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Foreign Direct Investment in India's Retail Sector: Some Issues

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Abstract

Foreign direct investment (FDI) plays an important role in India's growth dynamics. There are several examples of the benefits of FDI in India. FDI in the retail sector can expand markets by reducing transaction and transformation costs of business through adoption of advanced supply chain and benefit consumers, and suppliers (farmers). This also can result in net gains in employment at the aggregate level. This paper brings forth a few conceptual issues and analysis of qualitative information, data and stylized facts on these issues.

Key words- India, Foreign direct investment, Retail, Supply chain, Farmers

INRODUCTION

In applying transaction-cost logic to political aspects of the reform process in less-developed economies, Dixit (2003)) characterizes three phases in the formation of interest groups under information asymmetry: ex ante, interim, and ex post. At the ex ante stage, each individual is uncertain about his own type as well as the types of others because there is no private information. At the interim stage, each individual knows his own type but not the type of others. The ex post stage is when all players' types are publicly revealed. In the case of India, one may start from the interim stage because of existence of powerful incumbents both the private firms and the policy makers. Policy reforms would mean a fall in monopoly rents to incumbents and a decline in the rent-seeking powers of government agents. To illustrate this, when partial reforms for entry of transnational corporations (TNCs) in a few sectors were initiated in the mid 1980s, a few Indian industrialists organized themselves as the so called 'Bombay Club' to block the reforms in the name of nationalism. However, the reforms continued in a slow fashion. Competition from TNCs in sectors such as two wheelers and automobiles made Indian firms to upgrade technology and organization which resulted in decline in costs, prices and consequent expansion of markets. Consumers, workers (increase in wages owing to increase in productivity), local firms (increase in total profits) and TNCs benefitted from this. Over time, several Indian firms themselves have become multinational firms (Patibandla, 2006).

TNCs that build backward linkages with local firms are more beneficial than those that operate as 'islands' in developing countries. Prior to the reforms, several Indian large firms had backward linkages with small and medium scale firms through sub-contracting practices. However, the relationship was exploitative with large firms exercising monopsony power (Patibandla, 1998). After the reforms, TNCs such as Suzuki and Hyundai built backward linkages with supplier firms and transferred technology and organizational practices through cooperative arrangements. Subsequently, several Indian firms such as Bajaj, Mahindra and Mahindra and Tata Motors imitated these practices. As a consequence, the Indian auto-component sector has become internationally competitive (Okada, 2009).

When the Prime Minister Rajiv Gandhi brought Texas Instruments (TI) to Bangalore in 1985, a few opposition parties ridiculed him by calling him a computer boy and he did not understand the real India. The successful operation of TI gave positive demonstration effect to other information technology global players which led to entry of a large number of TNCs to take advantage of India's skilled manpower for their global operations. This, in turn, caused labor market dynamics: increase in employment, productivity and wages and technological and informational externalities to local firms (Patibandla and Petersen, 2004, Patibandla and Petersen, 2002, Patibandla et al, 2000). Consequently, India's software industry became one of the most dynamic industries in the world.

The issue is that the reforms, supported by effective local institutions, can benefit larger sections of the stakeholders in the long run. However, the short and medium term calculations of a few interest groups could block the reforms. The objective of this paper is to bring forth analysis of conceptual issues, stylized facts and data with regard to the net effects of allowing FDI into the retail sector in India.

The main proposition is that adoption of efficient supply chain augments economic growth by reducing transaction and information costs, deadweight losses and uncertainty of market exchange and thereby contributes to increase in productivity. Entry of the foreign retailers has effect on different stakeholders. On the demand side, it will affect consumers, small retailers, wholesalers and local large retailers. On the supply side, it will affect employment, farmers, manufacturers, middlemen and (bribe extracting) government agents. The feasibility of the reforms depends on the perception of distributional effects by the different stakeholders and their political power.

In section II, I present the case of Wal-Mart to understand the possible effects of allowing global players into the Indian retail sector. In section III, I discuss the current organization of the Indian industry. In section IV, the benefit of generation of supply chain to farmers is discussed. Section V presents concluding remarks. Some of the insights are drawn from my field study of the large retailers both local and foreign, small retailers, wholesalers and farmers in the cities of Bangalore, Hyderabad and Guntur.

THE CASE OF WAL-MART

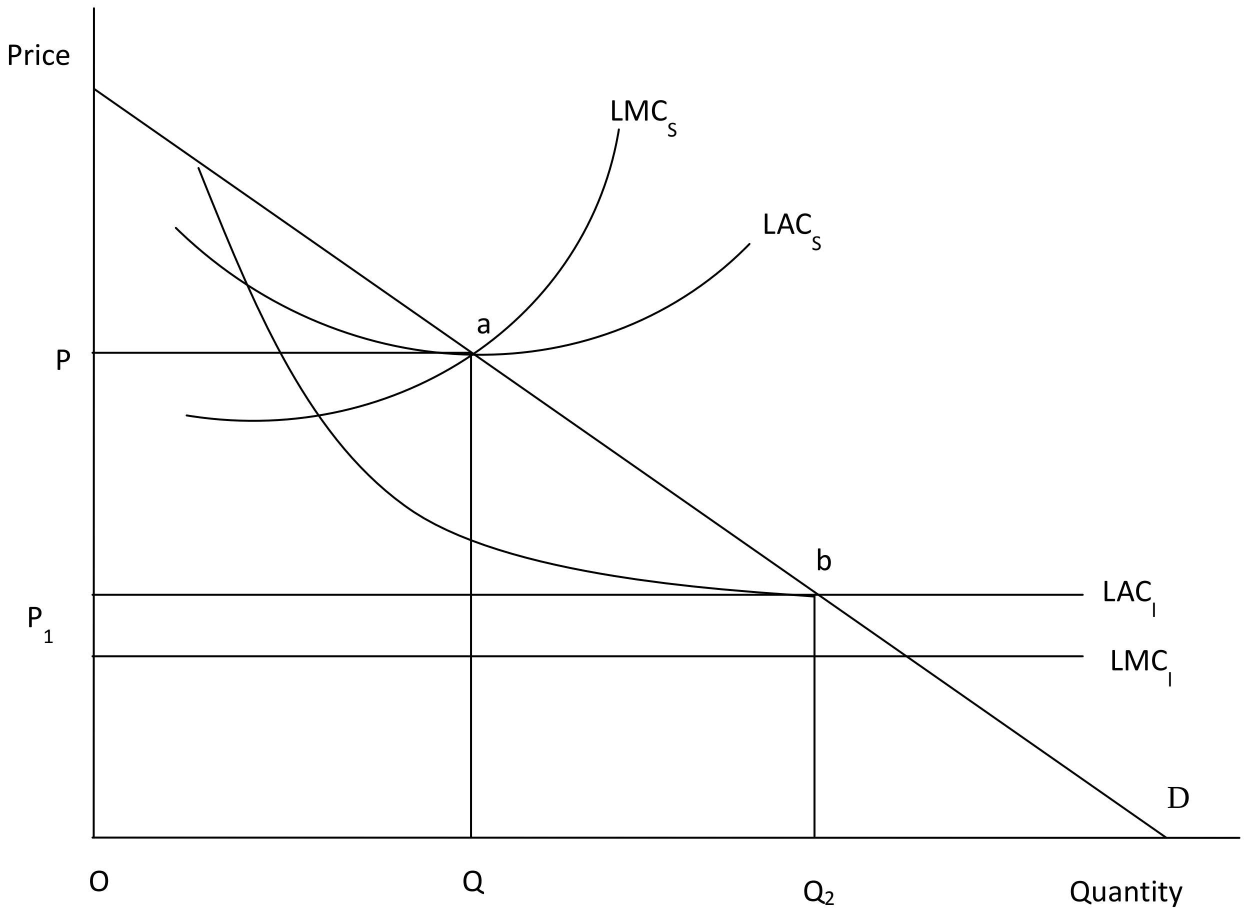
I take the case of Wal-Mart's model of retailing as the bench mark for the possible effects of allowing entry of large foreign retail firms into India. What are the advantages of Wal-Mart in the U. S., and other countries, whether these advantages can be translated into India and if so what are the possible effects in terms of net benefit or losses on different stakeholders?

Wal-Mart is the largest retail corporation in the world with $ 400 million annual turnover and about two million employees. Wal-Mart discount store was first established in a small town Rogers in Arkansas by Sam Walton in 1962. The basic strategy was to enter small towns with population of 5000 to 25000 which were not served by large retailers and derive scale advantage in relation to the size of small town markets and eliminate small players. This is similar to a natural monopoly where, given the size of the market, one large player with global economies of scale can serve the market more efficiently than large number of small players. The outcome of this strategy is illustrated with a simple partial equilibrium theory.

In Figure 1, *D* is demand curve of a small town. The linear addition of '*U*' shaped cost curves of small firms is represented by *LACs* and *LMCs*, the long run average cost and long run marginal cost respectively. With these costs, the equilibrium market price is *P* and quantity served is *OQ*. Let us take that a large player with global economies of scale enters the market and the cost curves of the large firm are *LACl* and *LMCl*. The large firm charges a market price *P1* that is equal to long run average cost. The supply increases from *Q* to *Q1*.The decline in the market price causes exit of small firms. Will it result in unemployment as small firms employ more labor per unit of output produced than the large firm with economies of scale? Increase in output supplied from *Q* to *Q1* can absorb some of the labor released by the exit of small firms. Given the fixed costs of the supply chain infrastructure, the constant and positive marginal cost could be treated as goods turnover and labor costs. Apart from this, decline in price from *P* to *P1* increases consumer surplus to the extent of *PabP1* and real incomes. Increase in real incomes increases expenditure and savings and could generate employment in other activities. After realizing the cost advantage in its expansion in small towns, Wal-Mart translated this into its operations in large cities with aggressive cost and price cutting and grew at a rapid pace.

One could argue that the large firm could act as a monopolist after it drives out the small firms and produce at a point where the marginal revenue for *D* intersects *LMC1*, which may imply a price higher than the small firms' *P*. However, Wal-Mart has not done this and that it is against its whole pricing strategy- keeping costs and prices as low as possible and realize high turnover with thin margins. The following provides the different processes of the cost advantage.

Figure 1



Brea-Solis et al (2010) indentified six choices or a set of choices that define the Wal-Mart's business model which are setting low prices, investing in technology, having specific human resource policies, establishing strategies for expansion, increasing product variety and developing a Wal-Mart Culture.

From the beginning Wal-Mart focused on increasing the volume of customers' visits to realize economies of scale (Walton, 1992). By keeping prices low, it increased sales so much more than just to compensate for the decrease in markup. When Wal-Mart enters a market, prices decrease by 8 percent in rural areas and 5 in urban areas (Ghemawat and Mark, 2006). For example, when Wal-Mart entered the grocery business the prices fell by fifteen percent. This unrelenting drive to keep prices low puts pressure on all the stakeholders: workers, managers and suppliers. Wal-Mart competes with establishment in a wide array of sectors both directly and indirectly (Basker, 2005).

Labor (wage) costs were treated as overheard costs for the retail business and were kept as low as possible. This meant employing as minimum workers as possible and paying wages as low as possible. Trade unions were totally discouraged. However, the company introduced a profit sharing plan for workers in 1971 in which they could purchase subsidized Wal-Mart stock with a percentage of their wages. Workers are treated as associates. Managers are given certain degree of autonomy to make decisions for increasing volume of sales. For example, department heads pick an item which they consider has the potential to sell large volumes and develop the associated promotion plan. Furthermore, it developed the concept of 'store within store' in which each department is given the freedom to act as an independent merchant. As I have observed in the Wal-Mart office in India, it defines (and posts them on the walls) the rules of conduct for employees and managers in dealing with customers and suppliers. For example, managers are not allowed to accept any gifts or expensive dinners from suppliers.

Wal-Mart derived competitive advantage through adoption of highly efficient logistics and distribution system by leveraging new technologies. It adopted vertically integrated distribution system. It was one of the first retailers to adopt electronic scanners at the registers which were tied to an inventory control system such that it could know immediately which items were selling well. By 1988, Wal-Mart had the largest privately owned satellite communications network in the U.S. This helped the managers to have a complete picture of where goods were and how fast they were moving from the suppliers to frontend service and track all the costs involved (Lichtenstein, 2005). This made inventory management very efficient thereby reducing working capital costs.

Wal-Mart procures goods directly from manufacturers bypassing all intermediaries and always drives hard bargain from suppliers. It spends a significant amount of time meeting vendors and understanding their cost structure. Once satisfied, it establishes long term relationship with vendors. It is in constant touch with suppliers through computer network (Chandran, 2003). The long term relationship of repeated interactions reduces transaction costs of exchange. Once goods procured, its warehouses supply 85 percent of the inventory as compared to 50-60 percent for competitors. Consequently, it is able to provide replenishments within two days against at least five days for competitors and shipping costs on average turn out to be 3 percent as against 5 percent for competitors.

This ruthless pursuit of cost and price cutting strategies of Wal-Mart made it to grow into a gigantic corporation. Fishman (2006) observes “The Wal-Mart effect is the suburbanization of shopping; the downward pressure on wages at all kinds of stores trying to compete with Wal-Mart; the consolidation of consumer product companies trying to compete with Wal-Mart’s scale; the relentless scrutiny of unnecessary costs that allows companies to survive on thinner profits; the success of a large business at the expense of its rivals and the way in which that succeeds builds on itself… In the same decade that Wal-Mart has come to dominate the grocery business in the United States, 31 supermarket chains have sought bankruptcy protection; 27 of these chains cite competition from Wal-Mart as a factor. That too is the Wal-Mart effect.”

As far as employment effect of Wal-Mart is concerned, Basker (2005) found that “…immediately after entry, retail employment in the country increases by approximately 100 jobs; this figure declines by half over the next five years as some small and medium size retail establishments close. Wholesale employment declines by approximately 20 jobs over five years.”

On the other hand, Ghemawat and Mark (2006) argue that Wal-Mart has grown the economic pie available to be divided among its various stakeholders instead of slicing up a fixed pie in a way that favors one group over another. They cite the McKinsey Global Institute's study of the U.S. labor productivity growth between 1995 and 2000 (by Robert Solow) which shows that Wal-Mart contributed significantly for its growth. Given that Wal-Mart's prices are 8 percent lower than competitors, the U.S. consumers save on the order of $ 18 billion per year. For each job lost through Wal-Mart effect, consumers saved more than $ 7 million per year. This would imply that in terms of net effects more jobs were created through increase in incomes and expenditure than those of direct losses.

The above discussion shows that Wal-Mart derived a sustainable advantage with respect to competitors in the U.S. with net positive effects on the economy as a whole. The following issue is whether it has been able to translate it to foreign country operations. The theory of multinational firms shows that a firm becomes a multinational if it has intangible asset advantage in technology, brand name and organization otherwise local firms can produce the product more efficiently than a foreign firm (Hymer, 1960). However, the intangible asset theory is only a partial explanation. Multinational firms have to take into account of diverse economic, political and social institutions of different countries in making their entry, governance and management decisions (Patibandla, 2007, Ghemawat, 2007). The institutional environment in terms of the constitution, the legal system, property rights, contract laws, regulatory institutions, embedded norms and customs and consumer behavior which determine transaction costs of business could be broadly similar across a group of countries and diverse across a group of other countries. For example, when Wal-Mart entered Canada and the U.K. it has been successful. However, it failed in South Korea and Germany and struggles in countries such as Japan and Russia.

In case of Germany, Wal-Mart management at the top was not able to understand and deal with Germany's regulatory and institutional conditions and consumer preference for value rather than service and work culture of Germans. In case of South Korea, consumers prefer to buy small and fresh quantities and the Korean competitors attracted consumers away from Wal-Mart with marketing strategies based on nationalistic feelings.

In the case of Mexico and other Latin American countries which are geographically close to the U.S., Wal-Mart has been successful. Wal-Mart entered Mexico in 1991 with a joint venture with the largest Mexican firm Aurrera which was bought out in 1997. Wal-Mart modernized warehousing, distribution and inventory management which reduced costs and prices significantly. It adapted to Mexican conditions like 'Bodega Aurrera' stores austere versions of supermarkets designed to meet small town needs and high-end 'Superama' in high-end neighborhoods. This allowed it to target different customers with different purchasing power. The operation of Wal-Mart in Mexico is shown to have resulted in $ 60,000 in savings to customers for each $ 10,000 in wages paid to employees (Das and Pramanik, 2011). Wal-Mart grew very rapidly in Mexico. By 2012, it has become the largest private employer with 209,000 employees.[i]

Wal-Mart entered China in 1996 and now it operates 352 stores in 130 cities. Wal-Mart has been able to cater to the rapidly growing Chinese market at around 18 percent annually. About 20,000 Chinese suppliers provide Wal-Mart with 70 percent of its global sales. Thirty percent of Chinese exports are accounted by Wal-Mart. Schell (2011) observes "Just as China is providing Walmart with the lifeblood of its commercial growth, Walmart is helping the Chinese state not just to satisfy the escalating demands of its consumers but to extend Beijing's regulatory writ. Together, they are engaging in a bold experiment in consumer behavior modification, market economies, and environmental stewardship….how Walmart and China interact with each other over the next decade will be critical to the fate of the planet's environment."[ii]

Over the years as the incomes of Chinese consumers have been growing, there has been greater demand for clean food and environmentally friendly products, Wal-Mart started to adopt environmentally friendly practices. In China, there are thousands of polluting factories and small-scale food producers who violate environmental regulations. As Schell notes through well-organized companies like Wal-Mart that operate nationally, the Chinese government has found auxiliary sources of public education, control, and regulation through effective supply chain with no extra cost to the public.

THE ORGANIZATION OF INDIA'S RETAIL INDUSTRY

In the year 2012, the Indian retail sector is estimated to be Rs. 18,673 billion and it accounts for around 15 percent of GDP and 8 percent of total employment. The sector is highly fragmented with about 96 percent of the stores in the unorganized sector. The Kirana stores (Mom and Pop stores) number around 12 million spread across 5,000 towns and 600,000 villages throughout India. These are mostly family owned with family labor. At the bottom of the pyramid is millions of pavement stalls in India.

Low overhead requirements and lack of regulation resulted in low entry barriers which led to overcrowding of the sector and consequent low productivity. The basic socio-economic model of the Kirana stores is repeated interactions with customers closely located geographically- trust in exchange arising through repeated interactions. Most of the expenditure of Indian consumers is on food, on average about 50 percent of the total retail, which would be a lot higher for low income groups. Majority of Kirana stores stack up with food grains and dry foods. Fruits and vegetables are sold by pavement stalls and relatively better organized larger vendors both coexisting side by side. The products are procured from wholesalers located in certain central part of a city. In the case of fruit and vegetable vendors, they procure the products everyday at the dawn and ship them to their sale locations. Since they do not have access to formal credit, they have to manage working capital effectively- everyday sales have to cover the everyday purchase costs of goods plus a margin on the sale. Most Kirana stores and wholesalers offer credit to their customers.

Boston Consulting Group (2012) estimated that the retail sales were $ 471 billion with 7 percent share for the organized retail ($ 34 billion) in 2011. It also shows that by 2020 the size of the organized retail to be around $ 260 billion with a penetration of 21 percent. Increasing middle class incomes and use of automobiles, refrigerators, credit cards and adoption of technology for supply chain is expected to shift the balance in favor of organized retail in metros and small towns.

As mentioned in the introduction, entry of large foreign retailers affects different stakeholders on demand and supply side. I discuss the possible demand side and some elements of supply side effects in this section and supply side effects on farmers and middlemen in the following section. The insights of this section combined with those of the following section help in testing the proposition that adoption of efficient supply chain affects middlemen adversely and benefits farmers and consumers.

Before going into the possible effect of FDI on different stakeholders, I would like to discuss the effect of the entry and expansion of large organized Indian retailers such as the Reliance fresh in Bangalore, Hyderabad and a small town Guntur in the state of Andhra Pradesh. The observations are based on visits to the Reliance stores and field interview of small vendors located within five kilometer radius of the location of the Reliance store.

The Reliance fresh stores operate both large stores and relatively small ones depending on the real estate available in the areas populated with middle income and richer consumers. They stack up with food grains both in large quantity and smaller quantity packets, processed foods of all kinds, fresh vegetables and fruits and some stores have fresh meat and fish set up separately from the main store. Vegetables, fruits and meat products are brought in everyday while the processed foods and food grains are stacked up in relation to turnover. They ensure the products meet the grading and quality requirements both at the procurement and final sale stages.

The prices in the Reliance stores on average are cheaper by about 5 to 10 percent compared to nearby Kirana stores and fruit and vegetable vendors in Bangalore. Apart from this, consumer's have wider choice of products than those available in Kirana stores. The entry of the Reliance stores led to closure of middle scale grocery stores, which are relatively modern compared to Kirana stores, located in the radius both in the metros and the small town. Kirana stores and vegetable and fruit vendors observed that their business dropped by 20 percent with the advent of the Reliance fresh stores within the radius.

Textbook economics shows that a monopolist could undertake price discrimination to maximize producer's surplus: perfect price discrimination of charging a different price from different consumers depending on their willingness to pay; second order price discrimination of charging different prices depending on the quantity of purchase and third degree price discrimination of charging different prices from segmented markets depending on price elasticity of demand.

However, as I observed in Bangalore, small and medium scale vendors are able to exercise a certain form of perfect price discrimination of quoting higher price to a customer who looks rich (with cars) and lower price from a customer who appears poorer. Secondly, they could exercise third degree price discrimination of charging higher prices in the rich localities and lower prices in the poorer areas. The ability of small vendors to exercise perfect price discrimination has declined with the entry of the large organized retailers as the richer consumers with cars and refrigerators prefer to buy from the large players with diverse product choices. The main market that remained with the small vendors is the daily income earners who buy small quantities for their everyday needs. The Reliance fresh stores sell both large quantity packages at discount and also small quantity items of say rice, wheat powder, lentils and vegetables at a cheaper rate than the small vendors. However, poor consumers' inability to incur costs of going to the Reliance fresh makes them to buy from the small vendors. A few small Kirana stores in the Bannerghatta road of Bangalore procure large quantities of food grains and dry foods from the Reliance stores on a weekly basis and sell to costumers with a mark-up of 5 to 10 percent. Apart from this, the small Kirana stores which are densely located with each other have developed cooperative agreements with each other and avoid price competition.

The following issue is how does the entry of foreign players effects the market dynamics? The possible effect of allowing FDI is improvements in supply chain technologies, technological and informational externalities to local players and competitive dynamics that could benefit consumers and suppliers.

The press reports show that in the year 2011 the Pantaloon Retail's net profits increased 69 percent to Rs 1.42 billion on net sales of Rs 122.1 billion which means the company was able to make supernormal profits at the cost of consumers and suppliers. A study of the Indian retail chain Spencer (Singh 2010) shows that lower procurement prices are not passed onto consumers and most supermarkets maintain high margins on perishable items. This is where competition from foreign firms will drive the industry to be contestable.

I briefly discuss the case of Bharati Wal-Mart, although its presence at present is small owing to policy restrictions, its entry has important implications. Wal-Mart entered India as joint venture with the Indian firm Bharati to circumnavigate India's FDI rules. In countries such as Mexico, Wal-Mart entered the country with joint venture with a local retail firm and later on bought it off similar to buying a real option at the time of entry. In the case of India, Bharati did not have prior retail business. It wanted to enter the retail by using Wal-Mart's expertise. Interestingly, it is a non-exclusive partnership and Wal-Mart can forge other alliances in India. Both the partners would like to use each others' advantages with the expectation of breaking off in the future and become competitors. Bharati is Wal-Mart's franchisee and wholly own and manage the front end retailing by setting up multiple stores across India. This means once Bharati acquires Wal-Mart's expertise in warehousing and supply chain, it is rational for it to break-up as it would own the stores strategically placed across the country. Wal-Mart calculation could be gaining the institutional knowledge of the Indian economy through the venture to be able to adapt its American model of retailing to India at the time of future break-up of the venture.

Bharati Wal-Mart has three forms of business models: Cash and Carry, Small Supermarkets (Easy Day) and Compact Hyper Markets. In the case of Cash and Carry format there are no policy restrictions on goods sold as it is basically a business to business model. However, the government issued only 60 licenses for Cash and Carry operation for the whole country. Small and medium scale businesses are given a registered card with which they can buy goods in bulk and sell them to consumers with a mark-up. These stores carry a wide range of manufactured goods procured from all over India and grocery items. As the firm derives scale advantage in procuring goods they sell them at a lower price than traditional wholesalers, thereby benefitting consumers indirectly. The other formats are single brand entities.

The company established three large distribution centers (with warehousing and cold-storages) in the north and one in the south of India. The northern centers have been sourcing food items directly from farmers by establishing long-term relationships. Wal-Mart established Wal-Mart India, a separate entity, in the city Gurgaon of the northern India which provides technical, software and logistics support to Bharati Wal-Mart. Its supply chain at present is still nascent owing its small operation. One of the managers of Bharati Wal-Mart in Bangalore observed that they procure vegetables from farmers on daily basis and have some cooling facilities for fruits such as apples which have to be procured from the far north. In the case of farmers located in far off places, they procure vegetables from middle-men (mandis).

Bharati Wal-Mart currently sources its private labels from 120 Indian companies. They have about 70.000 members which include small shop owners, hotels, restaurants, schools, colleges, the police force and even the Indian army.

The Bharati Wal-Mart's Cash and Carry operation in Guntur city is successful with medium scale businesses preferring to procure bulk quantities of items from the entity. It issues membership cards to businesses with licenses with which they can buy a whole range of manufacture goods, food grains, pulses and fruits and vegetables both at large and small quantities. Most of the members are hotels, restaurants, colleges, hospitals, small supermarkets, and medium scale Kirana stores. It has gotten into an exclusive agreement with the Kotak Bank which issues credit cards to the members with which they can buy the produce on credit with competitive interest rates. It procures manufactured goods and food grains and pulses at the national level and vegetables from the local farmers through a vendor. Its supply chain in vegetables is still rudimentary.

According to a wholesaler of pulses, the entry of Bharati Wal-Mart to Guntur has made him to be highly alert about price movements of pulses across the different regions of Andhra Pradesh state and also neighboring states such as Maharashtra. Procuring pulses from the different regions has become easier in the recent because of improvements in transport infrastructure and information flows. He has an advantage over Bharati Wal-Mart in getting low prices in procuring pulses from the mills because his purchases are not recorded so that they do not pay taxes for his purchases. He has more flexibility in prices as he buys in smaller quantities than Bharati Wal-Mart which procures in bulk and sells at fixed prices until the output is sold out. As a matter fact, he buys from Bharati Wal-Mart when the market price goes up and sells it to customers with a mark-up. He openly acknowledges he does not pay taxes on his sales. According him and another small business man in Guntur, if they pay taxes honestly on their sales it gets them into trouble with the tax inspectors. Suppose if they have paid a tax rate of 5 percent on a turnover of Rs 100000, the tax inspectors would argue that they have paid the tax because their turnover must be a lot higher than what they have reported and demand bribes. These businesses try to be as invisible as possible to the tax inspectors. One more interesting observation is that some of the small wholesalers adopted innovative practices in response to entry of Bharati Wal-Mart. They procure pulses frequently at competitive prices from the large wholesalers and send SMS about the prices to customers such as small restaurants and food processing businesses and deliver the goods once they get order through SMS.

According these wholesalers, one advantage of the large retailers over them is that they reduce the transaction costs to consumers of finding out the prices of different quality of output as they grade and display them in one place.

I interviewed a few wholesalers, farmers and small retailers in the vegetable market of Guntur. Most of the wholesalers observed that the entry of Bharati Wal-Mart and the Reliance fresh stores so far has no effect on their business. There is no single business model of procuring vegetables from farmers. One of them goes to a neighboring village (30 kilometers away) to where farmers bring in their output and he buys from an agent and transports them to Guntur in the night and sells them to his customers (retailers and small businesses) in the morning hours. He gives credit to his regular customers, sometimes even to new customers as he has to sell off the output by morning otherwise it will perish. Another wholesaler specializes in potato trade. He procures potato from a commission agent in Agra of Uttarpradesh state and transports them to Guntur which takes about four days. As potato is not a stable food of the South Indians, its price is positively correlated with fresh vegetables. He sells the output to a commission agent on payment of cash who, in turn, sells it to retailers and small businesses on credit with an interest rate.

In the case of the other two wholesalers, farmers bring in the output every evening. Small farmers with a half and one acre of land pool their resources in hiring min-trucks or three-wheelers and bring in their output to the wholesale market. The price of procurement is decided by the magnitude of the supply and expected demand in the morning. As the land in the coastal region of the Andhra Pradesh state is fertile, vegetables are grown throughout the year by farmers by using both canal water (from Krishna River) and ground water.

In the case of small retailers in Guntur, some of them observed that the advent the large super markets had a negative effect on their sales. However, as I observed the prices of vegetables are lower in the retail market than in the Reliance Fresh Stores. On the given day, the price of tomatoes was Rs 14 per kilogram in the retail market while it was Rs. 19 in the Reliance fresh.

One common observation is the market for perishable vegetables is characterized by high degree of uncertainty. This is where the large retailers with efficient supply chain of warehousing and cold-storages can make a difference of reducing uncertainty especially to farmers.

Assuming Wal-Mart is allowed to enter India without policy restrictions, the first issue would be Wal-Mart's ability to adapt its low cost and price model to India's institutional and infrastructure conditions and overtime how its' operations change the landscape of the retail industry in India. Wal-Mart has to modify the U.S model of establishing large stores outside the cities. India is more densely populated than the U.S and China and less densely populated than the countries like the U.K, the Netherlands and Japan. High density could be an advantage and also a disadvantage for large retailers. Once a large retailer occupies real estate in a high density area, it will be able to realize economies of scale of serving large number of customers and at the same time the real estate prices could be high. One of the strategies of the Indian firms such as the Reliance is to occupy real estate in large cities and towns to preempt the foreign players. Secondly, consumer preferences and consumption patterns (for example vegetarian and non-vegetarian food) are more diverse across different regions than in countries such as the U.S, the European countries and even China which means standardized supply chain across the country may not work. Furthermore, at present there are large barriers for trade within the country- different tax regime of the states and infrastructure conditions. Just to give an example, it is easier to bring apples from Australia to Bangalore than getting them from the Himachal Pradesh state. This means Wal-Mart has to adopt the supply chain for the different regions of the country than for the whole country. In other words, certain elements of the supply chain could be standardized at the national level and others have to be adapted to regional requirements.

As mentioned earlier, Wal-Mart's supply chain is highly efficient in terms of linking sales pattern at the front end to its warehouses and the producers. One of the important issues is creating linkages with large number of Indian manufacturers and farmers spread across the country which poses difficulties in inventory management if it faces problems of high transaction costs of contracts, delivery time, and quality control. Wal-Mart has to invest significant amount of resources in cultivating long term relationship with the suppliers and helping them in quality and delivery control mechanism.

One of the criticisms of Wal-Mart's practices is that it drives supplier firms to be cost-effective especially if the suppliers become dependent on the large buyer. On the other hand, if supplier firms in India learn from Wal-Mart in improving production and delivery practices, they could improve their bargaining by diversifying their sales to other large retailers or even by selling in the international markets. If Wal-Mart is able to adapt its supply chain to Indian conditions, it could benefit both large and relatively small Indian retailers by expanding the market through improving know-how of large number of vendors in the country. This was what happened in the auto-component industry in India especially in regard to the first-tier producers as a result of entry of TNCs in the automobile industry (Patibandla, 2006, Okada, 2009).

As mentioned before, major part of the consumption basket of Indian consumers is food. It will remain so at the aggregate level for a long period with India's population growth (it is expected to be 1.6 billion by 2050). The food inflation in India has been high. It is generally argued India is the fourth largest economy in terms of purchasing power parity (PPP). PPP concept is fundamentally flawed if we ask the question for whom- the rich, the middle-class and the poor? One has to take into account of the composition of tradables and non-tradables in the consumption basket in applying PPP. If we take a rich person in India, composition of food items will be small and consumer durables and luxury items and non-tradables such as housing, domestic servants and restaurants, etc., will be high. In the case of most of the non-tradable items, the purchasing power of the rich and the middle class is higher than those in a developed country because people engaged in most of the non-tradable services in India are paid low wages. If we take the poorer sections, major part of their consumption is food. Food items are internationally tradable- if so their prices will be equalized to international prices. So the poor gets paid low wages corresponding to workers in a similar activity in a developed country and may end-up paying international prices for food- in terms of PPP the poor are extremely worse off. Food inflation in India is the example.[iii]

Macroeconomic policies aimed at curbing food inflation result in perverse outcomes. If we take the example that the Reserve Bank of India increases interest rates to curb economic activity that is expected to curb food inflation, this results in unemployment so that demand for food from the poor goes down. This is a perverse outcome. The main way to reduce food inflation is to reduce the supply inelasticity- increase in agricultural productivity, allowing free trade across the country and adoption of efficient supply chain that reduces the wastage. To cater to the growing demand for food, large retailers have to invest significant amount of resources in building backend infrastructure- warehouses, cold storages and linkages with large number of farmers. If India's policy makers fail to facilitate this, food inflation will keep increasing.

On the employment side, modernization of the retail sector through the entry of large retailers will have some disruptive effects in the short run that there will be some direct job losses especially unskilled labor and generation of jobs for semi-skilled labor. Most of the jobs that are created in the large retailers such as the Reliance are workers with basic computer and English language skills. [iv]

Turnover per employee for the retail sector in India is about Rs. 340,000 per annum. The turnover per employee for Wal-Mart International is about Rs. 9,971,057 which is 29 times that of the unorganized sector in India. If foreign players capture 10 per cent share by 2015, that will turn out to be Rs. 189660 million with employment of 19000 employees replacing about 0.55 million in the unorganized sector (Ray et al, 2012). A study by Price Water Cooper (2011) shows every 50,000 square feet of development creates direct employment for 200 people. Based on these estimates 1.5 million jobs will be created in the frontend retail activities by 2015. Apart from this, 10-20% more jobs will be for backend activities. The direct employment will be close to 1.8 million. This does not take into account of net effect of employment through expansion of markets, and incomes. If output expands through modernization of the retail, it will increase real incomes (and savings) and generates employment in other sectors. In the case of wage levels, the organized retail sector has to adhere to the labor market regulations which means workers will be better off than being employed in the unorganized.

India has been able to develop world class manufacturing industries at the higher end through the entry of TNCs owing to low cost labor with advanced skills. Ford, Hyundai, and Suzuki export cars from India. LG, Motorola, and Nokia make handsets in India and export a sizeable share of production. ABB, Schneider, Honeywell and Siemens set up plants to manufacture electrical and electronic products for domestic and export markets. These industries generate employment for the relatively skilled labor. India has to generate employment for the large pool of unskilled and semi-skilled labor. The government policy has to create conditions for development of low-end manufacturing which can absorb semi-skilled labor as these activities will be labor intensive.

As mentioned earlier, close to 30 per cent of manufacturing exports of China are accounted by Wal-Mart. If Wal-Mart is able to replicate its global supply chain practice in India it can source manufacturing exports from India which will generate employment. China is transforming into a middle-income country with a per capital income of about $ 5000. This will increase wage costs in the manufacturing. This is where India can take advantage by letting the manufacturing industry to move to India by improving infrastructure, literacy rates and reducing transaction costs of business.

Critics of Wal-Mart or representatives of the Indian retailers' special interests may make an argument that Wal-Mart should be kept out of retailing but their outsourcing and supply chain activities for exporting Indian manufacturers should be encouraged. However, it is essential to allow foreign players to operate in India to make markets contestable, for realization of externalities and benefit consumers and suppliers especially farmers which I show in the next section.

Prior to the reforms, there were rudimentary supply chain practices between large and small and medium firms in the manufacturing industries (such as shoe-uppers and some engineering industries) through sub-contracting practices. However, the bargaining power was very much in favor of large firms (Patibandla, 1998). Entry of TNCs such as Suzuki, Honda, Hyundai, and Ford motors, which developed the component industry through transfer of technology and lean production practices not only made the component industry internationally competitive but also shifted bargaining power in favor middle scale component industry (Okada, 2009, Patibandla, 2006). The following issue is whether entry and expansion of Indian large retailers and foreign players will help to develop the small and medium scale manufacturers. As mentioned earlier, in China's case Wal-Mart helped small and medium manufacturers to improve the quality of products, source products from them for exports through its highly advanced global supply chain and also helped them to adhere to environmental standards. Similar outcome can take place in India.

In the case of the agricultural sector, India's supply chain is one of the most fragmented and inefficient ones in the world resulting in wastage of large quantities of food grains, vegetables and fruits. About 40 percent of vegetables and fruits are destroyed before they come to the market. Apart from this, output is procured through unhygienic practices. This means farmers and consumers bear the costs of the wastage.

In the case of vegetables and fruits, on average, output passes through six middlemen- from farmers to consolidator, commission agent, trader, commission agent, wholesaler, retailer and finally to consumer. As a result, farmers receive a small fraction of the final price paid by consumers. India's food distribution system is a result of government regulation of the 1940's and 50' which attempted to curtail hoarding of food products by cartels. In 1966, the government enacted a law which banned farmers from dealing directly with retailers and forced them to sell through licensed middlemen called 'mandis'. Overtime, this resulted in emergence of multiple middlemen and commission agents. Farmers go into debt with the traders who buy their produce and then sell them seeds and fertilizers for the next crop (Robinson, 2007) - a vicious circle of poverty trap.

The emergence of large retail sector started to change the organization of the supply chain. The large retailers bargained with the state and central governments, starting with the Karnataka state government, to allow them to procure output from farmers directly. A simple starting point of breaking up the poverty trap is paying farmers at the time of delivery which reduces working capital costs to farmers.

SUPLIERS: THE FARMERS

This section tests the proposition that adoption of supply chain benefits small and medium farmers and contributes to productivity. Small and medium farmers in most of India face vicious circle of poverty trap as illustrated in Figure 2. Taking from Patibandla and Sastry (2004) these farmers suffer from at least five losses of income:

(i) Credit: They pay high interest rates for loans from the unorganized credit markets, sometimes more than 50 per cent.

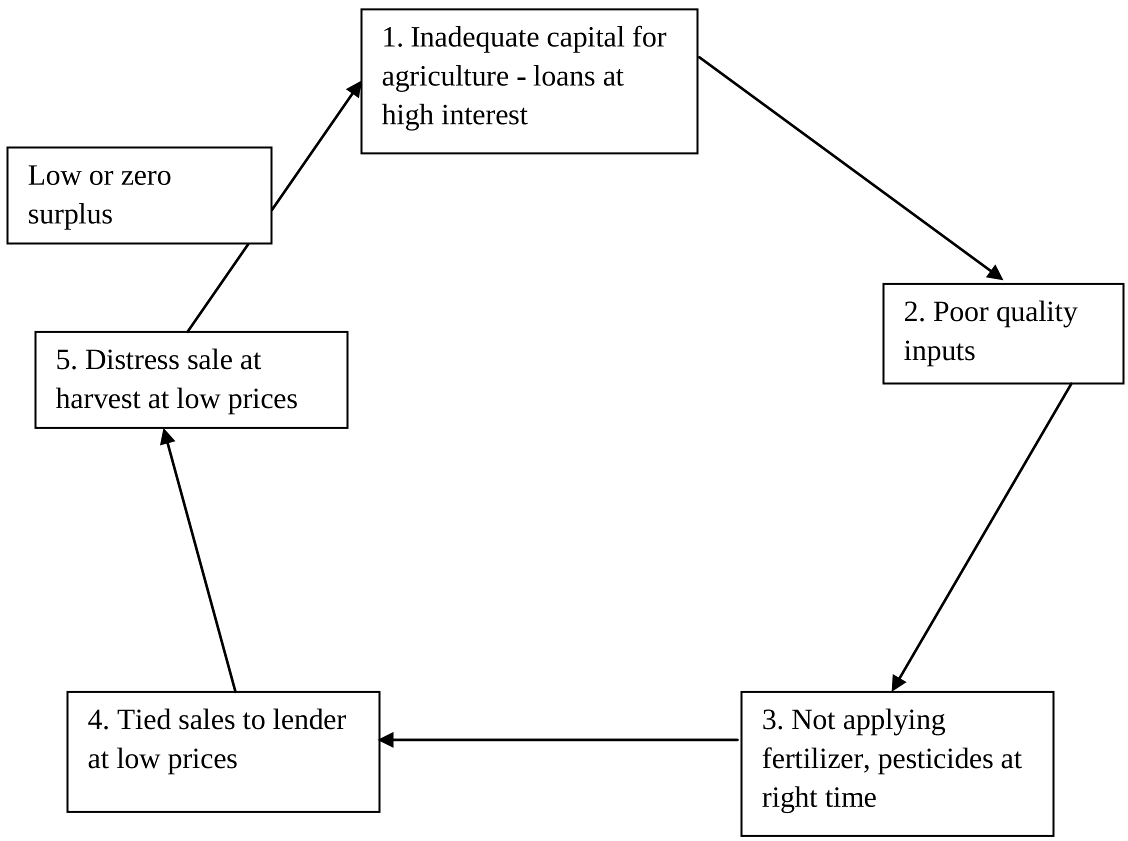
(ii) Poor quality seeds, fertilizers and pesticides obtained at higher prices: As mentioned in the previous section, the dealers and middlemen provide credit for purchase of agricultural inputs and palm off substandard items.

(iii) Poor farming practices: Farmers are unable to apply fertilizer and pesticides at right time during the right time owing to lack of liquidity.

(iv) Tied sales: Farmers are forced to sell their output to the money lenders at low prices as a part of the loan conditions.

(v) Distress sales at the harvest time: Owing to lack of storing abilities, farmers have to sell off their output at harvest time. The difference in price between the flush and lean season could be 100 per cent or more.

Figure 2: Small and medium farmers and poverty trap



Source: Patibandla and Sastry (2004)

Conventional thinking focused on credit in breaking the above circle. So far this has not worked because farmers still depend on informal markets owing to high transaction costs of availing formal credits (and poorly defined property rights and high uncertainty of the markets). Even if credit is available it does not solve the problem of distress sales. I argue that the most potent factor of the circle is distress sales. Distress sales also discourage (medium) farmers from investing in productivity enhancing practices. If a farmer incurs additional costs for improving productivity, this will increase the output, which, in turn, increases the supply at the time of harvest. This depresses price realized by the farmer furthermore. This is exactly where the entry of large retail firms makes a difference if they source directly from farmers, pay for the output at the time of delivery and adopt efficient supply chain. This is illustrated through a simple model.

The surplus equation of a farmer before the entry of a large retailer into the market is:

$$S = P(Q)\,Q - (b + mN + d\,N + Tc)\,Q \qquad (1)$$

P is the market price paid by consumers. Q is output. b is average cost of production. m is mark-up realized by numerous middlemen. N is the number of middle men. d represents deadweight losses incurred for multiple transfer of output before it reaches the market. Tc is transaction costs incurred by farmers in securing credit, inputs and selling output.

Let us take the case that a large retailer enters the market and procures output directly from farmers. It makes N equal to 1. This reduces total mark-up and deadweight losses in the system. One can argue that reduction in the mark-up is simply redistribution of wealth from middlemen to farmers. However, reduction in deadweight losses and transaction costs is a wealth generation effect.[v]

If the large retailer pays to a farmer at the time of delivery of output, this reduces the working capital costs to farmers which we can take as reduction in transaction costs, Tc. Apart from this, if the large retailer helps farmers in supplying good quality seeds and fertilizers at competitive prices, this can also be treated as reduction in transaction costs in the input markets.
However, there are costs in organizing the supply chain:

$$S = P(Q)\,Q - (b + m + d + Tc)\,Q - a\,K \qquad (2)$$

K is the cost of organization of the supply chain- warehousing, cold storage, transport costs and frontend infrastructure. This cost has fixed cost component of a, which means larger the output lower will be the average costs of the supply chain (economies of scale). Average costs of the supply chain will be lower for regions where farmers are densely located than for the regions where farmers are dispersed widely.

Let us take the first effect of this as reduction in the wastage of the output which, in turn, increases Q and decreases P. If the increase in Q is more dominant than decrease in P, farmers' surplus increases. Secondly, it also may result in increase in the price, Pf, paid to farmers on average of inter-temporal distribution of output from one harvest to the next harvest. Decrease in transaction costs, total mark-up, deadweight losses and average costs of the supply chain increases surplus of farmers. This increases incentives for investing in productivity enhancing practices which increase output. This, in turn, decreases average costs of the supply chain in dynamic terms. Furthermore, large retailers could spread good farming methods to farmers for maintaining quality- such as pesticide control, quality seeds, right kind of fertilizer use and product quality control. India is one of the largest producers and users of pesticides in the world. The toxins have entered the food chain and damaged soil and water. Although the spreading of good farming practices means additional costs to farmers, they improve productivity through externalities overtime.

One can argue that owing to economies of scale in procurement, large retailers prefer to procure from large and medium scale farmers rather than small farmers. One benefit small farmers can derive is that if the total output produced by the medium and large farmers is taken away by the large retailers at the time of harvest, small farmers' price of harvest time may increase. Secondly, small farmers can be helped to get into cooperative arrangements which can reduce their transaction costs of operating in the input and output markets.

Let us take two small farmers *i* and *j* operating in the input and output markets. If they act independently, total transaction costs are:

$$T_i\ (q_i,\ l_i\ ) + T_j\ (q_j,\ l_j) = T \qquad (3)$$

q is output and l is credit and input costs.

If they get into a cooperative agreement:

$$T_v\ (q_i\ \ l_i,\ q_j\ l_j) \qquad (4)$$

$(T\text{-}T_v) - u$, is the cost saved through cooperation where u is transaction costs of getting into cooperation. A part of u can be incurred by a large retailer in getting farmers to form into a cooperative agreement if that cost covers his/her mark-up and average costs of the supply chain through increase in total output, (q_i+q_j).[vi]

At present, the large retailers such as the Reliance Fresh, Bharati Wal-Mart and Metro have been sourcing directly from farmers in specific regions where density of farmers are high. Bharati

Wal-Mart's main focus has been doing business to business- sourcing from farmers and selling to wholesalers and restaurants, etc., for bulk selling. In the year 2010, Bharati Wal-Mart launched an initiative to support farmers through a combination of direct sourcing and training to generate a consistent source of high-quality produce for their supply chain. It engaged over 800 farmers and sources over 15 percent of vegetables sold in its stores. It is expected to directly source from 35,000 small and medium farmers by 2015.

The large retailers have to build their distribution from scratch owing to poor infrastructure of India. High transaction costs of business of the Indian economy means internalizing most of the supply chain within the firm even to the extent that companies like the Reliance fresh have been attempting to acquire agricultural land for production. In establishing cold-storage facilities, frequent power break downs require investment in diesel generators. The Reliance fresh installed reverse-osmosis machines at its processing centers to clean the water supply (Robinson, 2007).

As the large retailers invest in generating the supply chain complemented with the government investments in public goods such as roads, energy, and primary and secondary education, the average costs of the supply chain will decrease overtime owing to both static and dynamic economies. One of the dynamic gains of supply chain investment would be reduction in transaction costs of business- business to business, and business to consumers such as information and search costs, contractual costs, and distributional costs, fall in the costs of transport and communication and uncertainty of market exchange. This will expand markets, which implies net gains in employment and incomes of the stakeholders.

CONCLUDING REMARKS

Foreign direct investment plays an important role in India's growth dynamics. The examples are software and services industry, two-wheeler, automobile and auto-component industries, electronics and telecommunications. FDI in these industries expanded home and export markets, benefitted consumers, generated employment, increased productivity and wages and generated externalities to local firms. FDI in the retail sector, supported by effective local institutions, can play similar role. The most important dimension of the possible benefits is generation of world class supply chain in India which will decrease transaction, information and production costs of business and expand markets significantly. As long as the foreign players such as Wal-Mart do pricing based on long run average costs, the benefits will accrue to consumers and farmers.

Small and medium farmers are trapped into a vicious circle of poverty because of inefficient input and output markets especially distress sales at the time of harvest owing to underdeveloped agricultural supply chain in India. Since the independence of India, India's government systematically failed in solving this vicious circle. As a matter of fact, it made it worse by bad economic policies.[vii] Facilitating the Indian and foreign players to generate the supply chain infrastructure, farmers can be made to be better off.

The growth dynamics of generation of efficient supply chain are that it increases farmers' surplus and agricultural productivity which releases people from agriculture that have to be absorbed by the manufacturing. The supply chain will also result in the growth of manufacturing (home and export market expansion) which would absorb the people released from agriculture provided that the agricultural workers are imparted with basic literacy skills.

In political economy terms, the entry of foreign retailers affects different stakeholders on the demand and supply side. Improvement in supply chain, especially for food items, across the country benefits low income groups because their major part of the consumption basket is food. Secondly, it will increase surplus to small and medium farmers. Low income consumers on the demand side and small and medium scale farmers on supply side are less cohesively organized in influencing government policies than wholesalers, middlemen, and Indian large retailers. Indian large retailers (such as the newly entrenched interests like the Reliance fresh) may block the entry of foreign players with short-term calculations of their interests. However, they can benefit from externalities arising out of the entry of foreign players if the foreign players invest significant resources in developing the supply chain and improve the know-how of large number of vendors. This took place in the case of the automobile sector. Apart from this, as I observed in my field work, some of the wholesalers and small Kirana stores adopted innovative practices in procuring and selling goods in response to competition from the large retailers which will improve the overall organization of the markets. The main losers would be the middlemen rather than small traders. Small traders retain the advantage of low overhead costs and take advantage of geographic distribution and density of consumers.

Any technological and organizational changes have disruptive effects - some losers in the short run and larger number of gainers in the long run. As the presence of large retailers increases, government tax revenues will increase which can be used to compensate the losers.[viii]

The main role of government is to establish and implement effective and autonomous regulatory institutions- restraining anti-competitive conduct by firms, labor and environmental regulation. The government has to make credible commitments of its policies. Agents react differently if they believe that the reform is only political window-dressing and most of it will be retracted in the face of opposition. This behavior has a significant effect on the success of the reforms and the time it takes for the reform process. If the government acts opportunistically in changing its policies, it sends signal of non-credible commitments which discourages investments especially in durable assets (with high fixed and sunk costs).

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[i] The New York Times reported that the executives of Wal-Mart in Mexico paid bribes to Mexican officials to get fast clearances for its rapid growth (Barstow, 2012).

[ii] The Chinese communist state and Wal-Mart have something in common in governance of monitoring, electronic surveillance to ensure that employees and citizens and customers alike stay within the boundaries of correct behavior.

As mentioned before Wal-Mart suppressed trade unions. There were several cases against Wal-Mart in the U.S. that it monitored employees and denied them regular breaks and for gender discrimination. In China, it faced investigations for corruption and safety. It had to contend with trade unions.

[iii] This does not mean that the government should ban export of agricultural produce which will be detrimental especially to small farmers. The government should establish fair price shops and sell food items at subsidized rates to low income groups and let the rich and the upper-middle class pay international prices.

[iv] Press reports show that some NGOs have taken initiatives to impart these basic skills to high school dropouts and place them in the large retail firms.

[v] In this simple model, both types of surplus extraction, the mark-ups of middlemen and deadweight losses are modeled identically- in that they both behave like a per unit tax. It is possible that they both affect surplus differentially- deadweight loss is a fraction of total produce and rents are like fixed charges.

[vi] This can be extended in terms of bargaining models. One could in principle seed this within the context of a single dominant firm downstream with multiple fringe firms upstream where cooperative and non-cooperative behavior between the fringe affects not only their own surplus but also that of the overall supply chain. This requires an extension of this paper.

[vii] A simple example is banning of cotton exports and causing suicides of farmers because the mill sector is better organized than small farmers in capturing the government policies. Another example is inter-state barriers of agricultural trade which depresses prices in the regions which are productive which means punishing the farmers who are productive.

[viii] It is unlikely that centuries old entrepreneurial dynamism of India's bazaars (French, 2011) will be seriously dented by the advent of large retail firms in India. Change is essential part of any dynamic society. The role of the government is generating effective institutions that manage change which compensate the losers and make it work for the interests of larger sections.