is provided subject to a maximum of Rs.10 crore. Over a 100 private investors have availed of this assistance till early 2015.

Other schemes include incentives for modernization of abattoirs, financial assistance for setting up and upgradation of Quality Control / Food Testing laboratories, implementation of various standards like HACCP, ISO etc, R&D and promotional activities like organizing Seminars/Workshops/Studies / Surveys, Exhibitions/Fairs and Study Tours.

While the above mentioned schemes are administered by the Ministry of Food Processing, several other schemes and incentives are offered by other related agencies including

- Assistance for setting up cold storages by the National Horticulture Board (NHB), the Small Farmers Agribusiness Consortium (SFAC), Agricultural and Processed Food Products Export Development Authority (APEDA) and under the National Horticulture Mission (NHM)
- Assistance for technology upgradation, promotion and incubation of Small Scale Industries (SSI) by the Ministry of micro, small and medium enterprises
- Subsidy for setup of Food processing units under Horticulture Mission For North Eastern Region and Himalayan States (HMNEH)
- Venture capital assistance through SFAC and SIDBI Venture Capital Ltd.
- Schemes for promoting skill development through the National Skill Development Council (NSDC)

Government initiatives to support modern food retail

Unlike Food Processing, for which the government has a conscious and active facilitation policy and a Ministry dedicated to it, modern retail has not enjoyed any direct facilitation / promotion. As mentioned earlier, no exclusive regulatory framework for the retail sector exists in India with each state having regulation of the sector within its own domain under the broader “internal trade” bucket.

Skill Development

The key area where explicit government support for modern retail can be seen is that which is being provided for skill development. The Retailer’s Association’s Skill Council of India is a not-for-profit entity that has been co-funded by the Government of India along with equity participation from The Retailer’s Association of India and the top few modern retailers in the country viz. Reliance Retail, Future Retail, Shopper’s Stop, Trent among others to function as the apex skill development council for the Retail industry. The body works towards

1. Developing National Occupational Standards for all relevant roles in the Retail industry
2. Create a well-structured Labour Market Information System (LMIS)
3. Accredit training partners
4. Certify trainers
5. Assess and certify learners

The body carries out Train the Trainer programmes and administers the STAR scheme which provides for a government sponsored monetary reward for individuals who complete specified training courses and pass a test administered at the end of the training. The job roles currently covered include key roles required in modern retail outlets for eg. store operations assistant, cashier and sales associate.

Stakeholder consultations to guide reform in key policies impacting the sector

A high-level group on internal trade reforms under the Ministry of Consumer Affairs was constituted in the year 2013 with the objective of understanding current challenges faced by the Retail industry and to work out solutions to safeguard the interest of every stakeholder. This was considered necessary since there are a number of laws/acts that govern this sector, which needs deliberations and reforms for better alignment to needs of the changing environment of Retail. The group interacted with various ministries, state governments and traders to find out their difficulties following FDI in multi-brand retail and come out with suggested solutions along with a revised Model Shops and Establishments Act for the Ministry’s consideration.

Select other recent initiatives

The state of Maharashtra has been the frontrunner in creating a better enabling environment for retailers to the benefit of both traditional and modern retailers

1. In late May 2015, Maharashtra become the first state in the country to have a separate Retail trade policy. The policy, which will cover establishments from kirana shops to malls and even the e-commerce sector, is expected to focus on ease of doing business by reducing the licenses, permissions and the time taken to obtain them, increasing business timings and even establish designated 'retailing zones' in cities. It will also moot creation of warehouses to supply to the retail chain, allow women to work on night shifts and loosen

stock holding limits imposed to avoid hoarding by shops and establishments and promote the sector, which is being fuelled by the aspirational demand of the emerging middle class[32]

2. In March 2015, renewal of Shops and Establishments licenses was permitted online and through mobile applications in Mumbai
3. In April 2015, the state allowed maintenance of labour registers in an online format

Several other schemes under the National Horticulture Mission including those for cold storage and transportation development, Terminal and Wholesale market development, schemes for soft financing through National Bank for Agricultural and Rural Development (NABARD) etc.[33], though not directly meant for facilitating modern retail, do have an obvious impact on its development.

[32] DNA (newspaper), May 2015

[33] National Horticulture Mission, GoI

Chapter 3: Structure and size of modern food retailing

Share of modern format retail, particularly in food, is low

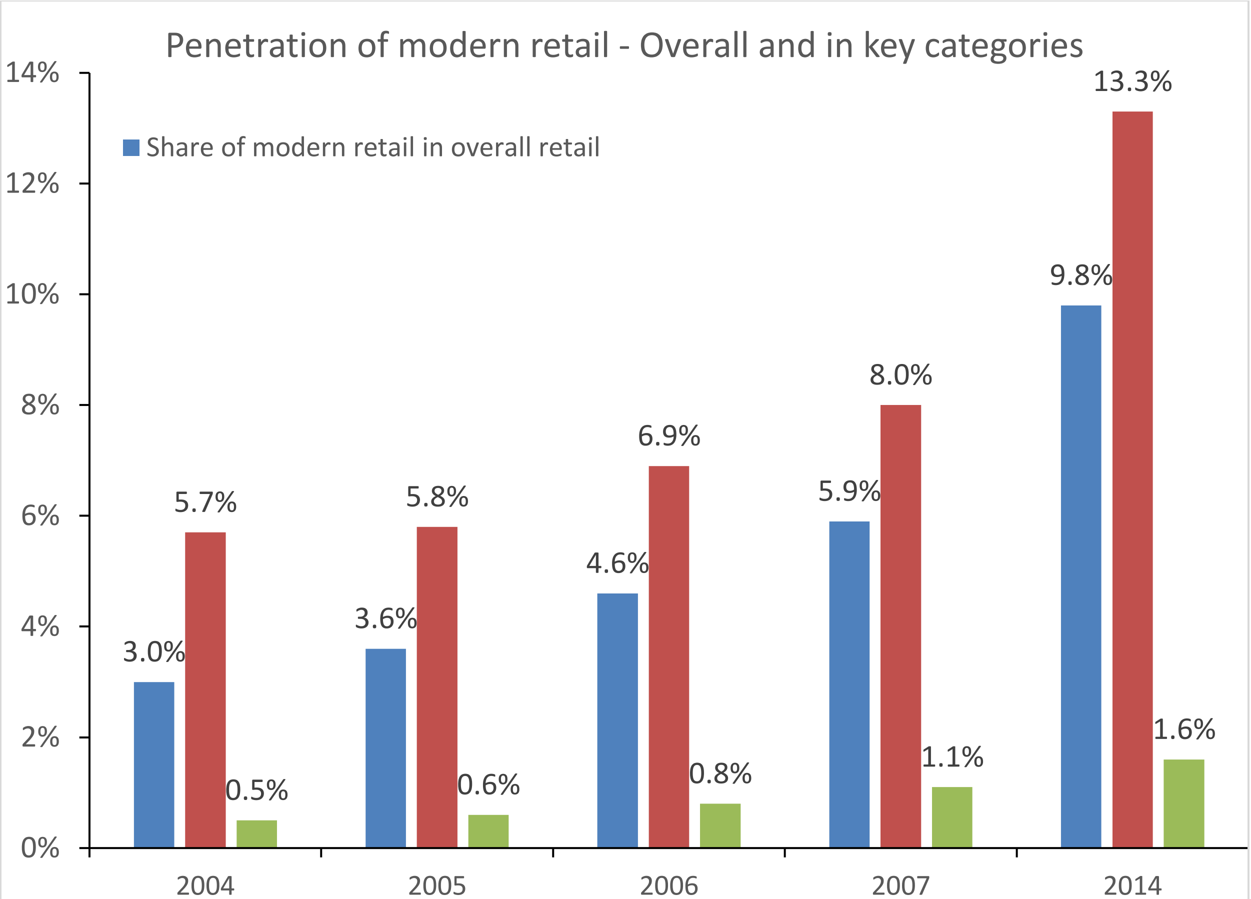
The Indian retail industry accounts for over 10%[34] of the country's gross domestic product (GDP) and around 8% of the employment in India.[35]. The industry is estimated to be $650bn in size with the share of modern retailing at about $64bn in 2013-14.[36]

The Modern Retail industry in India prior to 1995 had insignificant growth and consisted mostly of domestic manufacturers, who had set up company/brand outlets to sell their products. From 1995 till 2005 there was a cautious optimism with a few players experimenting with new formats primarily in the apparel sector due as the liberalization process created favourable conditions. However, in the next 3 years post 2005, the retail industry went into expansion mode on the expectation of major international players entering India, and large Indian corporate houses committing to retail. This was also the period which saw the entry of food and general merchandise categories in the retail sectors which dominated by the apparel players till then. However, the global economic recession and FDI restrictions on multi-brand retail from 2008 onwards saw a phase of consolidation in the industry with players focusing more on cost optimization and operational efficiency rather than on new store rollouts.

A large part of the Indian retail industry is still in the unorganized segment, which accounted for 90% of the total market in 2014, and within this, Food and Grocery had the largest share with 60%[37] of the total market. For the organized segment which had a 10% share in the overall retail market, food and grocery had a share of 10%[38] and has found growth challenging on account of low margins, high real estate costs and supply chain inefficiencies (see Figure 6)

Figure 6: Penetration of modern retail

[34] Economic Survey, GoI, 2014-15
[35] Ministry of External Affairs, GoI
[36] As of FY14; derived using the National Account (GDP) Statistics in "India Retail Report, 2015" by Images Multimedia Pvt. Ltd.
[37] 64% including Food Service; Source: "Indian Retail Report 2015" derived using the National GDP statistics
[38] 17% including Food Service; Source: "Indian Retail Report 2015" derived using the National GDP statistics



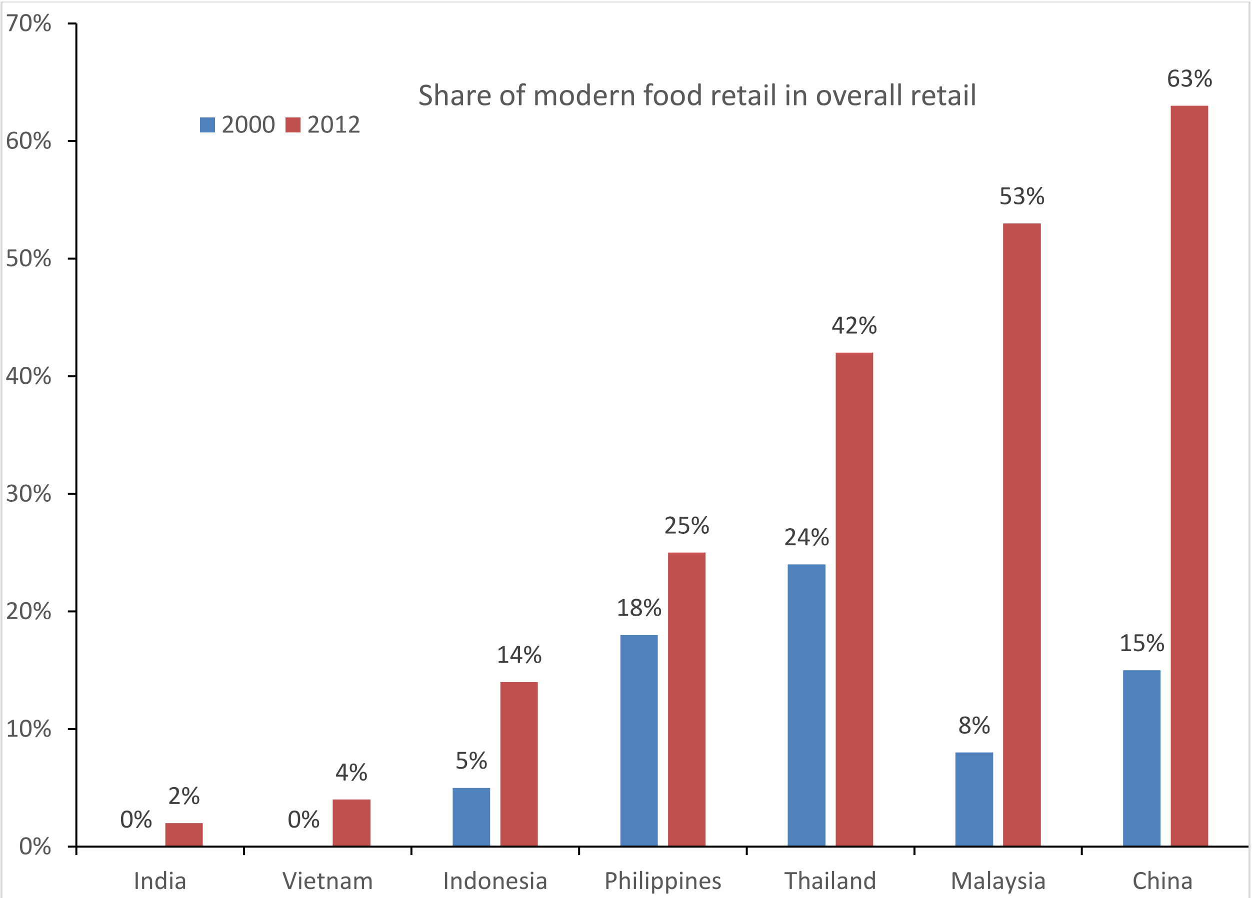
Source: Prepared from data from "India Retail Report" by Images Multimedia Pvt. Ltd.

While a significant majority of the share of retail sales continues to be through traditional retail outlets, the share of modern retail has been steadily rising especially over the last two decades.

However the share of modern food retailing has not grown in line with the overall share of modern retailing. Even after the advent and presence of modern food retail formats for close to two decades now, these enjoy a share of only 1.6% as compared to 9.8% share of modern retail across categories. It is interesting to note however, that in the related segment of food service (restaurants, hotels etc), the share of modern format is much higher at 13.3%. This is not very surprising as the food service sector has long been freed from controls and exposed to reform. Unlike modern food retail, this segment also does not have to depend upon a vast spread of fragmented suppliers at the other end of a multi-tiered and fragmented chain for a bulk of its requirements as is the case for food retail.

As is evident from Figure 7, the share of modern food retail in India is not only abysmally low compared to most developed and even developing countries, it has also grown at a much lower pace even from a smaller base.

Figure 7: Share of modern food retail by country



Source: Report "What does it really take for grocers to win in emerging Asia?" Bain & Co., 2014

When one looks at the share of fresh farm produce (fruits and vegetables) in the typical modern Indian modern retailer's basket of food items, it is seen that as compared to a share of 22% (see Figure 16) in overall food retail, this category's share in the value of food retailing by modern retailers ranges between 5-20%[39]. Some of the largest modern retailers also indicated that this share will reduce going forward. All modern retailers alluded to the view that maintaining fresh fruits and vegetables stocks on the shelves is necessary as a "footfall driver" i.e. a category that must be stocked to attract customers into the store so as to provide a complete basket of products. The category was often referred to as a "necessary evil" that, if not stocked, will lead to lesser customer interest and therefore lower sales of all other categories.

Some of the challenges highlighted by players which limit growth of fresh produce retailing in the modern format include[40]

Regulatory

1. Regulatory ambiguity and operationalization difficulties associated with contract farming (as outlined in the previous chapter)

[39] Excludes retailers that focus on food as the only / key category eg. Mother Dairy, in which case fresh fruits and vegetables comprise close to 85% of total value of sales

[40] Interviews with Modern Retailers (list in Annex)

2. Confusion and increased compliance costs that arise with regard to reform on account of (World Bank, 2014)
    a. Lack of rules associated with all areas of the APMC Act
    b. Use of executive notifications as against amendments to the Act which creates doubt and uncertainty on continuance and seriousness towards reform
    c. Different extent of reform in key areas of the act across various states
    d. Government intervention, which is often unpredictable / knee-jerk, in controlling free flow and an overall free market of produce through actions like stocking restrictions, export controls (both ex-state and ex-country), cold storage rental ceiling and, at a macro level, the Minimum Support Prices (MSP) regime

"Delisting has not caused any big changes; we pay 1.08% even for direct from farm procurement" – Fresh procurement head at top 3 modern retailer

"It takes 2.5 years to open a store! For example getting a license to operate 365 days even with all documentation in place took long time" – Store head at top 3 MNC cash & carry wholesaler

"In Punjab single point levy has been implemented but the paperwork associated (multiple forms, requirement of original invoice to be shown at each mandi etc) with it is so cumbersome that we end up paying more than once often instead - it is a headache to coordinate, employ people specifically to fill these forms to ensure compliance" - Fresh procurement head at top 3 modern retailer

Institutional

3. Lack of transparency and political influence in the operations of APMC mandis and cartelization of market operators[41]
4. Poor infrastructure and conditions at APMC markets despite collection of levy; in most cases levy is collected even for transactions undertaken outside the APMC mandi complex[42]

"Commission agents charge commission to both farmer and trader; often the trader is known to commission agent and they collude to charge 5-8% commission to the farmer disguised into the sale price" – Fresh procurement head at top 3 fresh produce modern retailer

"In Delhi price discovery is possible because Azadpur is large but Kolkata has only private mandis with no regulation; Jharkhand has wholesale mandis on the road; cash transactions with a "parchi" system abound resulting in very high bad debts of around 10-20%" - Fresh procurement head at top 3 fresh produce modern retailer

For example, kinnow harvesting is done by "shaking the tree" which causes internal damage which becomes apparent only later when the product is on the shelf and it has to be discarded after pulling it all the way through the chain" - Fresh procurement at top 3 modern retailer

Operational

1. Quantity loss of 7-8% in vegetables and 11-12% in fruits takes place on the retail shelf. A part of this is avoidable if the produce is harvested, transported and packaged appropriately

[41] Economic Survey 2014-15, GoI
[42] Ibid.

much of which is not possible in the absence of direct linkages between retailer and producer

2. Poor infrastructure, fragmentation and low reliability of the multiple service providers along the supply chain, constraints and uncertainty associated with the regulatory setup and operations of the APMC mandis and absence of standardized infrastructure and services for reliable grading and sorting of produce raise the overall transaction costs and reduce ability to scale procurement.

> *"I once got a query for payment of APMC fees from APMC Azadpur because we did a small direct procurement which we advertised (even though the procurement did not go through the Azadpur mandi). We had to give clarifications and spend precious management time in resolving the issue with the APMC officials; there is too much 'hassle' in doing direct procurement operationally.*
>
> *Even though there are savings on the individual transactions in which we do direct sourcing, the effort required and policy issues make it impossible to replicate and scale.*
>
> *As another example, once when I sourced sugar directly and stocked it on our own account, our selling price was lower by 2/kg from the buying price of other retailers. So we made money but the effort required to do that prevented us from doing it again – for example, coordinating the collection, loading, transport, unloading of 2 full rakes of sugar on our own was very challenging with no facilities provided by railways, thefts from the train etc"*
>
> - *Agriproduce procurement head at one of the large modern retailers in India*

The slow pace of storefront growth - which is necessary to build the volumes required to make direct procurement possible - makes it challenging to grow the fresh produce category especially since this category yields less a much lower Gross Margins Return on Footage (GMROF), a measure of space productivity of retail categories, as compared to other categories like apparel. Building scale at the storefront level requires heavy expenditures which is constrained by the limited availability and higher cost of capital of domestic retailers. In addition, the above mentioned factors further limit modern retailers' ability to build enough volumes of fresh produce at the store or even at the Distribution Center (DC) level to enable economies of scale and scope from direct procurement. Thus, until large scale infusion of capital is done at the frontend to build volumes upto a level at which direct procurement becomes remunerative, this category is unlikely to witness healthy growth.

> *"Regulations don't allow front-end expansion through franchising which is counter-intuitive. If allowed, franchising will enable more capital investment, more benefit for the small entrepreneur, faster expansion and volume buildup to enable backend integration" – Business head at top 10 modern retailer*

Only a few players have been able to scale up

Reliance Retail, which is a part of the largest Indian conglomerate, enjoys the largest share in modern food retailing with about 55% of its overall retail turnover of $2.8bn in FY15 ($2.3bn in FY14) coming from the food category - of which 6-7% comes from fresh fruits and vegetables[43].

[43] Discussions with senior management

While there was a net addition of 930 stores in the last year across fashion& lifestyle and other consumer categories over 100 Reliance Fresh stores were closed down. (stores that primarily carry food and grocery including fresh produce). Out of a total of 2621 stores, Reliance Fresh has 616 as of FY15.

Reliance is followed by Future Retail with an overall turnover of $1.8bn in FY15[44]. While the share of food retail in these revenues is not available, in terms of stores, out of a total of 320 stores, 24 stores cater to food and grocery.

Aditya Birla Retail, Bharti Retail[45], Avenue Supermarts (D-Mart), Spencers, Hypercity, Tata Trent, Mother Dairy, Max Supermakets and Godrej Nature's Basket are the other prominent food retailers. While there is no published information on the share of food retailing revenues out of their total revenues, industry discussions indicated that the food retailing revenues of Reliance, Future, Aditya Birla Retail, Bharti and D-Mart would account for around 75% of the overall modern food retailing market (see Table 2)

Table 2: Key statistics of large modern retailer

Name	Cities of presence		Revenues $bn		Store numbers		Area mn sq ft		Profit after Tax $mn	
	FY14	*FY15*	*FY14*	*FY15*	*FY14*	*FY15*	*FY14*	*FY15*	*FY14*	*FY15*
Reliance Retail	146	200	2.3	2.8[46]	1691[47]	2621[48]	11.7	12.5	29	31
Future Retail	98		1.8	1.8	319		10.3		12	25
ABRL	60[49]		1.0[50]		1750[51]		4.3			
Mother Dairy	5	5	1.0[52]		400					
D-Mart		27	0.6			89				16
Bharti Retail		100		0.3[53]		200				-40
Spencers	127		0.23[54]		127		1		-26	-19
Tata Trent	128		0.21[55]		128[56]					
Hypercity	11		0.14[57]		11					
Max-Spar		13		0.11		13				
Heritage Fresh		1		0.08		53				
Namdhari Fresh		1				20			4%	

Source: Annual Reports and websites of companies, news reports except where stated otherwise

44 Annual Report (pro-rated to 12 months from reported 15 months earnings)
45 At the time of writing this report, Bharti Retail was undergoing a process of merger with Future Retail
46 Includes all categories. Food and grocery accounts for about 55% of total revenues. Fresh fruits and vegetables account for 7% of total revenues.
47 "Value format" stores which include food and grocery number 718 in FY14 (Source: Annual Report FY14)
48 "Value format" stores which include food and grocery number 602 in FY15 (Source: Annual Report FY15)
49 Does not include hypermarkets (only supermarkets)
50 Includes all categories. Food and grocery account for about 36-37% of total revenues. Fresh fruits and vegetables account for 7-8% of total revenues.
51 504 stores in More format stores which carry food and groceries
52 Share of fresh fruits and vegetables is 10% of this number
53 Includes all categories. Food and grocery accounts for about 27% of total revenues. Fresh fruits and vegetables account for 3% of total revenues.
54 Includes all categories. Food and grocery accounts for about 80% of total revenues. Fresh fruits and vegetables account for 8% of total revenues.
55 $0.13bn from StarBazaar format which carry food and groceries
56 16 StarBazaar format stores which carry food and groceries
57 Includes all categories. Food and grocery accounts for about 63% of total revenues. Fresh fruits and vegetables account for 5-6% of total revenues.

Poor returns, after initial euphoria, have resulted in a wave of consolidation

Modern food retailing in India witnessed an indiscriminate wave of expansion in the early years followed by consolidation in recent times. It is opined[58] that the challenges associated with food retailing were underestimated by several players which has led to the failure of some reasonably large players like Subhiksha, which was primarily a food and grocery retailer with very minimal presence in any of the other categories like consumer goods and fashion, footwear etc. - and the acquisition of several other prominent ones for eg. Merger of Bharti Retail into Future Retail in 2015, acquisition of Nilgiris retail by Future Retail in 2014, acquisition of Trinetra Retail by Aditya Birla Retail in 2007.

Even amongst the top retailers, only Reliance, Future and D-Mart (Avenue Supermarkets) are profitable with the former two having turned profitable only after a decade of operations. Other major food retailers like Aditya Birla Retail and Spencers continue to incur year on year losses.[59]

The absence of a policy on FDI in multi-brand retail until late 2012 and the concerns associated with the policy released thereafter (as described in the previous section) have ensured that this sector has witnessed very limited foreign investment. Some of the largest global retailers including Wal-Mart, Tesco, Metro, Carrefour, Auchan, Spar to name a few have been interested in breaking into the space but have held back in the absence of policy permission earlier and policy clarity more recently. Some, like Walmart, Metro and Booker have established presence in the cash and carry wholesaling space in which FDI norms are relaxed purportedly waiting and watching developments on the policy front until they can play a wider role in the Indian retail landscape while others like Carrefour and Auchan chose to exit India after testing the waters.

After the release of clarifications on the FDI policy pursuant to consultations on the same with private sector over 2013, Tesco is the only player to have taken the leap to enter the multi-brand retailing sector in India in a 50:50 joint venture partnership with the Tata Group of India in mid-2014 to operate the StarBazaar store format which carries a wide range of categories including food and groceries. The total investment infused by Tesco has been reported to be in the range of INR 850cr ($135mn).[60]

In contrast another key sector that depends materially on effective and efficient food supply chains – the hotels and restaurants sector - albeit lesser than modern food retail, has witnessed $8bn worth of foreign investment over the last 15 years. Capital and knowhow brought in by some foreign players, particularly in the Quick Service Restaurants (QSR) sub-segment has made meaningful impact on the food supply chain (Dash, 2004).

[58] Business Line, January 2012
[59] Business Standard, May 2014
[60] Economic Times, April 2014

Chapter 4: Conduct of modern food retailing sector

Modern food retailers have built sourcing relationships along the existing supply chain

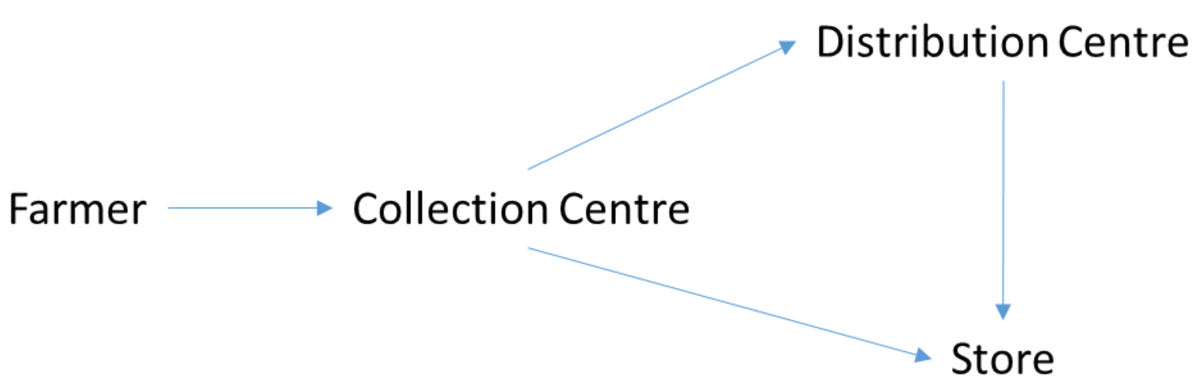
For the most part, modern food retailers have aligned their fresh produce value chains along the existing paradigm. While procurement practices of individual retailers depend on a host of factors including, though not limited to, their category spread (share and value / target market for produce), store locations and the geographic spread thereof, regulations of the states in which their stores operate and strategic focus, discussions with retailers have broadly revealed four prevalent models of which each retailer may have some minor variations.

1. Direct procurement from farm through own / hired collection centre
2. Procurement from local APMC mandi through wholesalers/sub-wholesalers/agents
3. Procurement from farm/hub mandi through agents/consolidators
4. End to end outsourcing of procurement and sale to vendor

Model 1: Direct procurement from farm through own / hired collection centre

Typically bulk volumes of widely grown vegetables (eg. okra, leafy vegetables, cauliflower, cabbage, bitter guard etc) and fruits (bananas) are procured under this model. Such staple vegetables like cauliflower, okra, dhania etc are sourced from farms located close to the consumption centres through collection centres that are typically rented by the retailer with their own employees manning the space.

Figure 8: Model 1: Direct procurement from farm through own / hired collection centre



The collection centre is located at a central location in the vicinity of farmers growing the required produce and acts as a hub relatively conveniently located for the farmer compared to the alternative option of him having to send the produce to an agent at the APMC mandi.

Figure 9: Receipt at Collection Center

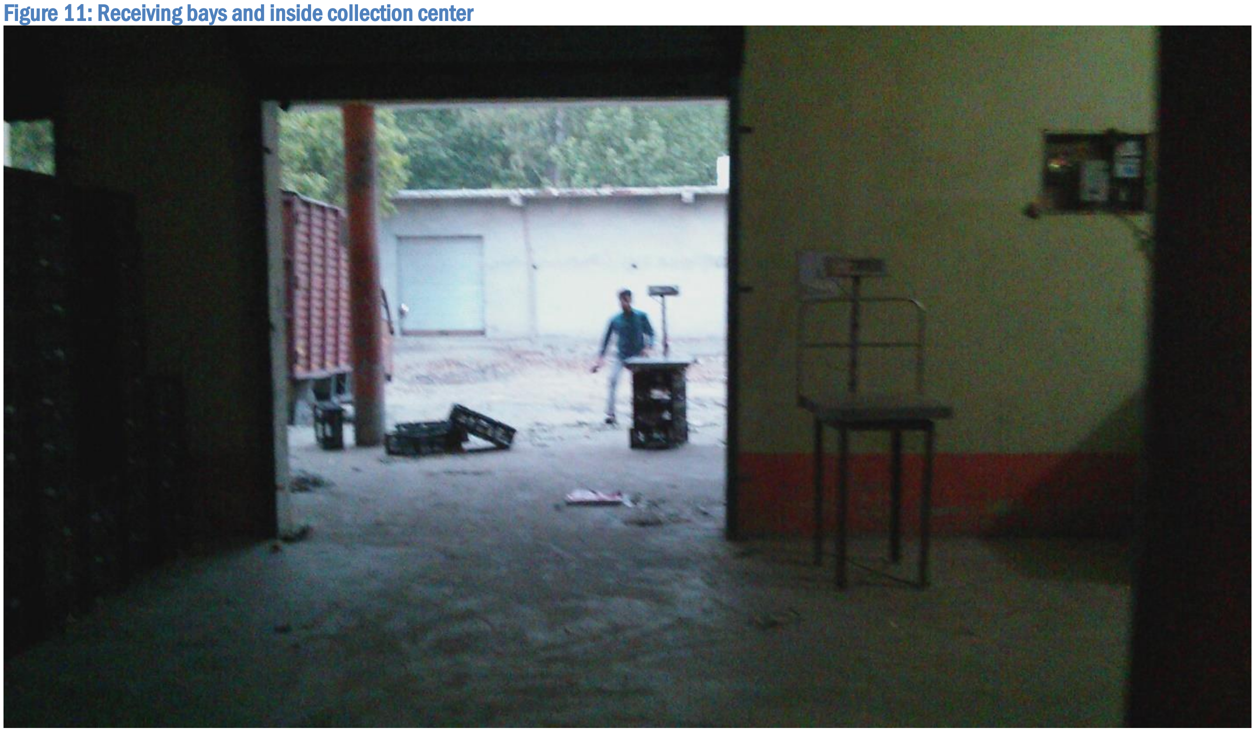
Operations carried out at the collection centre by employees of the retailer[61] include receipt and unloading of produce received at the centre from the farmer, first level grading, sorting, cleaning, crating / bagging, if required and loading on to vehicle to be dispatched to the retailer's distribution centre located in the vicinity of large consumption locations in contracted vehicles. At the distribution centre, produce is graded further, if required, sorted into store-wise lots based on requirement from the stores and dispatched to the stores accordingly in contracted vehicles[62].

Figure 10: Visual inspection at Collection Center

[61] In some cases, the collection centre may be rented / owned and operated by an aggregator who may work for more than one retailer. In that case, the operations are carried out by the aggregator's employees

[62] In the case of one large retailer, hypermarkets in the north region are served directly from the collection centre instead of going through the Distribution Centre.

Figure 11: Receiving bays and inside collection center



In most cases, store level requirements for city / region / state are collated at the distribution centre that services the stores and broken down into indents based on identified sources for procurement (mandi/agent/collection centre). The procurement requirement thus determined to be serviced by the collection centre is communicated to the centre which is then further broken down by the centre staff into requirements from farmers. This is done by disseminating information on pricing offered and quantity required by the retailer to farmers that either sporadically or dedicatedly supply to the centre via mobile phone text messages / calls etc. Those farmers that decide to sell their produce to the retailer then harvest based on the requirement and carry their produce to the centre often in crates provided for the purpose by the collection centre.
At the centre, a quality check (mostly visual) is carried out before unloading the produce and payment is made the farmer, typically within 3-4 days either through bank transfer or by cheque.

Price offered is benchmarked to the previous day's APMC mandi price for the commodity and the net payment made to the farmer adjusts for the differences in costs associated with selling at the mandi versus selling at the collection centre. The difference is primarily in the transportation cost for the farmer which is typically higher in the case of produce taken to the mandi vis-à-vis the collection centre.

In most cases no formal contract arrangements are in place and transactions take place on day to day pricing terms available though in some cases larger Retailers have loose "contracting"[63] arrangements with farmers. In these arrangements, retailers would obtain soft commitments from farmers for quantity of produce to be procured in exchange for assurance of prices and basic advice on which vegetables to grow (for example, broccoli was introduced by modern retailers as a viable crop for farmers in some locations given its rising demand in urban centres), what time to harvest

[63] A notable exception, albeit in the case of an exporter, not a retailer is that of FieldFresh Foods which claims to have formal written "price and pick" contracts with farmers in Punjab for dedicated procurement of baby corn, chillies, herbs among other produce

and recommended improvements in the harvesting practices (for eg. one large retailer advised mango farmers to harvest with a longer stem to prevent fast deterioration), use of pesticides etc. even though pricing, quantity and quality parameters agreed between the farmers and the retailer / aggregator do not appear to be practically enforceable, these coordination arrangements work in the normal course based on relationships of trust built over a period of successive transactions with both parties making reasonable exceptions to agreed terms in case of genuine issues (Chakrabarti, 2015).

Even though the APMC mandi is not physically part of this procurement model, it plays the crucial role of price discovery since no other basis for pricing of produce exists in the current context and cost plus pricing is not practical given the very limited share of modern retailers' volumes in overall volumes. For farmers, especially small and medium sized farmers, the modern retailers' collection centres provide a good option over and above the APMC mandis, for enhancing their returns. It also saves farmers the inconvenience of transporting produce all the way to APMC mandis and having to deal with agents who may not always be transparent. However this is only limited to the proportion of their produce which is acceptable by modern retailers and tends to be only a fraction of their total produce.

Based on interviews with top retailers, the prevalence of this model for procurement ranged from it being used for 80% of fresh produce procurement in the case of the one of the largest fresh produce retailers, Mother Dairy Fruit and Vegetable (MDFVPL) to 60% of fresh produce procurement in the case of the largest modern retailer – Reliance Retail - to none in the case of another large player, Hypercity Retail. The wider dispersion of front end stores and hence the lack of sufficient volumes in a particular area / region in the case of Hypercity makes it challenging for the company to follow the direct procurement model through collection centres, though efforts are being made for direct procurement of some fruits like watermelon from the vicinity of Mumbai. For other modern retailers like Aditya Birla, the use of this model 20-30% while in the case of Bharti it was about 40% until last year but is expected to decline going forward. Another major food retailer – Spencers – reported deploying this model for procurement for 40% of their fresh produce procurement in the key cities of their presence viz. Kolkata and Hyderabad.

MDFVPL has the largest network of 120 collection centres across the country followed by Reliance Retail with 60-70 such centres. MDFVPL has put together a network of over 200 "farmer associations" with a membership of over 8,000 farmers across 14 states[64] which manage the collection centres and through whom procurement takes place from member farmers (Singh et al, 2010).

While no major investments are required for setting up collection centres, the costs include rental for a location (building) and limited investment in customizing it to suit the activities to be carried out at the center – receipt, unloading, inspection, grading, sorting, cleaning, handling / crating. Similar expenses are involved in setting up and operating distribution centres.
MDFVPL is the only retailer to have invested significantly in setting up of an owned distribution centre with state of the art equipment for grading, sorting, ripening, packaging and storage albeit with grant support from the government.

[64] DownToEarth Magazine, January, 2012

It is relevant to mention here that one of the top 3 food retailers – Future Retail – is in the process of setting up a mega food park in the vicinity of the city of Bangalore which is expected to serve as a hub for servicing the requirements of a wide spread of Future Retail's stores in the area. The park is expected to be spread over 110 acres and will house several processing, packaging and handling (grading, sorting) units for fresh and processed foods for supply to its stores. It is also expected to house Future Retail's Distribution Centre linked with backend collection centres for procurement of fresh produce. Total envisaged in the project is estimated to be INR 1,000cr ($15.6mn) of which INR 250cr ($4mn) have already been invested. The park is expected to employ over 10,000 when it is fully functional.

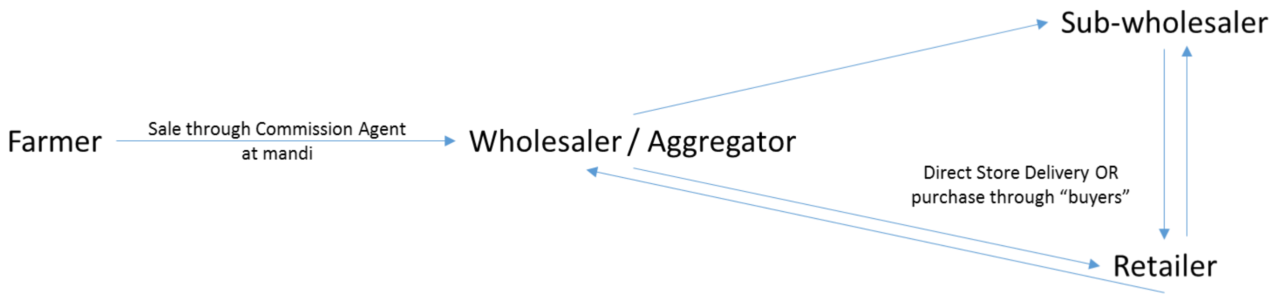
While this model provides better returns to farmers, both price and quality risk mainly remain with the farmer since price is benchmarked to APMC mandi prices which are determined by spot transactions which by definition are fully exposed to short-term demand-supply mismatches and only the best quality of produce is procured by the retailers with the farmer having to find buyers for the lower grade produce through the traditional APMC chain. However, unlike transactions at the mandi which take place through auctions and are therefore dependent upon the availability of buyers with unmet demand, sales to retailers at their collection centre are based on assured requirements that are released on a daily basis which limits the risk of the farmer being left with unsold produce to dispose of after transporting it all the way from his village to the mandi. Also, unlike in the case of sales at the mandi, the absence of an intermediary (in the case of retailer's own collection centre) means that the risk of produce deterioration from the collection centre to the distribution centre / store is taken by the retailer. No real enforceable risk-sharing agreements exist throughout the chain with each supply chain participant taking the risk on itself and pricing it into its margins based on its assessment.

As is evident from the above description, deployment of this model becomes worthwhile for a modern retailer only when there is sufficient throughout of volumes of produce from their storefronts in a particular geographic region or urban consumption centre. Concentrated volumes enable consolidation and the concomitant benefits of economies of scale and scope. Ramping up to sufficient volume of throughout at the storefronts in turn depends upon the scale and deployment of storefronts besides of course their value proposition of consumers. Since value proposition for customers naturally stems from the price-quality combination which in turn is better enabled in this model by virtue of the modern retailer's control of the entire chain, this leads to a chicken-and-egg situation for the retailer – throughput volumes of produce from the retailer storefronts will rise only if a better price-quality proposition is delivered to the customer which in turn is only possible through deployment of this model which requires sufficient throughput volumes for it to be viable.

Model 2: Procurement from local APMC mandi through wholesalers/sub-wholesalers/agent/s

Typically relatively smaller volumes of vegetables and fruits are procured under this model.

Figure 12: Model 2: Procurement from local APMC mandi through wholesalers/sub-wholesalers/agent/s



In this model, procurement is carried out from the key / hub mandi serving the respective consumption centre in most cases by having "empanelled" wholesalers at the mandi who are made aware of the quality requirements overall and quantity requirements on a day to day basis. These wholesalers in turn buy produce either by participating in auctions themselves at the mandi or from larger wholesalers who participate in the auctions. The retailer's procurement activities are carried out through their own "buyers" who are typically employees of the retailer. These buyers identify and select wholesalers who meet the retailer's criteria of quality, reliability and financial soundness and regularly feed them with orders based on requirements received from the distribution centre / stores. The buyers play the role of the development and monitoring of suppliers by continuously interacting, inspecting and visiting the mandi and coordinating the procurement and supplies between the DC / stores and mandi. Specific order quantities to be allocated to each "empanelled" wholesaler are decided based on the quality and price of produce on offer from them. Price is again decided based on the prevailing mandi price adjusted for the wholesaler's costs and margins.

Typically the buyer works with a dedicated set of 2-4 wholesalers at the mandi that have been assessed on the retailers' criteria of reliability, quality, transparency etc. The exclusive arrangement with these wholesalers provides them the security of regular order while at the same time bringing about greater predictability and transparency in the retailer's supply chain and streamlining the procurement operation for both. For example, Spencers has its mandi vendors registered on its ERP and has a system for direct credit of payments to their bank accounts.

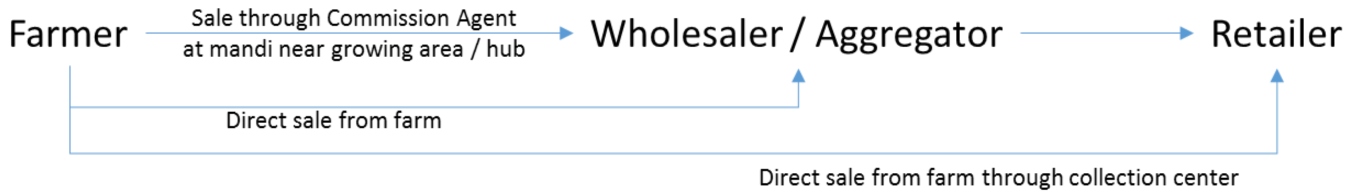
Unlike in the case of Model 1, the retailer does not get involved in first level grading, packaging, cleaning of the produce as these functions are delegated to the wholesaler. In a variant of this model, referred to as the Direct Store Delivery (DSD) model, deliveries are made by a dedicated wholesaler (aggregator) from the mandi directly to the retailer's stores without going through the DC.

In this model, price and quality risks are spread between the farmer and intermediaries, with the modern retailer taking on none except to the extent of product deterioration on the shelf.

Model 3: Procurement from farm/hub mandi through agents/consolidators (eg. Apple, onion)

This model is deployed for procurement of fruits and vegetables that have relatively limited or concentrated growing areas like apples (Himachal Pradesh and Kashmir), onion (Maharashtra and Andhra Pradesh), citrus fruits, grapes, bananas etc. located in areas that are separated by long distances from the consumption centres.

Figure 13: Model 3: Procurement from farm/hub mandi through agents/consolidators (eg. Apple, onion)



Under this model, modern retailers setup arrangements with a consolidator operating in the growing area and outsource the procurement process to him, guided by their quality requirements, in exchange for a commission to ensure regular quality supplies. Alternatively, in case the retailer has a requirement for sufficient volumes on a regular basis, it may have its own buyers going to the local mandi in the growing region (for eg. Nasik mandis for onion) or a hub mandi (for eg. Azadpur mandi for apple) to buy the produce from traders operating at the mandi. There are also a few instances of retailers having their own collection centre (akin to the centre in the first model) located in the growing region and primarily oriented towards procurement of the specific commodity of the region directly from farmers. For example, Reliance has a collection centre close to the growing areas for procurement of onion while MDFVPL procures bananas directly from growing areas through its farmer associations to be delivered directly to its distribution centre in Delhi from the growing areas around Jalgaon in Maharashtra. Spencers Retail has an arrangement with a consolidator located in Anantpur for *safeda* variety mangos. The consolidator procures directly from contracted farms. On the other hand Bharti Retail buys mangoes from the owner of a ripening chamber who is paid a commission over mandi prices for its supplies. In the case of apples that are sold in the offseason months of November to June, most retailers have arrangements to buy from authorised distributors of large traders that release offseason stock from their owned or hired controlled atmosphere storage capacity located close to the farms.

Like in the other models, price paid to the consolidator / farmer remains benchmarked to the prevailing mandi price adjusted for difference in costs between delivery at the mandi vis-à-vis delivery at DC / store.

In the case of banana and to a lesser extent for mango, investments in ripening chambers have been made by intermediaries to be able to serve the quality requirements of retailers.

As mentioned above, significant investments by large traders like Adani Agrifresh, Devbhumi Agri among others have also been made in the development of controlled atmosphere storage capacity for apples near the farms to enable availability of the fruit in offseason months.

Model 4: End to end outsourcing of procurement and sale to vendor

Under this model, a modern retailer outsources the management of the fresh produce supply chain entirely - from sourcing up to in-store and on-shelf inventory. Outsourcing is done to a third party which is perceived to have better resources, flexibility or experience than the modern retailer to manage the chain. The modern retailer enters into an agreement with this third party where the gross margins from sale of fresh produce are shared with the third party with incentives that may be linked to the volumes sold, growth achieved and waste incurred on the shelf. While the vendor uses its own resources and model for procurement, the retailer carries out a quality check on produce received and displayed at the store.

In this model the retailer offloads the entire risk (including losses on the shelf) on to the vendor in exchange for sharing gross margins with the vendor. This works particularly well for retailers whose interest in fresh produce retailing is limited to its utility as a footfall driver as against making it a category of strategic focus and releases management bandwidth for focus on greater profit generating categories. For eg. the vendor, which is typically a fruit and vegetable wholesaling company, is able to dispose of unsold produce for some realization through other channels like 2^{nd} tier restaurants, processing etc which is not strategically and operationally possible for the retailer.

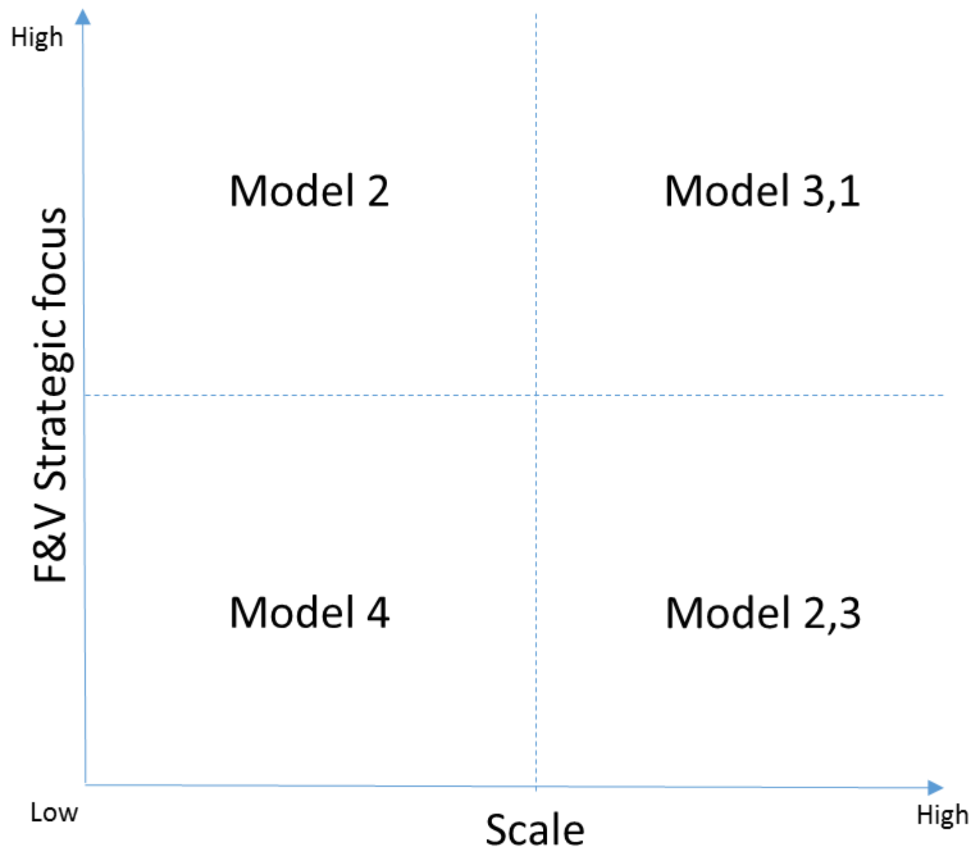
While these four models account for the vast majority of procurement of fresh produce by modern retailers, there are a few exceptions. For eg. Namdhari Fresh, a retailer with several stores in Bangalore procures upto 25% of its fresh produce requirements from own or leased land (Singh et al, 2010). The company has leveraged its sourcing strengths from the backward integration built for its seeds and exports businesses to get into the retailing business. Companies like Namdhari Fresh and Fieldfresh, which is also integrated backward and procures from farmers with whom it has years of contractual relationship with, have built backward linkages after several years of experimentation and investment which they have been able to do partly because the value realized from exports is one, better able to justify the investment and two, the policy environment has been relatively more clear.

In the case of imported fruits and vegetables, modern retailers mostly procure from importers as against placing order directly on international suppliers given the limited volumes of sales.

Choice of procurement model is dictated by strategic focus and volumes

Even though the most favorable economics (gross margins) are obtained by deploying Model 1, executing it effectively and realizing its benefits is possible only if volumes are beyond a threshold that enables leveraging economies of scale and scope. The expenses involved with renting space for a collection center, employing the staff, installing even basic equipment for sorting, grading etc, and operational challenges involved with attracting farmers to supply to the center, ensure receipt of the required quality, quantity and range of produce etc can make it an overwhelming task which is justifiable only if there is sufficient scale. This is the reason that this model has been seen to be deployed on wide scale only by the largest modern fresh produce retailers like Reliance and Mother Dairy and on a limited scale by the next rung of retailers like Spencers which deploys the model only to serve the cities in which its has a larger presence viz. Hyderabad and Kolkata. What makes the retailers that deploy this model different is not just their volumes but also their strategic focus on building the category as an independent profit center as against using it only as a footfall driver for sales of other categories. It is this strategic focus which helped them build up the volumes in the first place, like in the case of MDFVPL whose retail portfolio consists of 80% fresh produce.

Figure 14: Choice of model driven by strategic focus and scale



Model 2 could be deployed by modern retailers that consider this category to be strategic and important but have yet not reached sufficient volumes to justify the investment into deploying Model 1 or by those retailers that have sufficient volumes by virtue of their location or nature of footfalls but still do not consider this category to be strategic thus choosing to not investment management bandwidth and effort in operationalizing Model 1.

As mentioned earlier, deployment of Model 3 becomes a necessity to secure supplies of fruits and vegetables that have localized areas of production. The vegetables in this category – onions, primarily – are staple and, irrespective of strategic focus are an indispensable commodity to have on their shelves and the fruits in this category – apple, citrus, banana etc – are high value and usually high margin products which, again, irrespective of strategic focus become indispensable to ensure consumer’s basket of needs is met and better margins are captured.

Finally, when a modern retailer does not consider fresh produce as a strategically important category and also does not have sufficient offtake of this category, it ends up choosing Model 4 since this model minimizes the involvement and risk without compromising the retailer’s attractiveness as a “full range” retailer.

Importantly, these models of procurement are not mutually exclusive. Most large modern retailers deploy a combination of these Models which may determined based upon the specific requirements of the stores. For example, for a concentrated set of stores in a metro city, Model 1 could work much better for the same retailers whose individual and geographically spread out stores may be better served through Model 4 given the lack of concentrated volumes in the case of the latter.

Given that food comprises over 60% of total retail volumes and fresh produce accounts for over 22% of this, any modern retailer seeking to establish a prominent presence cannot afford to treat this category as “non-strategic”. Therefore, for modern retailers that will eventually capture a lion’s share of the organized market, deployment of Model 1 and its further refinement and optimization through closer and more direct farmer relationships, will be crucial.

Chapter 5: Performance of the modern food retailing sector

Growth of modern food retail has had positive spin-offs

Wherever modern food retailers or processors have established backward linkages (as in Model 1 described in the last section), both the producer and consumer have benefitted. The benefit has not only come about from the reduction / elimination of intermediaries but also from reduction in waste resulting from improved practices, lesser and better handling, better grading / sorting, storage and more seamless information flow.

During a field visit to one of the collection centres used by Aditya Birla Retail in North India, carried out for this study in March 2015, data on marketing costs was collected for procurement of cauliflower under Model 1 (see Table 3). The difference in the price paid by final consumer in the modern and traditional retail chains was found to be significant when farmer realization was about the same in the case of Model 1.

Table 3: Illustrative value chain cost buildup for cauliflower

Cauliflower (Rs/kg)	Modern retail	Traditional retail	
Farmer sale price	**4**	**4**	**Farmer sale price**
Collection center costs*	3		
Margin to collection center operator	0.5		
DC landed cost	**7.5**	**12**	**Mandi price**
Handling at DC**	0.8		
Transport to store	1.0		
Store delivered cost	**9.3**		
Loss on shelf (15%)	15%		
Net cost to retailer	**10.9**		
Retail price	**15**	**20**	**Retail price**
** Labor, weighing, quality check and transport to Distribution Centre*			
*** Unloading, crate to crate changeover, sorting, grading (including waste)*			

Source: Interview with ABRL sourcing personnel, collection center manager and NHB

A comparison of the cost build-up from farm to storefront between traditional and modern retailers procuring using Model 1 for key staple vegetables based on another primary study carried out in Ahmedabad in 2011 (Deliya et al, 2011) (see Table 4) also demonstrates this.

Table 4: Comparison of the cost build-up from farm to storefront between traditional and modern retailers

Rs/kg	Traditional Retailer chain				Modern Retailer chain	
	Producers	Commission Agent	Wholesaler	Retailer	Producers	Retailer
Cauliflower	3.5	4	4.5	**12**	5.5	**10.9**
Cabbage	2	2.5	3	**10**	3	**7.25**
Tomato	5	5.2	6.8	**12**	7	**12**

Source: "A Study on 'differentiator in Marketing of fresh fruits and Vegetables from Supply Chain Management Perspective'", Deliya et al, 2011

Similarly, a comparison of the waste incurred along the chain (see Table 5) demonstrates the greater efficiency obtained in procurement done using Model 1 by modern retailers.

Table 5: Comparison of waste incurred along the chain

Waste %		Cauliflower	Cabbage	Tomato
Traditional Retailer chain	Producers-field	6 – 9	6	9
	Producers-market	5	10	6 - 10
	Commission Agent	2	1	1
	Wholesaler	2 - 3	3 - 5	2
	Retailer	5	5 - 8	5
	Total	**20 - 24**	**15 - 24**	**23 – 27**
Modern Retailer chain	Producers	11 - 14	9	14
	Retailer	5	7	5
	Total	**16 - 19**	**16**	**19**

Source: "A Study on 'differentiator in Marketing of fresh fruits and Vegetables from Supply Chain Management Perspective'", Deliya et al, 2011

Another study in 2008 on comparative assessment of supply chain costs between modern and traditional retail chains in Bangalore (Shilpa K., 2008) demonstrated in the case of several vegetables the lower waste, greater farmer realization and lesser overall cost buildup between farmer and consumer. (see Table 6)

Table 6: Comparative assessment of supply chain costs between modern and traditional retail chains in Bangalore

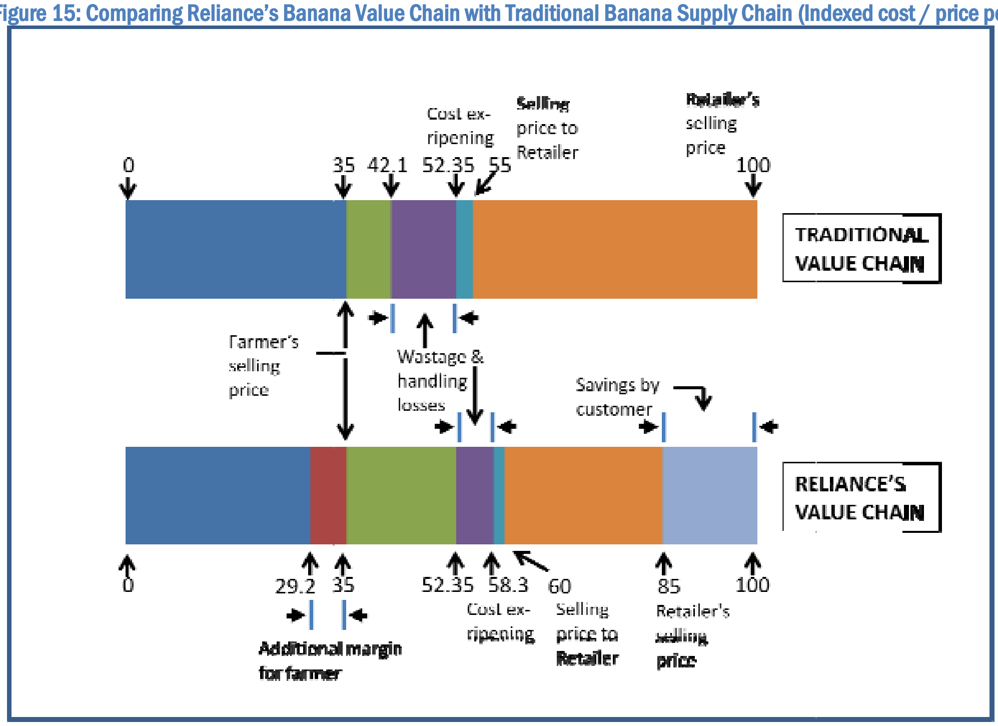
Rs/kg	Tomato		Cabbage		Carrot		Capsicum
	Traditional	Modern	Traditional	Modern	Traditional	Modern	Traditional
Farmer sale price	5.1	7.0	3.3	5.9	9.2	10.6	9.5
Packaging cost	0.3	0.1	0.2	0.2	0.2	0.2	0.2
Transport cost	0.3	0.2	0.3	0.3	0.3	0.2	0.2
Commission @ 8%	0.4		0.3		0.7		0.8
Handling (loading, unloading)	0.1		0.1		0.1		0.1
Labor at farm	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total cost of marketing	**1.0**	**0.4**	**0.9**	**0.5**	**1.4**	**0.4**	**1.3**

Source: Supply Chain Management in Vegetable Marketing: A comparative analysis, Shilpa K., 2008

Reliance Retail's efforts in developing an organized supply chain for bananas created linkages with more than 2000 farmers, 150 intermediaries and 100 distributors across India, and generated employment for 500 labourers daily. The farmers' share of consumer price went up from 28% to 42% and wastages in the supply chain reduced from 30% to 15% (Mukherji, 2011).

Other models of procurement do not lead to any material improvement in the state of fresh produce value chains given that it is the same existing multi-layered chains that are leveraged for procurement in these cases. There is however a relatively greater level of farmer connect in the case of high value fruits like apple, mango and bananas when procurement is undertaken under Model 3. Improved practices that limit losses and enhance value like the use of ripening chambers in the case of bananas (and mangoes, though adoption is much slower in the case of mangoes) and the heavy investments in near-farm controlled atmosphere storages in the case of apple have partly been driven by the stricter quality requirements of retailers and competition from imports (in the case of apple).

Figure 15: Comparing Reliance's Banana Value Chain with Traditional Banana Supply Chain (Indexed cost / price per Kilogram)



Note:

1. **Data represents typical cases and is illustrative only**
2. **Retailer is buying higher and selling lower per kg in case of Reliance because of greater longevity of fruits and lesser wastage**
3. **'Wastage and Handling losses' comprise moisture loss, ripening loss, de-handing loss and other wastages**
4. **Source of 'Additional margin for farmer' comprise harvesting, loading, transportation, unloading charges and agent commission which the farmers do not have to bear in case of Reliance because either they are not applicable (e.g., agent commission) or borne by Reliance.**
5. **The Retailer's selling price in Reliance Value Chain is applicable for Reliance Retail stores**

Source: "Inclusive Business Models – Prospects and Challenges", S Mukherji, Indian Institute of Management, Bangalore, 2011

The penetration of modern retail, though limited, and its increasing adoption of direct farm or near farm procurement of fruits has enabled more seamless feedback to producers not only on the quality to produce but also on what to produce – evident examples of this include development of exotic vegetables like broccoli which were traditionally not grown much in India. It has also led to investments into quality preservation and value addition infrastructure like ripening chambers[65]

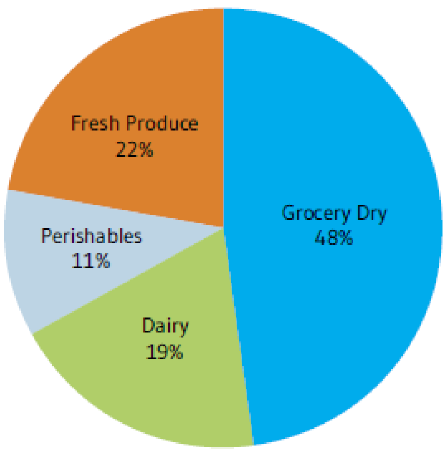
[65] While the largest modern retailer - Reliance Retail – had invested in 12 banana ripening chambers with a total capacity of 170MT as of 2011, the second largest modern retailer – Future Retail – is investing in banana ripening capacity at its Food Park near Banglore and the third largest modern retailer – Aditya Birla Retail – has worked with local entrepreneurs to facilitate investment in ripening by providing commitments of

and packhouses associated with controlled atmosphere stores and state-of-the-art grading equipment.

However the scale of impact is limited by low penetration of modern retail

Less than 0.2%[66] of the total fruit and vegetable production of India of close to 250mn MT per annum[67] is currently sold through the modern retail channel. As compared to a 22% share of fresh produce in the food category at an overall level (see Figure 16), modern retailers quote a share of 5-20%[68] of their food category as being accounted for by fresh produce. In terms of shelf space, depending upon the store format (hypermarket vs convenience store) and the specific retailer's focus, the share of fresh produce can vary from 1% to 7%. In absolute terms, space in hypermarkets can range around 3000 sq ft and in supermarkets 300-400sq ft.

Figure 16: Breakup of "food and grocery" category by components



Source: "Indian Retail Report 2015" derived using the National GDP statistics

While the share of produce going through modern retail is creeping up gradually at an overall level, interviews with individual retailers indicated a conscious de-focus from this category in some cases on account of the policy and operational challenges in sustaining it as discussed earlier.

This is in contrast with the levels and growth of fresh produce retailing through modern formats in other comparable countries (see Figure 17).

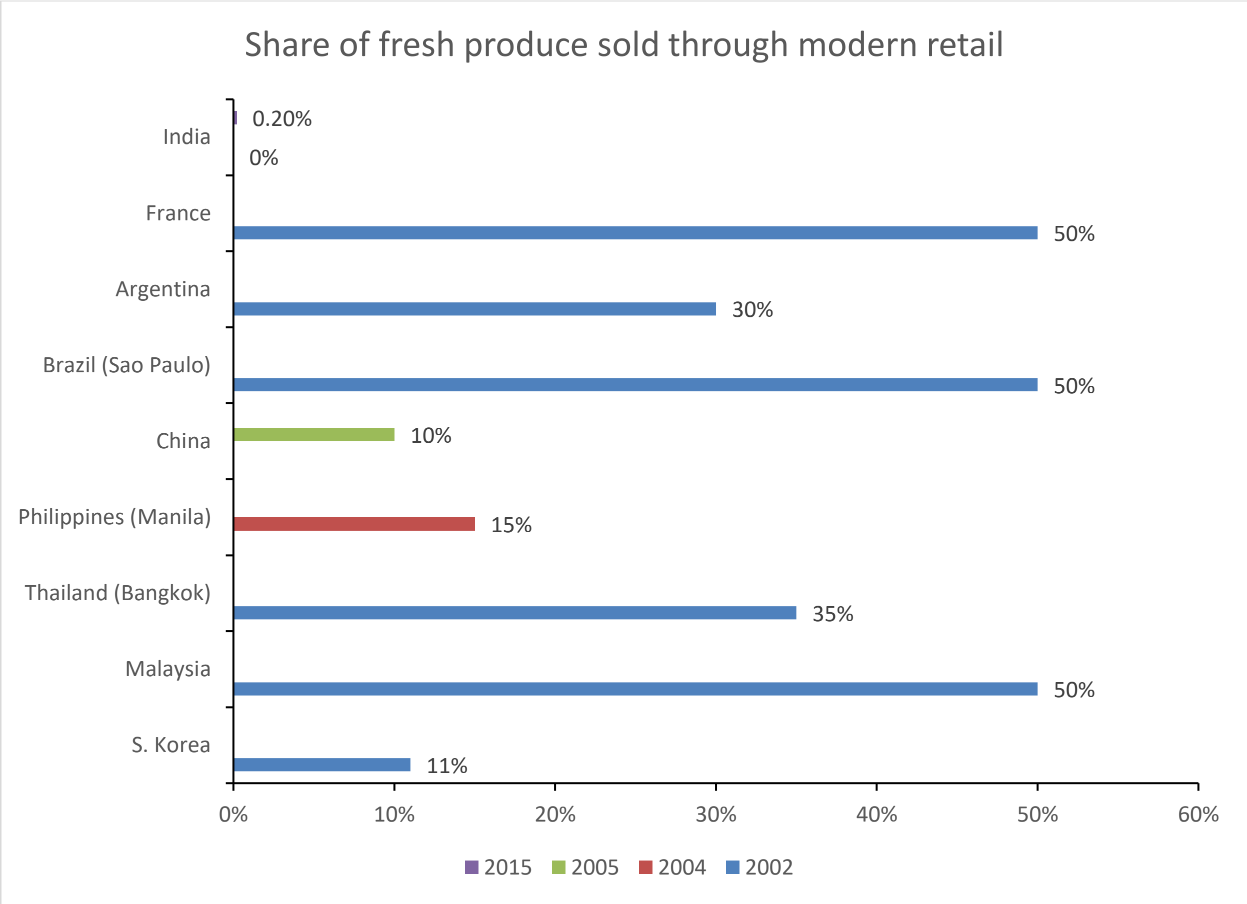
Figure 17: Share of fresh produce sold through modern retail in select countries

purchase volumes (Source: Interviews with modern retailers and "Inclusive Business Models – Prospects and Challenges", Indian Institute of Management, Bangalore)

[66] Discussions with top 5 modern retailers

[67] Horticulture Database, National Horticulture Board

[68] Excludes retailers that focus on food as the only / key category eg. Mother Dairy, in which case fresh fruits and vegetables comprise close to 85% of total value of sales



Source: Supermarket Expansion in Latin America and Asia : Implications for Food Marketing Systems, Thomas Reardon, C. Peter Timmer and Julio A. Berdegué

Chapter 6: Conclusions and Recommendations

Penetration of modern retail in India, especially in the food category and particularly in fresh fruits and vegetables, remains low. Even existing modern retailers find fresh fruit and vegetables to be a tough category to deal with and some even project a declining share for the same, despite having been in the market dealing with the fresh produce supply chain for close to a decade. While some modern retailers have increased the share of fresh produce and some have consciously either reduced focus or started treating it as a support category as against an independent profit center, almost all agree that they cater to this category primarily only because it attracts buyers to come and buy other more profitable categories also.

This thinking is witnessed in the fact that modern retailers are still extensively leveraging existing supply chains despite their inefficiency in comparison to establishing direct farm linkages.

Practically all retailers cite multiple challenges that have led to this situation ranging from structural issues – fragmentation across the chain, infrastructure issues - poor handling, transportation, storage infrastructure, business environment / ease of doing business issues – archaic laws and bureaucratic red tape, lack of standards and best practices in handling / storage, disabling policies – disincentives / distorted incentives for investment, APMC policies (and practice), inability to engage in contract farming, inability to invest extensively in the front end on account of storefront space cost and availability issues etc.

Inability and unwillingness of modern retail to establish backward linkages are causes for concern given that modern retail has inherent potential to drive improvement in the state of post-harvest management both in terms of reduced wastage / increased efficiency (through direct procurement, better practices etc) and in terms of driving adoption of better cultivation and handling practices / adoption of standards through provision of market feedback directly to growers. It is important to realize that success of modern retail will be beneficial for all stakeholders involved in the agri value chain

For the equitable development modern retail and more importantly, for this development to drive social and economic impact, there is a need to

1. Remove policy barriers that raise transaction costs of sourcing and limit modern retailers' ability to scale
2. Enhance ease of doing business / create enablers for modern retail growth
3. Facilitate investment in agriculture marketing infrastructure

Removing policy and procedural barriers

There is a need to remove policy barriers that disable / limit modern retailers' ability and incentives to develop direct farm linkages.

Contract farming

The Government of India's National agricultural Policy (2000) states, "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." However, the true potential of contract farming in improving the state of post-harvest management remains unrealized with a majority of such "contracts" being informal with no safeguards for either the farmers or the companies. Though contract farming continues to proliferate, cases of success have been triggered by specific actions of state governments to promote the same as against a consistent framework/model (NABARD, 2005) to guide comprehensive sustained policy which is essential for institutionalization and consistent expansion of the model to a level that its impact moves the needle.

Bringing about greater clarity, formality and uniformity (across states) in the policy and rules with respect to contract farming arrangements, comprehensive and affordable crop insurance schemes, mandating the central and state level agriculture research and education institutes to provide region specific crop solutions and making them part of public information domain and facilitating import of new improved varieties of seeds/saplings/hybrids and technology for contract farmers/contracting companies can go a long way in enabling greater production to move to modern retailers through contract farming arrangements.

Contract farming has proven to work best for both parties if there is a collectivisation of small farmers. It brings down the transaction costs, the farmers are better protected, and the company gains from the lower likelihood of defaults vis-à-vis individual farmers. Success of the model in Thailand led to Thai government to make it a part of the country's national development plans. Other studies have also found the impact on farmers to be highest when contract farming arrangements are executed with cooperative organizations (Shilpa K, 2008). The government could therefore consider providing incentives to companies and cooperatives engaged in organized contract farming activities.

Facilitating direct buying and electronic trading to supplement APMC mandis
Many states have amended the APMC Act to permit direct buying and allowed the development and operation of private markets, quite a few among which have gone ahead and framed the rules for the same also. However, the amendments remain more in words than in spirit with key impediments making these activities challenging. For example,

- In most states, levy of market fees continues even when the produce procured by a retailer does not pass through the APMC mandi reducing the cost benefit of direct procurement.
- Compliance procedures associated with availing single point levy have been found to be as cumbersome by one large retailer we spoke to that they preferred to pay multiple levies instead

Piecemeal approach and, in the case of some states, reluctance to enshrine the reform provisions in the act / rules are likely manifestations of overprotection by vested interests of existing marketing channels by not facilitating change/ competition/ new channels and not modernizing APMC Yards. A concerted approach to solving this vexing issue is required in each state facilitated by the central government, in the new spirit of cooperative federalism.

For example, progressive approach to direct buying in states like Andhra Pradesh, Tamil Nadu, Madhya Pradesh, Maharashtra have enabled the direct buying of bananas by modern retailers leading innovations in sourcing, packaging, handling which in turn have translated into benefits for farmers and investments in handling and storage infrastructure like ripening chambers. The potential for replication of these benefits in the case of other key fruits like mango and papaya (Mukherji, 2011) is significant and can be accelerated by uniform implementation of reforms.

Many of the shortcomings of the current context in agriculture trade in India can be overcome by leveraging technology to complement the ongoing reform process. The success of an electronic trading platform implemented on top of the existing APMC mandi system has been demonstrated in Karnataka where the state government partnered with NCDEX, a private player running a futures exchange, to deploy a spot e-trading platform in selected mandis of North Karnataka[69]. By bringing spot transactions on an electronic platform and permitting warehouse based sales, the initiative facilitated greater competition and price realization for farmers while at the same time, enabling direct access for buyers to local mandis without requiring intermediation through local traders. Not only have wholesale dealers such as Metro Cash and Carry and major traders in different parts of the State have been able to directly participate in online trading, quoting competitive prices, even the government has eased its foodgrain procurement process by leveraging this platform. The impact on farmer realizations and overall competitiveness of the market has been marked[70].

There is a need to replicate across other states what Karnataka has been able to achieve in the state, where 51 of the 155 main market yards and 354 sub-yards have been integrated into a single licensing system. Rashtriya e-market Servies Ltd. (ReMS), a joint venture created by the State government and NCDEX Spot Exchange. ReMS offers automated auction and post auction facilities (weighting, invoicing, market fee collection, accounting), assaying facilities in the markets, facilitate warehouse-based sale of produce, facilitate commodity funding, price dissemination by leveraging technology. The wider geographical scope afforded by bringing fragmented markets under a single system has enabled private sector investment in marketing infrastructure.[71]

Needless to mention, the success of such a technology intervention is only possible if key reforms are undertaken, particularly enabling a "free market" by providing for a single license and single point levy of market fees, both of which were implemented in Karnataka. The reason that the electronic trading in futures in agri-produce is well developed while electronic spot trading is in its infancy is precisely the regulatory barriers referred to earlier in the form on state-level APMC laws as against uniform national regulation for futures markets.

In this context, the National Agricultural Market (NAM) initiative undertaken by the Department of Agriculture and Cooperation (DAC), GoI in 2015 and to be implemented by the Small Farmers Agribusiness Consortium (SFAC), which is aimed at e-enabling close to 600 mandis across the country is a step in the right direction and should be accelerated[72]. By bringing these mandis onto a common electronic platform, buyers from across the country will be able to transact on any of these mandis electronically giving farmers a much wider choice of buyers and expected better

[69] National Commodities and Derivatives Exchange (NCDEX)
[70] The Hindu, May 2014
[71] Economic Survey 2014-15, GoI
[72] Though the National Agricultural Market was discussed and proposed in 2014, appointment of a strategic partner for implementation and a project management agency to track and monitor implementation was still pending as of late 2015. More details on the NAM initiative and its current status can be found at http://pib.nic.in/newsite/PrintRelease.aspx?relid=122932 and www.sfacindia.com

prices by enabling more competition vis-à-vis limited competition between the small set of (often cartelized) local traders that operate at each individual mandi. Further, farmers will be able to make warehouse based sales in this model thus limiting distress sales. Buyers (including modern retailers) will also benefit by having direct access to mandis across the country which is limited in the current context of limited number of mostly local traders that hold the license to trade at these mandis. The elimination of physical barriers for accessing localized fresh produce markets (particularly in the case of high value fruits and vegetables) that such e-enablement brings about will will ensure that modern retailers and other large buyers would either directly buy at these exchanges as against having to rely on local or a very limited number of regional and practically no national traders. Even for modern retailers that do not have sufficient volumes to justify direct e-buying, the access to a wider set of traders who can buy through the platform will remove the current concentration and low competition amongst a limited number of suppliers that have capabilities spanning across states.

Reform functioning of APMC mandis

It is well recognized that a majority of existing APMC mandis are not operating efficiently despite the heavy user charges and levies they impose. In addition to the cost of this inefficiency is the high levels of commission (up to 10%) that agents charge which in turn is made possible by limiting issuance of licenses and consequent cartelization. The latest Economic Survey of the Government of India lays the malaise out clearly

"There is a perception that the positions in the market committee (at the state level) and the market board – which supervises the market committee - are occupied by the politically influential. They enjoy a cosy relationship with the licensed commission agents who wield power by exercising monopoly power within the notified area, at times by forming cartels. The resistance to reforming APMCs is perceived to be emanating from these factors."[73]

A study carried out on five key APMC mandis[74] in the country found all these mandis lacking significantly against the standards for fresh fruit and vegetable wholesale markets advised by FAO[75] (see Table 7).

Table 7: Comparison of key mandis vis-à-vis FAO standards

Parameters	Avg.of different markets	FAO Standards
Sales area as percentage of tot. area	12.2%	25-33%
Per trade area allotted	47.25 sqm	100.sqm
Parking & Circulation as a percentage of tot. area	32.87%	65%
Water consumption per meter square of tot. area per day	0.74 lts	4 lts
Produce handled in MT/ sqm per annum.	21.57Mts	10 MT's

[73] Economic Survey 2014-15, GoI
[74] Azadpur, Nashik, Kolar, Hassan, Belgaum
[75] Presentation on "Structural and Functional Peculiarities of Wholesale Markets in India", JS Yadav, CEO, Premium Farm Fresh Pvt. Ltd.

Transparency in the collection and utilization of market and other fees collected at the APMC mandis and also in the deployment of the monies so realized for improvement of the state of the market infrastructure, hygiene and services is of paramount importance. This can be brought about by re-architecting the governance structure of APMC mandis, including ensuring separation of the operating and regulating functions of the mandi board (perhaps by putting in place an independent regulator to regulate both APMC and private markets) and removing the provision in the state APMC Acts which enables the levy of market fees as a tax levied by the state as against a fees for provision of services.

Enhancing ease of doing business / creating enablers for modern retail growth

The often quoted catch-22 of low fresh produce sales volumes leading to low investment towards establishment of backward linkages which in turn leads to poorer value proposition for consumers and thus lower volumes, can be solved by dismantling the challenges that constrain the growth of modern retail.

Enabling this growth of modern retail will inevitably drive consolidation through the supply chain up to the farm. Modern retailers' investments in the front end to serve the fast growing consumer demand can provide the much needed assurance of regular predictable demand to stakeholders in the backend thus incentivizing local entrepreneurs to invest and farmers to make informed choices in production and marketing.

Adoption of a National Policy for Retail and Internal Trade

Implementation of a 10-point policy agenda prepared by the Retailers Association of India (RAI) (key relevant elements summarized below) should be prioritized. Since "internal trade", of which retail is a part, falls under the purview of the state governments, a mechanism to provide incentives to the State Governments for adopting the policy will encourage adoption. Uniformity in the implementation of the policy across the country will provide the necessary impetus for the growth of the retail sector[76].

- Industry status to Retail to enable easier flow of credit to the sector
- Creation of retail and entertainment zoning norms to enable development of property 'banks' suitable for retail leading not only to lower rental costs due to 'clustering' of supply but also to aid in urban planning.
- Simplification of labor laws to enable servicing of customers as per their convenience by appropriately changing the requirements for opening and closing hours, working hours etc
- Skill development programs not just for organized but also traditional retailers
- Single window licensing to cut bureaucracy and red-tape for setting up new stores
- Facilitating financing and investment options for the retail sector not only by easing conditions for FDI but perhaps also by allowing Indian companies to raise funds from various alternative sources including ECBs and FIIs.

[76] Retailers Association of India

FDI plus capital support for domestic retailers while simultaneously safeguarding traditional retailers: International experience

As mentioned earlier in the paper, the lower cost of capital for international retailers can afford them the patience that is necessary before returns can be expected from investments (both capital and operational expenditures) in the retail sector. However opening up the sector exposes domestic retailers (both modern and traditional) to competition from international players that come with an advantage that they cannot match thus in a way creating a non-level playing field. Therefore, while inflow of FDI has been demonstrated to accelerate development of the sector and positively impact farmers in other developing countries in Latin America and East Asia, often safeguards to counterbalance the advantage international retailers enjoy have also been used. (Source: Farina, E.M.M.Q. "Consolidation, Multinationalisation, and Competition in Brazil: Impacts on Horticulture and Dairy Products Systems," Development Policy Review, Vol. 20, No. 4, September 2002, pp. 441-457 and Supermarket Expansion in Latin America and Asia : Implications for Food Marketing Systems, Thomas Reardon, C. Peter Timmer and Julio A. Berdegué)

Countries that have permitted a free flow of FDI into Retail have adopted various measures to prevent this from happening or, in other words, minimize the impact of this disparity. Host economy government support for indigenous retail chains became very important to match that low cost capital available to the retail TNCs. Otherwise the local chains have had little option than to make partnerships or joint ventures with retail TNCs to improve their access to capital. In the environment of intense competition, if the indigenous retail chains were not being able to form partnerships or joint ventures with retail TNCs, they had to go out of market due to low cost capital constraints.

A paper written by Neil M. Coe and Neil Wrigley (2007) titled "Host economy impacts of transnational retail: The research agenda," has shown how different countries government had assisted their different indigenous retail chains to resist themselves from the intense competition given by the new emergent international retailers.

For example, Reardon (2005) had outlined the case of the Chinese government making loans to its indigenous retail chains. While Faiguenbaum et al. (2002) had noted the case of national bank loans to D&S (Chile's largest retail chain) to help it. In contrast, in Brazil, leading food retailer CBD had formed a joint venture with French retail TNC Casino, and subsequently expanded that partnership, to help fund its continued expansion. This had happened due to the absence of government assistance in terms of capital supply (loans) to the local chains in Brazil.

Many countries in Europe such as Norway, Spain, Germany, France, Belgium, Scotland etc., and Japan, had given the small retailer various forms of assistance, in terms of subsidies and grants, regulation amendment, training and retraining, and even retirement pensions. This had been done with the view that this sector has a social, as well as an economic, role to play in the community. However, the methods and the degree of support varied from country to country. For example, Government of Denmark had provided limited management consultancy, while in West Germany there was an agency for retail consulting. In the case of Norway, the most liberal Government had provided aid and subsidy to all retail businesses. Some countries' governments had even introduced some "negative" policies towards large scale retailing for protecting the small shop, for example, France, Belgium and Germany (Davies 1995) and Japan (Larke 1994; Suzuki et al. 1997).

On the other hand, various methods of support had also been provided to shift the balance in composition of the small business community away from ageing, traditionbound and relatively unskilled retailers to younger, more innovative entrepreneurs. The success of these schemes is doubtful (Davies 1995) and not proven (Smith and Sparks 1997).

Making appropriate changes in other laws and policies negatively impacting Retail

As discussed in the second chapter, enabling changes in the Essential Commodities Act, Legal Metrology Act, Shops and Establishments Act and Food Safety and Standards Act will go a long way in boosting modern retail volumes which in turn is necessary for establishment of backward linkages.

Defining and ensuring adherence to a well-defined system of sorting, grading and packaging standards

In a supply chain that is as fragmented as the fresh produce chain in India and where spot transactions are the most prevalent mode of trade, the absence of a commonly agreed framework[77] of standards specific to each fruit and vegetable for accurately identifying quality is a key concern. Auctions at APMC mandis typically take place on large lots with mixed grades and purchase price is determined on the basis of subjective individual estimate of the buyer / agent of the "average" quality of the lot. It is partly for this reason that when collection centers of organized players come up near growing areas, farmers often prefer sell their best produce at these centers and take the rest of the produce for sale at the APMC mandi.

To an extent, the presence of more than necessary intermediaries in the chain is a natural system response to the absence of such a framework – as the bulk produce moves through the existing chain, intermediaries play the role of successively grading and sorting out the produce to ensure suitability for each buyer.

Similarly, lack enforcement of packaging standards leads to waste and damage to the fruit. For example, farmers often pack over 25-30kg of apples in a packaging box that is designed for carrying 23-25kg in order to save transportation and other incidental costs (that are quoted per box as against per kg) leading to handling losses from pressure and mishandling.

Quality and quantity waste that starts with inadequate field sorting, grading and packing protocols for commodities thus gets magnified along the chain.

Systematic grading coupled with appropriate packaging and storage, will extend postharvest shelf life, wholesomeness, freshness, and quality, and will substantially reduce losses and marketing cost. Horticultural produce must be sorted and graded on the basis of parameters such as maturity, size, shape, color, weight, freedom from insects and pests, pesticide residues and ripeness. Establishing sorting, grading and packing protocols for key commodities, educating farmers and other supply chain stakeholders through training programs, information material development and dissemination by government agencies, related institutions, cooperatives and institutions like the FAO should be undertaken to get around these issues.

Investing in agriculture marketing infrastructure

Re-think Private Terminal Market and Wholesale Market schemes

Since the ecosystem at existing mandis has been built over decades in a monopolistic environment and the infrastructure at these mandis is fully depreciated having been built on land at historical rates much cheaper than the prices now, it is highly unlikely that private capital will be able to earn market returns on investments into private markets[78].

Recognizing this, under the National Horticulture Mission (NHM), the government has made provisions for grant of subsidy to investors in Wholesale[79] and Terminal Markets[80]. However, key

[77] Though the "Fruits and Vegetables Grading and Marking Rules,2004" lay out the rules for grading of key fruits and vegetables, these are not universally applied in practice.
[78] Presentation on "Market Facilities in Fruits & Vegetables Wholesale Markets in India with Respect to their Investment & Returns", JS Yadav, CEO, Premium Farm Fresh Pvt. Ltd.
[79] National Horticulture Mission, GoI
[80] Department of Marketing and Inspection, Ministry of Agriculture, GoI

challenges remain in operationalization of these markets with private players citing stringent and ambiguous conditions which prevent commercial investment[81].

A consultation process with interested private investors should be undertaken for resolving the stumbling blocks in creation of these markets which may include a more active investment contribution or incentives from the government. This is particularly important in states with low level of penetration of APMC mandis like Bihar since these states are in the most dire need for good quality infrastructure in the form of wholesale markets.

Drive adoption of Warehousing Receipt System in fresh produce

The boost provided by the Warehousing Development and Regulation Act to the development of private sector warehousing capacity (see Figure 4) and availability of inventory-backed credit to farmers and traders in the case of grains and other non-perishable agri-commodities[82] has not been seen in the case of perishables yet. The difficulties associated with accrediting cold storages and the absence of standards are key barriers that have prevented this. The Warehousing Regulatory and Development Authority should have a special focus for perishables since the level of waste and value loss that can potentially be prevented by leveraging cold storages built under these regulations and the disintermediation that can be achieved by the greater availability of credit by driving adoption of a Warehousing Receipt System - in conjunction with e-trading as being implemented under the NAM initiative discussed above - can be transformational, as it has been in the case of non-perishable agri commodities[83].

Other initiatives to boost agriculture marketing infrastructure

It will take a long time for the existing context to involve into one where there is large scale consolidation and integration in the chain. Initiatives can be undertaken within the constraints of the existing supply chain to make incremental improvements.

Encouragement of and incentives for technological innovations that extend produce shelf life like solar based micro cold storages and / or reefer trucks or packaging materials that provide protection without compromising on protection of the produce can go a distance in easing the prevalent challenges until larger scale change comes about.

Such encouragement and incentives could take the form of research grants, low cost venture capital or even subsidies albeit disseminated in a manner that directly reaches the farmer as a beneficiary.

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[81] Presentation on “Private markets: Untapped potential”, JS Yadav, CEO, Premium Farm Fresh Pvt. Ltd.

[82] Outlook Business Magazine, November 2014

[83] Please refer background paper on Apple Value Chain by the same author

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Annex: List of meetings

1	Mr. Bhandari, CEO, Hypercity Retail India Ltd
2	Mr. Rajneesh Kumar, VP - Corporate Development, Wal-Mart India
3	Mr. Asim, Store Head, Meerut Cash and Carry Store, Wal-Mart India
4	Mr. L R Shiva Kumar, VP - Merchandising, Wal-Mart India
5	Mr. Ashik, Fresh procurement head, Hypercity Retail India Ltd
6	Mr. Daboo, CEO, Trent Hypermarkets Ltd.
7	Mr. Ballary, AVP & Head of Staples, Aditya Birla Retail Ltd.
8	Mr. Vaid, Reliance Retail Ltd.
9	Mr. Vineet Malaviya, Business Head - Fruits, Reliance Retail Ltd.
10	Mr. Raman Saluja, Founder, Gramco Infratech Ltd.
11	Mr. Bopardikar, Future Supply Chain Ltd.
12	Mr. Swain, Godrej Nature's Basket
13	Mr. Ashish Butani, IAS
14	Mr. Mohanta, Fresh Produce Sourcing Head, Mother Dairy Retail
15	Mr. More, Fresh Produce Sourcing, Aditya Birla Retail
16	Mr. Gosain, DGM, Fieldfresh Foods Ltd.
17	Mr. Somani, Aditya Birla Retail
18	Mr. Basant Nayak, Head - Business Development, Adani Agrifresh Ltd
19	Mr. Radhakrishnan, Founder and CEO, Grocermax
20	Mr. Srivastava, Fresh Sourcing, Spencers Retail
21	Mr. Goyal, VP - Merchandisinf, Spencers Retail
22	Ms. Gupta, Head - Retail, Federation of Indian Chambers of Commerce and Industry (FICCI)
23	Mr. Hazra, Director, FICCI
24	Mr. Pruthi, Fresh Sourcing Head, Bharti Retail
25	Mr. Chauhan, Sahara Q Shop
26	Mr. Rajagopalan, CEO, Retailers Association of India
27	Mr. Kaushalendra, Co-founder, Samriddhhii; Founder and President, Bihar Entrepreneurs Association
28	Mr. Marichi Galava, Store head, Adani Farmpik store, Azadpur mandi
29	Mr. Abhimanyu, Promoter, JCO Ltd. (Commission Agency)
30	Mr. Rajeev Sood, Promoter, DSF Ltd. (Commission Agency)
31	Ms. Tanu Goyal, Research Associate, ICRIER