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# Multinational Retailing in China and India: Understanding Resistance, Risks, Rewards

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*Between unqualified success and stark failure of multinational entry into retail sectors of Asia are various forms of resistance. By examining instances of resistance to multinational retailing in Asia, we propose a preliminary framework to understand how the resistance-acceptance dynamics work, and shed light on the risks-rewards for multinational as well as domestic actors. We draw from examples worldwide but focus on selected countries in Asia: primarily India, where multinational retail entry faced resistance in the 21st century; and China, as a contrasting comparison to India. Some references are also made to Japan, where the resistance to multinational retailing goes back to mid-20th century; and South Korea, where Walmart entered but later withdrew; and to selected other countries.*

Failures in multinational retailing have attracted journalistic and some scholarly attention. The cases of Walmart's withdrawal from South Korea and Germany, the failure of the French retailer Carrefour's hypermarket format in USA, and some retail failures in Chile have been discussed in research literature. Multinational retail successes, of course, attract considerable attention. Our focus here is on a state in-between unqualified success and stark failure. We examine instances of resistance to multinational retailing in Asia, and propose a preliminary framework to understand how the resistance-acceptance dynamics work, and to shed light on the risks-rewards for multinational as well as domestic actors. We draw from examples worldwide but focus to some extent on two major nations in Asia: India, where multinational retail entry faced resistance in the 21st century; and China, as a contrasting comparison to India. We draw also selective lessons from Japan, South Korea, Europe, and Latin America.

## Impact of Resistance on Internationalization of Retailing

The academic literature gives some accounts of large retailer failures in foreign markets: withdrawal of Walmart from South Korea (Gandolfi and Stratch, 2009), retailer failures in Chile (Bianchi et al., 2006) or the failure of the hypermarket format in the US (Tordjman, 1988). According to Burt et al. (2003), divestment and failure may arise from four sources : (a) 'because the market does not behave as expected and sales don't meet expectations (*market failure*), (b) because the operational performance does not match that of competitors (*competitive failure*), (c) because domestic competencies do not transfer (*operational failure*), (d) because decisions related to international expansion are linked to changing domestic circumstances such as performance or stakeholder expectations (*business failure*). Except for the business failure, typically attributable to company policy,

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explanations to failure are formulated in terms of "failure to adapt to the local market," "bad locations," "wrong assortment," or "wrong positioning". Additional explanations may also lie in local resistance. Even when a retailer does his best to fully adapt to local practices, habits, assortments, the resistance may strong enough to deter entry or forestall market development.

Economic and political geographers have explored the concept of resistance since 1990 (Sparke, 2008). In marketing, Peñaloza and Price (1993) first explored consumer resistance and subsequently consumer resistance has been studied in terms of consumer behaviors such as boycott or de-marketing (Izberk-Bilgin, 2010). More recently, it has been applied to describe forms of resistance to foreign investment venues, particularly in the retail sector (Coe and Wrigley, 2007, Franz, 2010). In this context, resistance is not merely linked to an imperialist versus a nationalist battle. Rather, resistance occurs as a self-defense strategy and may be defined broadly as the powers at work that impede the development of a foreign retailer in a given country. It may emerge from small retailers or larger scale competitors and may or may not be backed by government policies, party politics, or other institutional factors.

We believe analyzing resistance may provide a rounded understanding of why a retailer should succeed or fail when investing abroad as well as the emergence of various marketing systems in different countries. We follow the path suggested by several academics in various fields to focus more on the host country environment (Wrigley et al., 2005, Coe and Wrigley, 2007, Huang and Sternquist, 2007) as shaping the patterns of international development. We also consider a variety of academic works in institutional economics, geographic economics, business management or business history in order to draw consistent arguments to build a framework to deal with resistance.

We draw on the examples of China and India as two similar countries that differ vastly in the ways resistance is expressed and imposes on foreign retailers or local marketing systems. We conclude with a framework meant at approaching resistance and its consequences for retail transnational corporations (TNCs).

### **Defining Resistance**

Resistance literature originates in Marxist thinking as a way for workers to fight against their exploitation. In general, resistance is viewed as a way for consumers, people, and workers, to counter exploitation. Another view set forward by de Certeau (1984) holds that individuals are not just passive even when there may be some market dominance. People have "ways of operating" where they can use

resources to resist the dominant system. In comparison with the exploitation discourse, the empowerment discourse affords people the agency to challenge and contest the dominant power (Izberk-Bilgin, 2010).

From the point of view of political geographers, resistance is linked to dispossession and the market-led globalization (Sparke, 2008, Hart 2006). Retail Transnational Corporations may be considered abroad (as well as in their home market) as the representatives of the new global capitalism that dispossesses small local operators. Even though nationalism may be present in resistance (Williams, 2007), geographers suggest that resistance should be contextualized. It needs to be articulated and interlinked with historical and geographical elements to understand how and why resistance becomes of consequence.

Far from the pure romance or tragedy of autonomous resistance, the concept is embedded in specific contexts, in various structuring circumstances, and leads to various impacts (Sparke, 2008). Thus, any autonomous form of resistance on the part of local competitors may not systematically be interpreted as a form of resistance. Resistance may rather be qualified differently depending on contexts and the way agency occurs, which enhances operational consequences of resistance. This contextualized approach improves our ability to understand how resistance varies in form and in impact, what its limits are, and how it is structured by context (Sparke, 2008). Katz (2004) contrasts three forms of resistance which overlap and remain dynamic: resilience, reworking, and resistance itself.

### **Making the Resistance Operational: Managerial Issues**

In order to use the construct of resistance as a predictor of success for foreign retail ventures as well as of the evolution of marketing systems, the construct should be clearly outlined. Resistance could be purely oppositional, or feature more blurred characteristics such as reworking or resilience.

In "reworking," there is no questioning of the system itself but local shopkeepers or other local competitors have "ways of operating" and use the system in a way that their situation is improved. In the retail context, reworking would correspond to a situation where, facing domination by foreign retailers and their marketing model, local players rework the forms of retailing in a way that they perform better. Reworking may concern large local groups or small shopkeepers.

Instances of resilience may arise where large retailers, whether local or global, dominate the market,



but shopkeepers manage to maintain their activity and their previous living conditions. The outcome is neither improved nor worsened in terms of dispossession. Resilience may also be viewed differently according to context: in most of Central and South America, small independent shopkeepers still account for 50 percent or more of retail sales in spite of large retailer development. They develop their business either in locations where large retailers have not settled; and indeed, may never settle because it may not be sufficiently profitable. Resilience therefore could stem from the remaining possibility of survival because modern marketing channels cannot satisfy needs of all shoppers efficiently.

The construct of resistance provides an obverse lens on competition than the one we are used to: looking at it with the lens of the Western foreign firm. It also does not focus so much on intra-type or inter-type competition but rather on traditional and modern retailing (Dholakia, Dholakia and Chattopadhyay, 2012) or the old and new, whatever the formats.

**China and India: Resistance and Retail Development**

We now go into our two major cases of China and India to analyze the circumstances that foster resistance. We first recall entry conditions, then exhibit factors that explain the emergence and ways of resistance.

**Entry Conditions in China and India: Local Settings**

China and India account for some of the most attractive destinations for retail FDI as featured by AT Kearney (2011): India ranked 4<sup>th</sup> behind South American countries (Brazil,

**Box 1: Rules related to the gradual opening of the Chinese market to retail FDI from 1992**

Initial Retail FDI Conditions:
<ul style="list-style-type: none"> <li>• The Chinese partner must have a share of more than 51%</li> <li>• Joint venture or cooperation to enter the market</li> <li>• Impossible to operate a wholesale business</li> <li>• Proportion of imported goods not more than 30%</li> </ul>
1992: Store opening limited to Beijing, Shanghai, Tianjin, Guanzhou, Dalian and Qingdao, plus five selected economic zones,
1996: Wholesaling allowed, foreign companies allowed to operate in provincial capital cities and selected other cities,
End of 2004: All restrictions removed whether on locations, type of activity, amount and shares structure.

Uruguay, Chile) and China ranked 6<sup>th</sup> because of the concern that there might be retail overinvestment in China. Both countries feature a large territory, a population of over a billion people with growing middle classes, and vast prospects for retail investment. Entry conditions for retailers in the two countries, however, are very different.

China began opening to retail FDI in 1992, with FDI in that sector being restricted and joint venture made compulsory as is often the case. Progressive opening took place, up to 2004, after China entered the WTO (2001) and agreed to a full opening of the retail sector (see Box 1). Until then, retailing, in terms of selling to the final consumer, was listed among other sectors such as finance, banking and telecommunications, as requiring a joint venture.

Some foreign retailers had established before 2004. Metro (1996) developed the cash and carry format, while Carrefour (starting in 1995) developed supermarkets and hypermarkets through local partnerships. Others arrived later, such as Tesco (2004), Walmart, and the French retailer Auchan. In retrospect, China did not turn out to be as unapproachable as imagined and foreign retailers do not seem to have suffered much from local resistance even though local competition may be quite tough (see Table 1).

**Table 1: China's Biggest Retail Chains**

Multinational Retail Chain	Market share
Walmart (with Trust Mart)	8.0%
Sun Art (RT-Mart and Auchan)	7.8%
Vanguard	6.6%
Bailan Group (including Hualian)	6.0%
Carrefour	5.1%
Tesco	2.1%
Wu-Mart	2.1%
Zhongbai Group	1.9%

Source: Adapted from Kantar WorldPanel, 2011 to take recent takeovers into account

By contrast, investment by retail food TNCs in India started later with first investments in 2002 by the German company Metro, because of former local restriction to retail FDI (see Box 2). Large food retailers have been waiting for several years now for the market to open but local resistance had made it impossible for the government to liberalize the market until late 2012. As a consequence, foreign retailers are restricted to given activities such as wholesaling and sourcing management. The number of stores they opened remains small and is exclusively in the cash and carry business. When foreign firms have



**Box 2: Rules related to the gradual opening of the Indian market to retail FDI**

**Initial Retail FDI Conditions:**

- 51% stake allowed for single brand retailing (Levi's, Benetton), that is products should be sold under the same brand internationally.
- Joint venture mandatory
- 100 percent FDI in cash-and-carry, or wholesale, ventures allowed

**October 2012:** 100 percent foreign FDI allowed in single brand retailing Retailers who own more than 51 percent will be required to source 30 percent of their goods locally from small and medium enterprises,

**November 2011:** Government proposes to open FDI for multi-brand retailers to hold stakes up to 51 percent in retailing activity

**December 2011:** Government withdraws project because of street and political resistance.

**December 2012:** Government allows FDI in multi-brand retail.

entered a partnership with an Indian firm in retailing activities, the foreign company's activity is limited to helping the Indian partner build a supply chain, while stores are developed under Indian brand name and ownership. Powerful resistance in India has kept foreign firms waiting and constrained, while local groups develop to the face of

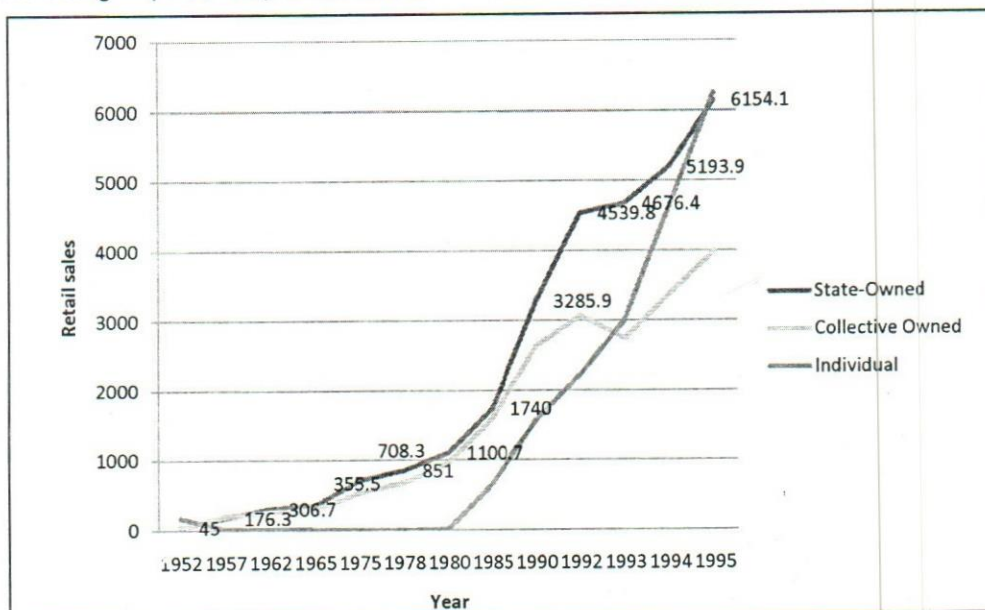
resistance. Globally, modern retail accounts for 15 percent of retail sales, but the figures per category show a wider spread of modern retailing in clothing (23 percent) than for the food category (1 percent)<sup>1</sup> in a country where food and grocery account for 60 percent of household spending. The Indian case shows how much local resistance impacts retailer development. Before we look into the impact of resistance on retailer development, it is worthwhile discussing the factors that explain such resistance.

**Resistance in China and India: Some Patterns**

The reason why resistance is so strong in India is generally linked to the number of shopkeepers and the importance of unorganized trade for the livelihood of the Indian people. India is said to be a service based economy where trade represents 10 percent of GDP and is the second largest source of employment after agriculture. The organized retail sector in the nation of 1.2 billion people is estimated to hit annual sales of \$450 billion by 2015<sup>2</sup>, with nearly 90 percent of the market controlled by small family-run stores. The "kirana" shops – 15 million small retailers in India – provide a living for 40 million people. At the time of first opening, China also had 12 million shopkeepers. Several differences between the two settings account for the strength of resistance in India versus China.

**Importance and Evolution of Small Local Stores**

While India could be qualified as a "Nation of Shopkeepers," it was not quite the case for China. China only liberalized its internal trade market in 1979 with the economic reform.



**Figure 1:** Retail sales by type of ownership, China 1952-1995, 100,000,000 Yuans

<sup>1</sup>India Retail Report, 2009.

<sup>2</sup>Business Monitor International, 2011.



Until then, all trade was state owned. Even in contemporary China, the seemingly independent kirana-like store in China often has a 'silent' co-owner in terms of some arm of the municipal or provincial government. The liberalization as well as economic development led to steep growth in store numbers. State owned stores were either leased or turned over to collective owned companies or to individuals. At the time of first entry of foreign retailers, however, a large part of the trade business was still state owned (see Figure 1), even though individual stores outnumbered state owned stores. If the market share of state-owned retailers dropped from 90.3 percent in 1976 to 40.5 percent in 1983, state owned businesses were still important: out of the some 30 million people working in trade (China government statistics), 27 percent worked in state owned or collective owned retail outlets and 68 percent in recently individually owned outlets (but often with a silent 'state partner'). In 1995, individually owned outlets represented nearly 87 percent of outlet numbers, with close to 13 million<sup>3</sup> compared to nearly 15 million as a total number of stores (Figure 2). Obviously, single individual owned outlets accounted for a very small turnover relatively to single state owned outlets.

Moreover, compared to the situation before 1979, shopkeepers and other local companies were benefitting from the opening and growth of the market, without anybody being dispossessed of previous revenue. There was therefore little ground for resistance, and figures show that local trade has not suffered from foreign direct investment (FDI). Foreign investments in the retail sector therefore did not affect either small retailers or domestic retail chains, except in some positive ways. Since 2004, the number of small outlets rose from 1.9 million to over 2.5 million in China<sup>4</sup>. Employment in the retail and wholesale sectors increased from 28 million to 54 million from 1992 to 2001. Low resistance in China may therefore be linked to the fast pace of growth which 'lifted all boats', to the importance of state ownership at the time of entry, and to the improvement in store assortments and pricing that was brought in by new competitors.

By contrast, in India, there is nothing like state ownership even though there is some regulation. The shop density is the highest in the world with 11 stores per 1000 people, even though high store density is an Asian characteristic (Japan, Taiwan, Hong Kong<sup>5</sup>). Trade is

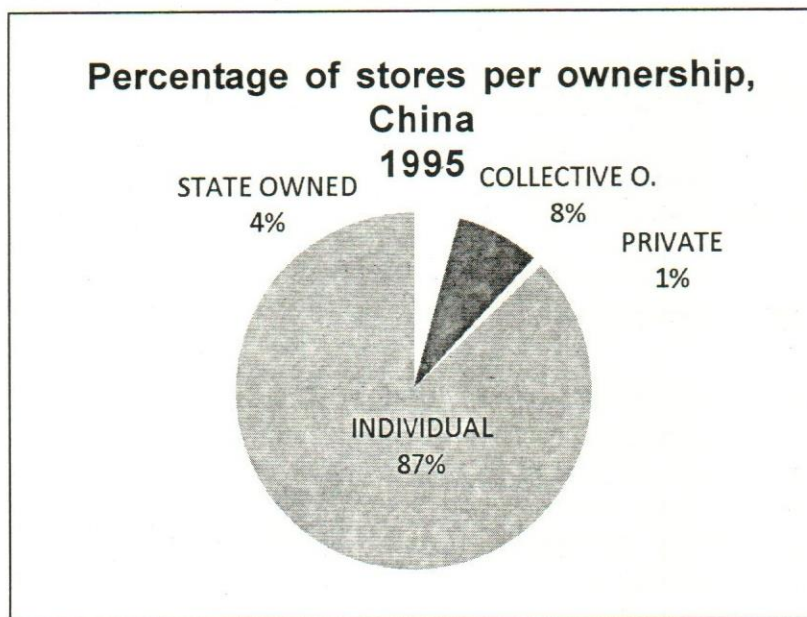


Figure 2: Share of outlets according to ownership at the time of FDI opening, China, government statistics

<sup>3</sup> Data here on individuals may include any type of individual sale (market, store, street vendors).

<sup>4</sup> "Foreign direct investment (FDI) in multi-brand retail trading," Department of Industrial Policy and Promotion Discussion Paper, Government of India (2010), in FDI in retailing and inflation: The case of India by Nandita Dasgupta, Columbia FDI Perspectives, n°52, December 2011.

<sup>5</sup> D. Flath (1990) reports that in 1982, there were 14,53 retail stores for 10,000 people in Japan, compared with 8.29 in the US, 6.27 in the UK, 7.48 in France and 6.7 in Germany. For Hong Kong, see M. Williams (2007).



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characterized by high levels of self-organization, low capital per store, and accounts for 8 percent of national employment and 4 percent of total population. The risk of being dispossessed by the development of modern distribution is therefore much higher than in China, especially as the prospects for growth are not as promising as they were in China because trade is already an important business in India. In most cases indeed, the development of modern retailing leads to a reduction in the number of stores<sup>6</sup>. This has been observed in South Korea (Choi S.C., 2003), Argentina (Gutman, 2002), Chile (Faigenbaum et al 2002), Mexico (Biles, 2006) or Brazil (Farina, 2002). According to a KPMG report (2010), the number of small stores in India increased only at a slow pace between 2001 and 2005 (2 percent), while organized retail was increasing by 18 percent. Even though the change might be lightly felt because of overall market growth<sup>7</sup>, figures show the increased market share of organized retail in the market.

The “anti” retail FDI movement brings together a wide variety of profiles across India, from the farmer to the shopkeeper and the middleman. Indian farmers sell to licensed wholesale “mandi” middlemen, and these wholesale merchants have emerged as a politically powerful class of intermediaries which are directly threatened by the development of modern retailers which typically squeeze out such intermediaries. The overwhelming resistance, when one considers that new formats are concentrated in metropolitan cities and some regions (Singh and Sharma, 2011), is surprising. This is due to the fact that the competition in large cities, and anticipated as changes in metropolitan cities, may impact shopkeepers elsewhere (Dholakia et al., 2012).

These contrasting settings demonstrate that the structure and nature of commerce *before* TNC entry is of importance in evaluating potential resistance. It is not only the size and the growth of the market that make large retailers successful. It is also the fact that they encounter little resistance locally. Even though local operators may be perceived as bearing poor knowledge on quality retailing and hygiene conditions, forms of resistance may be such that the transfer of the foreign format is made very difficult even when adapting to local market conditions. High resistance is more likely to develop when the number of local shopkeepers is high as well as the threat on their revenue.

### **Government Agency**

Government agency may make the difference from the Mexican setting where, with minimal government oversight, Walmart became an uncontested leader. The situations in China and India differ from Mexico and similar situations.

One objective for Chinese players at the time of opening may have been to acquire knowledge on retailing activities as pre-existing experience was poor on building attractive assortments, pricing policies, or managing store surfaces efficiently. Contrary to Poland or other East-European countries, the central government did not privatize retailing fully. Not only did it retain shares in given retail activity, but it also engaged in the grouping of retail activities to build large and powerful local groups. Therefore, indigenous resistance, in the form of reworking, is built-up in China. In 2003, the Shanghai Bailan Group (Lianhua stores), a state owned company, was created from the grouping of former separate state companies. It later acquired other Chinese companies such as Hualian. China Resource Enterprise (CRE), a subsidiary of China Resources Holdings, is the other state entity behind the Chinese food retailer Vanguard. These groups are however very diversified. They are horizontally as well as vertically integrated: they have department stores, manufacturing activities, and other specialty businesses (wine stores, meat distribution for CRE). China Resources Holdings also manages a variety of businesses that are of use to retailing activities, such as banking activities or real estate. Therefore, Chinese companies have all the networks they need to acquire prime locations and develop banking operations with customers or other partners. Foreign retailers cannot rely as much on local authorities (Williams, 2007, Hingley et al., 2009), and do not benefit from such reliable links and support throughout their business.

Built up resistance provides the greatest challenges for foreign firms in China. The systemic support that indigenous retailers benefit from has not prevented foreign companies from developing as yet (See market shares Table 1). Foreign firms depend a lot, however, on government policies and controls as illustrated by recent unrest relating to Carrefour and Walmart. Indeed, these two retailers have been sued for overpricing and cheating on the quality of meat. They were fined and stores were shut down for two weeks. Moreover, they were expected to be exemplary in the application of the new labor laws

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<sup>6</sup><http://www.kpmg.com/CN/en/IssuesAndInsights/ArticlesPublications/Documents/Retailing-Asia-Pacific-200610.pdf>

<sup>7</sup>The KPMG report 2010 shows that India was concerned with a slow down due to the worldwide crisis.



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passed in 2010 especially regarding the introduction of unions in their stores. The several scandals in which foreign retailers have been involved also seem to be linked with the type of management set up by foreign retailers in China, with a lot of autonomy given at the store or regional level where corruption develops (Williams, 2007). Similar unrest took place previously in South Korea and partly led to the withdrawal of major players, Carrefour and Walmart.

Because China is large, while foreign retailers were developing on the east coast, other local competitors have been developing in the West. And each region will be providing a number of local competitors which global players will have to face.

In India, government agency provides some protection in various ways. The existence of some form of retail price maintenance is one form of protection which provides manufacturers with control over their marketing channels. Another protection is provided by preventing foreigners from buying land locally which reduces the power of foreign players to control locations. More importantly, the Indian government restricts the development of foreign formats in multi branded retailing. These restrictions may be strengthened by rules established by local Indian State governments which may restrict surfaces or store development even for Indian players.

While entry in China has been made easy, entry in India is impeded by government taking the people's anger into account. This resembles the Japanese context where the 1978 Large Scale Retail Store Act was passed to account for local shopkeeper resistance (Flath, 1990, Luhman, 1994). Takatoshi and Maruyama (1991) suggest that the legislation has protected small stores and may act as a non-tariff barrier for foreign entry. McGraw and O'Brien (1986) argue that a consequence of the 1978 Japanese law (which has been superseded since) is found in the decreasing number of applications for store openings after it was passed.

In Japan, small family run retail stores accounted for most of the retailing, often handled by elderly couples, and the Japanese government was reluctant to see these people out of work. The stores were said to provide social benefits as they enabled families and old aged people to make a living. According to a KPMG study (2006), even though their number was decreasing, independent small retailers still accounted for 63 percent of the Japanese trade business. The number of supermarkets was increasing but they only accounted for 19 percent of grocery sales and there were no nationwide supermarket

chains. Even with its high income levels, Japan remains a difficult market for retail TNCs.

### **Local Networks**

Local networks have proven to be important, particularly in Asia. We have seen how, in China, government led companies use local networks to face foreign competition, but these networks seem to be mainly government managed. Japan offers a different setting and exhibits forms of resistance due to local networks.

After the opening of the Japanese market in the 1990s, many foreign firms entered and many failed and withdrew: Carrefour (2005), Boots, Sephora, and more recently, Tesco (2011). One explanation for the failures is that the stores are strongly linked to wholesalers and producers. Takatoshi and Maruyama show (1991, p. 7) that wholesaler numbers continued to grow until 1990. The size of the wholesaling activity was rather small with an average of only 9.4 employees per establishment. This shows the density as well as the steadiness of the structure in spite of industrial development. This structure has prevented large retailers from developing direct sourcing from the producer and gaining price advantage. Takatoshi and Maruyama (1991) state that even discount stores and large supermarket chains are unable to purchase directly from manufacturers. Flath and Nariu (2008) refer to this middleman activity as the "complexity of wholesale distribution channels in Japan" and find that there are more steps in the distribution channel in Japan than in other developed countries in consumer as well as industrial goods. The number of steps is statistically linked to the number of stores. Marketing channels in Japan thus frequently include secondary and even tertiary wholesalers. Takatoshi and Maruyama (1991) find that, despite these intermediary layers, the Japanese distribution system is as efficient as any other in terms of global margins and operating costs.

Such established networks are likely to provide strong resistance facing foreign retailers because of their density as well as because of the long term contracts and the vertical agreements all over the market. Resistance stems from all groups at the same time: manufacturers who wish to control marketing channels, wholesalers, and shopkeepers. Similar structures have been pointed to in South Korea even though they were not as strong as in Japan (Kim, 2008). Thus, when Burt et al. (2003) refer to the operational failure of a foreign venture, when domestic competencies do not transfer, this may be due to local



forms of resistance which make it difficult or worthless to adapt. In a sense, reworking in Japan has taken place progressively, growing out of resilience, by the low transformation of progressively closing family small stores, into convenience stores. Independently from the structure analysis, the network analysis reveals ways of resistance which did not appear in Western countries, nor apparently in Central or Southern America. High vertical integration, powerful middlemen and manufacturers, make local resistance stronger.

The case of Japan provides a window on the prospects in the Indian market where middlemen have traditionally been powerful and where caste relations are strong within retail channels because of caste relations within customers and shopkeepers as well as between shopkeepers and their wholesalers. According to Dholakia et al. (2012), in India there is 1 wholesaler for every 17 stores.

### **Towards a Framework for Understanding Multinational Retail Resistance**

Because there is a growing and increasingly accessible knowledge of what happens when large TNC retailers enter a market, resistance is likely to develop in various parts of the world and to make entry more challenging. Bianchi et al. (2006) state the case of Chilean retailers who had been observing their competitors in fellow countries for some time previous to their entry in Chile. This goes to show that local operators are more and more aware of the patterns of retail development and global patterns of resistance may appear. As shown with the example of Japan, in some cases, traditional forms of retailing may also prove efficient in given contexts in which case they should survive eventually after resisting. The Darwinist vision of "adapt-or-die" does not apply in any case and some traditional shopkeepers, even though they may sound archaic in European or American terms, may serve a local purpose and survive, particularly if they benefit from government favorable agency.

### ***Reworking and Resistance in China and India***

The absence of resistance in China – that is, overt oppositional consciousness – does not mean, as suggested by Katz (2004), that there are no other ways of resistance. The process is dynamic and resistance may emerge from resilience or reworking. Following Coe and Wrigley (2007), resistance also refers to local and national retail chains, which suggests that we look at ongoing competition with other players.

### ***Easy Reworking in China***

It is apparent that local Chinese companies have reworked retailing considerably to face foreign competitors. The reworking process seems to have been easy which may be due to a number of reasons some of which have been mentioned such as the growth rate and the general need/want for more attractive assortments. Another reason is probably that state owned companies have prime access to locations which enables them to open the stores they need. Failure when opening will stem only from their lack of performance.

The reworking process by major local retailers (which are still state linked) also led to a number of new arrangements to resist foreign development. Local retailers needed to increase their number of stores rapidly. To do so, they used franchise agreements but also leased surfaces (space) to sets of independent local operators who could sell their products against the payment of a commission to the retailer. This latter type of management is widely used in department stores. It also provides some benefits as it enables local producers to access the market and therefore lowers resistance. These contractual arrangements do not offer the same performance as a wholly owned store. It however enables Chinese retailers to develop their network and work on building a nationwide reputation. Local players also have access to suppliers (vertical integration) and have engaged in building similar supply chains as their foreign counterparts by sourcing from the producer, contracting with producers and building logistics premises.

In the end, local players have adapted to new circumstances. They adopted the modern formats, but still run a wide range of convenience stores and department stores. Because they needed to develop their network of stores and to secure supplies, they engaged in contracting and supply chain management. Thus, they do not overtly question the system much; instead, they use the dominating rules and make them their own. The local competitors reinterpret in their own way leasing agreements, vertical integration, and the development patterns of their counterparts – creating local competitive spaces right under the noses of retail TNCs.

### ***Prospects for India: Overlap of Resistance, Resilience, Reworking***

Resistance in India as we have discussed previously is very oppositional. Meanwhile, some local operators are developing into modern retailing with or without partnerships with foreign firms and the country remains



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hostly closed to retail FDI. The other operators, the small traditional stores, in spite of protest, seem to have ways of resilience as it is perceived they may be efficient regarding the local market. What prospects can, then, be drawn for the retail market in India?

As mentioned previously, in some respects, the outlook of India has similarities with the Japanese or the Korean context. Indeed, government regulation provides time for local actors, large or small, to adapt to foreign entry and manufacturers are involved in retailing, to a greater degree in the case of India. Retailing groups such as Pantaloon Retail (Big Bazaar, Food Bazaar), Trent (Star Bazaar, a subsidiary of Tata Group) are also conglomerates that are horizontally and vertically integrated: they have apparel manufacturing as well as specialty stores or department stores. The Indian groups do not function like Korean Chaebols or Japanese Kereitsu but their size and the array of their activities may provide them with some competitive advantage and at least some ways of resistance: it could be in terms of pricing of particular items, accessing supplies as is the case in China, combining product lines, accessing locations, offering own brands, or even benefiting from a more favorable image by the general public. Dholakia et al. (2012) state that Indian retailers have introduced private brands in many categories and note this happens at early stage and may provide customer loyalty before foreigners are allowed to enter. The development of private brands may slow the development of foreign brands and thus contribute to weaken the links foreign retailers maintain with worldwide manufacturers. Moreover, private brands are bound to satisfy the price conscious Indian consumers.

Another Asian specificity is that local players are involved in India (as well as in all other Asian countries) in various types of formats. Inter-type competition in Europe was and still is mainly managed by different competing retailers. Because the same operators manage the various formats and are involved in manufacturing, the outcome may be a different type of competition than that observed in Europe or the US. The importance of specialty stores to promote clothing or electronics for instance could reduce the potential for hypermarket development.

More importantly, suppressing the intermediaries may prove as difficult as in Japan. Large numbers as well as caste and family relationships within retail establishments and between wholesale and retail

establishments create a network of ties that affect business decisions and retail outlet selection (Dholakia et al., 2012). Resale price maintenance on branded goods may well provide margins to all channel actors and thus contribute to strengthening the vertical network from manufacturer to customer as was the case in Japan. These well-established networks could make it difficult for foreign retailers to suppress or bypass the intermediaries. Some recent events show how retailing is organizing locally to deal with the actual structure of the marketing system. In India, domestic retail chain Reliance Retail, with more than 1,300 outlets across the country, has come out with a model for survival as it plans to trade with the local Kirana shops<sup>8</sup>. By this business-to-business initiative, Reliance will be sourcing products and selling them to the local Kirana shops. In Kerala, Jerry Mathew owns 53 percent stake in Kochi-based LanMark<sup>9</sup> which has grouped 160 independent stores in white goods under the same brand name in order to organize delivery and a common brand image. India also has a long standing experience of cooperative stores which could lead small stores or wholesalers to group into independent cooperatives (in France, such cooperatives have proved quite successful).

Small Indian shopkeepers are probably not as inefficient as imagined. As in other countries, they provide a number of services ranging to neighborhood servicing to credit and banking services.

#### *Impacts of Resistance on the Evolution of the Marketing System*

The marketing system will differ depending on whether there was resistance or not which in turn is to be related to local context. In the case of China or India, due to government agency, foreign retailers are not likely to attain "commanding heights," which will remain in the hands of local players.

In China, where we argue resistance was low, the outcome is a "Central America" type of retail development where modern retail has scaled up rapidly and will eventually account for most of the sales happening through chain stores of supermarkets, hypermarkets, and convenience stores. This was the case in most East European countries and in Russia. In all these countries, the government agency accounts for the existence (Russia, China) or non-existence of large local competitors (Mexico). In terms of market structure, the outcome is also a more concentrated market than in the Indian or Japanese setting.

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<sup>8</sup> FDI In Retail: Will It Boost India's Economy Or Leave Millions Jobless?, *International Business Times*, June, 12, 2012.

<sup>9</sup> <http://india-growth-story.blogspot.fr/2012/06/watch-out-walmart-indias-got-lanmark.html>, June, 24, 2012.



In India, where resistance is strong and partly government (or political party) backed, the outcome seems to result in a slower development of modern retail, especially in the food sector. This will offer small traditional stores and local players time to adapt which should lead to a longer fragmented market. For the wholesaling segment, the paper by Aserkar<sup>10</sup> on the Bharti-Walmart joint venture shows that the wholesaling joint business serves the supermarkets and the kirana stores alike, just like in the Japanese organization. Because the operators are manufacturers, they will probably not want retailers to retain too much power.

### The Dynamics of Resistance

Table 2 suggests some outcomes of resistance instances depending on the level at which the resistance unfolds

(shopkeeper, industry) and whether it is backed or not by the government or by political forces. However, in this table which would need some testing to become more robust, we only have a snapshot of the outcome in the short term. Dynamics of resistance take into account the fact that local players may evolve from resilience to reworking or oppositional resistance depending on ongoing circumstances. Fassio and Koleva (2009) show how the market in Poland, in spite of overwhelming foreign investments at the time of opening of the market, has experienced the development of local convenience chains which have grown on their own capabilities, and may be viewed as an instance of resistance. This shows that like competition, resistance is an ongoing process.

Forecasting the dynamics of resistance requires considerably more research. It is however worthwhile

Table 2: Features of Resistance and Outcomes for Local and Foreign Players

Resistance Type	Conditions	Expressions	Countries	Outcome for local players	Outcome for foreigners
Autonomous indigenous shopkeeper resistance	High shopkeeper numbers, Market structure that favors the gathering of multiple groups (farmers, middlemen, shopkeepers) belonging to multiple political parties Threat on revenue	Protests, demonstrations, vast social movement	India	Slower development of local large players, Reworking of shopkeepers into convenience store chains in the medium run	Partner with a local firm, be discreet, or exit. (Local name for the store, enter in wholesaling rather than retailing.
Government backed/ fostered resistance	No shopkeeper resistance	Legal instability, high level of control, suits.	China, Korea, Russia, Brazil	Reworking of local players in the same system as that imported by foreigners. Large modern retail market share, market shared between local and foreign.	Partner with a local firm, face instability, be exemplary, or discreet (Auchan China)
Industry based resistance	Networked industry, Vertical integration, solidarity	Making it impossible to build a local base, industry inertia to foreign retailer initiatives	Japan, Korea	Reworking of local players and of small stores into inter-linked convenience stores.	Partner with local player or exit
No resistance No government agency	No leading manufacturers Isolated retailers Fast modern retail development Regional local players	None except journalists and academics	Mexico	Leadership of foreign retailers	Enter and develop fast

<sup>10</sup>Rajiv Aserkar, "Reconfiguring distribution channels for efficient supply chains", <http://preet.sesolution.com/ict2010/Full%20Papers/Distribution,%20Transportation,%20and%20Traffic/0064-Rajiv.pdf>



reminding how time is an important variable in the dynamics of entry and resistance. A substantial slice of time before opening a market, such as in India and Korea, provides local players with the means to organize and anticipate. Time also works after entry, even when foreign players achieve a substantial foothold. Many withdrawals by foreign players happen because of the corporate strategy and situation in the home market. The Carrefour withdrawals from Korea, Japan, Mexico or the Czech Republic are linked to the situation of the retailer in France and its need for cash. The characteristics of the Chinese market also show that, in spite of easy entry, local players still have a number of cards they can play that should make the market more and more competitive – and it is possible that some of the lesser-established foreign retail chains could conceivably withdraw.

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*He who is not courageous enough to take risks will accomplish nothing in life*

*- Muhammad Ali*



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

MURALI PATIBANDLA

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*Foreign direct investment (FDI) plays an important role in India's growth dynamics. 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.*

## 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 unorganised 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 labour (Ray et al, 2012). 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 stock up with food grains and dry foods. Fruits and vegetables are sold by pavement stalls and relatively better organised 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 organised retail (\$ 34 billion) in 2011. It also shows that

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by 2020 the size of the organised 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 organised retail in metros and small towns.

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 organised 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 stock 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 15 to 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 organised 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 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. 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.

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



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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. 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 that certain elements of the supply chain could be standardized at the national level and others have to be adapted to regional requirements.

One of the important issues of the supply chain 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 (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.<sup>1</sup> 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.

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 labour and generation of jobs for semi-skilled labour. Most of the jobs that are created in the large retailers such as the Reliance are workers with basic computer and English language skills.<sup>2</sup>

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 unorganised 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 unorganised 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 percent 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 organised retail sector has to adhere to the labour market regulations which means workers will be better off than being employed in the unorganised.

India has been able to develop world class manufacturing industries at the higher end through the entry of TNCs owing to low cost labour with advanced skills. India has to generate employment for the large pool of unskilled and semi-skilled labour. The government policy has to create conditions for development of low-end manufacturing which can absorb semi-skilled labour as these activities will be labour 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 through sub-contracting practices. However, the bargaining power was very much in favor of large firms (Patibandla, 1998). Entry of TNCs led to development of the component industry through transfer of technology and lean production practices which made the component industry internationally competitive and shifted bargaining power in favor of 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. Asymmetric information generated by middle-men especially the wholesalers, makes farmers, the front-end retailers and consumers worse off. 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.

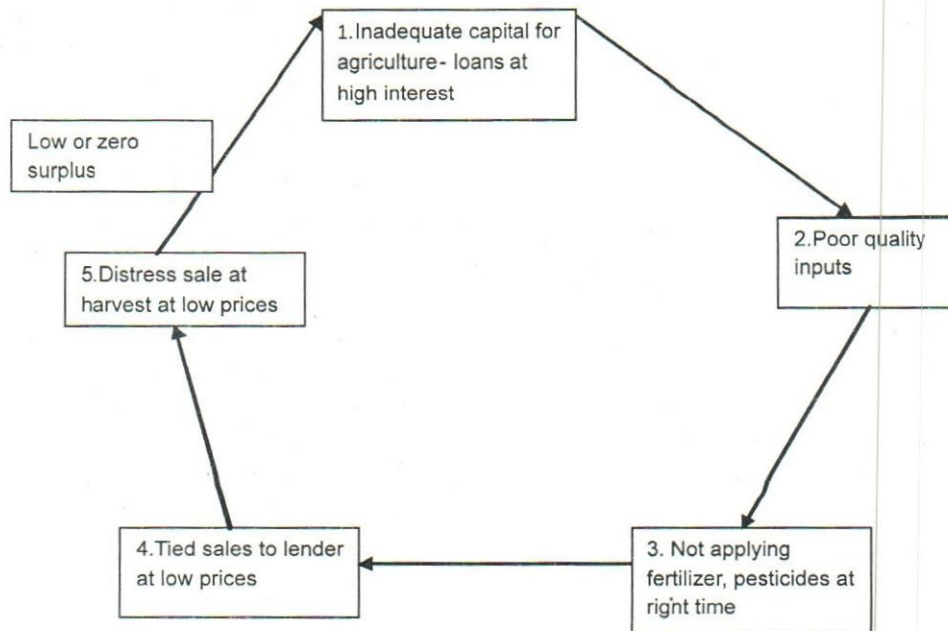
**Suppliers: The Farmers**

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 1. These farmers suffer from at least five losses of income (Patibandla and Sastry, 2004):

1. **Credit:** They pay high interest rates for loans from the unorganised credit markets, sometimes more than 50 per cent.
2. **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.
3. **Poor farming practices:** Farmers are unable to apply fertilizer and pesticides at right time during the right time owing to lack of liquidity.
4. **Tied sales:** Farmers are forced to sell their output to the money lenders at low prices as a part of the loan conditions.
5. **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.

Conventional thinking focused on credit in breaking



Source: Patibandla and Sastry (2004)

Figure 1: Small and medium farmers and poverty trap



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:

$$S = P(Q) Q - (b + mN + dN + Tc) Q \quad (1)$$

$P$  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.<sup>3</sup>

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:

$$S = P(Q) Q - (b + m + d + Tc) Q - aK \quad (2)$$

$K$  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 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 (reduction in distress sales). 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:

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

$q$  is output and  $l$  is credit and input costs.

If they get into a cooperative agreement:

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

$(T - T_v) - u$ , 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/



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her mark-up and average costs of the supply chain through increase in total output,  $(q_i+q_j)$ .<sup>4</sup>

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.<sup>5</sup> 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 organised 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 interim 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. The main role of government is to establish and implement effective and autonomous regulatory institutions- restraining anti-competitive conduct by firms, labour and environmental regulation.

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## Notes

<sup>1</sup>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.

<sup>2</sup>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.

<sup>3</sup>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.

<sup>4</sup>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.

<sup>5</sup>A simple example is banning of cotton exports and causing suicides of farmers because the wholesalers are better organised 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.

*The two most important words I ever wrote were on that first Wal-Mart sign, "Satisfaction Guaranteed". They're still up there, and they have made all the difference.*

**– Sam Walton**



# Prospects of Foreign Direct Investment (FDI) In Retail Sector: An in-depth study from Indian Perspective

G. S. POPLI AND MANISH MADAN

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*Foreign investors are tremendously enthusiastic on charisma in India's Retail Sector. India has been termed as a country with most compelling opportunity for retailers' by AT Kearney's 2005 Global Retail Development Index. The Government cap over FDI in retail, like in many other sectors, has been essentially a personification of the dilemma that confronts policy makers about whether opening up FDI in retail would be a boon or bane for the sector and for the stakeholders involved in it. The Retail Sector of India is a robust pillar of the economy which employs 6% of the Nation's workforce and contributes 13% to GDP. The Global Retail Development Index has also observed that India is the most attractive destination for retail investment for a third consecutive year. This Research Paper helps in developing an insight as to what are the trends in the Indian Retail Industry and to the benefits and drawbacks of FDI in this sector. It will also focus on whether this policy will be beneficial for the Indian Economy as a whole or not.*

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## Overview of Retail Business in India

Retail Growth story in India is not only prodding domestic players to take their businesses to a new orbit but is also attracting foreign players as the latter are left with little or no hope to grow further in their structured home markets. India has been termed as a country with the most compelling opportunity for retailers by A. T. Kearney's 2005 Global Retail Development Index. The increasing disposable income among the Indian middle class, the burgeoning young population is touted as the main reason for such attractive optimism. This infectious positivity about Indian retail scene has also led to an intense lobbying by certain sections for opening foreign direct investment in this sector. Notwithstanding this thumping euphemism, there is another equally strong lobby that has been opposing this idea tooth and nail. India has positioned itself as a promising market for retailers worldwide by virtue of the following strengths.

- Median age
- Growth of ATMs
- Rising disposable income
- Urbanization
- Shopping convenience

## Highlights from the above Information

- Indian Retail Market contributes approximately 1/3rd to India's GDP.
- It is expected to grow @ 8% p.a. to become 416 US dollar by 2010.



**Table 1: Retail Trade in India and South East Asia**

Country	Organised Sector	Unorganised Sector
Malaysia	50	50
Thailand	40	60
Philippines	35	65
Indonesia	25	75
China	20	80
South Korea	15	85
India	2	98

Source: CRISIL.

**Table 2: Share in Retailing in Employment across Different Countries**

Country	Employment (%)
USA	16
Brazil	15
Poland	12
India	8
China	7

Source: Research Paper "FDI in India's Retail Sector More Bad than Good" by Mohan Guru Swami

**Table 3: General Overview of Growth of Retail Market in India**

Year	Retail Market in USD Billion	Retail Area in million Square Foot	Organised Retail market in USD Billion
2006	300	52	12
2007	325	66	19.5
2008	353	90	24.71
2009	386	145	34.47
2010	427	200	49.92
2015	637		

Source: India Retail Biz.Com

- Organized retail is projected to grow @ 40% p.a. reach 50 USB dollar by 2010.
- Retail space to grow from 90 million square feet in 2008 to 200 million square feet in 2010.
- FDI in the range of 25–30 USB dollar is anticipated in the present format.

- From 2000–08, FDI in organized retail was approximately INR 78 crore.

### Retail FDI Regulation in India

The Government of India does not allow FDI in multi-brand retail but permits up to 51 percent in single brand retail and 100 percent in cash and carry wholesale trading. Though there is a ban on FDI in big multi-brand retail stores, but there is no restriction on companies accessing the foreign equity market through the American and Global Depository Receipts. The Government of India opened up FDI in "single brand retailing" in the year 2006. This was done with a primary motive of giving a boost to the organized retailing in India. FDI up to 51 percent is currently permitted in Indian companies engaged in retail trade of single brand products with prior government approval subject to prescribed conditions. As per these conditions, products to be sold should be of "single brand," which are sold under the same brand internationally and these products have to be so branded during manufacturing.

### Statement of the Problem and Need for Study

Retailing is a kind of business activity, which offers products or services in small quantities to ultimate consumers, at a place where consumers prefer to buy. Especially, in countries like India, till date, the unorganized retailers play a predominant role in offering products or services of a different product or service mix at the convenient location, i.e., kirana stores or Apana Bazar, with effective selling and buyer's retention strategies. However, due to the recent changes in the field of retailing and with the entry of big domestic corporations as well as multinational and foreign companies into the field of various retailing ventures, the existing unorganized retailers turn their existing business structure.

The perception of consumers about both organized and unorganized retailers keep on changing. Most of the time, both organized and unorganized retailers are in a dilemma regarding the perception of consumers and hence, due to the unpredictable nature of the customers, both the type of retailers face difficulty in realigning their business strategies. Because of this kind of issue prevailing in today's retail markets, this topic has become very important, which needs in-depth probing.

### Objectives of the Study

- To find out the merits and demerits of FDI in retail sector in India.



- To study the reasons for preference of organized retail outlets by the consumers in the National Capital Region of Delhi.
- To study the reasons for preference of unorganized retail shops by the consumers in the National Capital Region of Delhi.
- To find out the factors influencing the consumers to buy from the organized and unorganized retailers.
- To offer suggestions for organized and unorganized retailers.

### Research Methodology

This has been done in undernoted two parts

1. Part I : Survey of Concerning literature
2. Part II: The Experience Survey of 100 consumers from organized and unorganized sector in the National Capital Region of Delhi.
3. Sampling Unit: Consumers from different age groups, gender, locations, income levels, and educational backgrounds.
4. Sampling Method: Convenience Sampling.
5. Nature of Data: Primary as well as secondary data were collected from respondents and from journals, internet sites and from previous research related to the retailing sector.
6. Method of data collection: Personal interview with respondents.
7. Type of questionnaire: Structured questionnaire with suitable scaling.
8. Type of questions: Open ended, close ended, Likert scale, and multiple choice questions.
9. Pre-testing of questionnaire: It was done among selected (20) respondents on judgment basis and corrections were made in the questionnaire, wherever required.
10. Percentage, weighted average and sign test.

### Part I : FDI—A Boon or Bane

Retailing in India is highly fragmented and unorganized as compared to the retail sector in developed

economies. With close to 12 million retail outlets, the country has one of the highest retail densities worldwide. Retailers include street vendors, supermarkets, department stores, restaurants, hotels, and even two-wheeler and car showrooms. Counter stores, kiosks, street markets, and vendors, where the ownership and management rest with one person are classified as traditional or unorganized retail outlets. They suffer due to the poor shopping experience they offer to their customers and their inability to offer a wide range of products and value-addition due to lack of sourcing capabilities. The modern Indian consumer is seeking more value in terms of improved availability and quality, pleasant shopping environment, financing options, trial rooms for clothing, products, return and exchange policies and competitive prices.

The government cap over FDI in retail, like in many other sectors, has been essentially a personification of the dilemma that confronts policy makers about whether opening up FDI in retail would be a boon or a bane for the sector and for the stake-holders involved in it. There has been a school of thought which has strongly favored further liberalization of FDI aspects in retail and has opposed the idea strongly, listing the fall-outs of doing so. Let us have a look at both these school of thoughts and look at possible advantages and disadvantages of further opening up FDI in retail.

### Major Developments

The major changes in the Indian retail sector during the last 25 years are as follows:

- 1986—The Foot Soldiers: Fast Moving Consumer Goods (FMCG) companies like Brooke Bond, Hindustan Liver etc. took initiative to build robust retail distribution chains in India.
- 1990's Sachet Revolution: Though retail in India had never been so easy, but selling in the rural India was near to impossible. Everything like size packaging, distribution, cost (affordability) had to be different for this segment. FMCG companies rapidly ramped up in mid 1990s with their 'Rural India Plan' in the form of sachet—20 ml./10 ml. plastic pouches.
- 1999 and after wards, The Big Push: The movement was quiet for about a decade, and then the action began to unfold. All the big players whether the Tata, ITC, Piramal



Enterprises, S Kumar's started to look for their role and a slice in the Indian Retail Pie.

- The Mail Bugs: From 2000 to 2004, about 600 malls sprung up. The Retail Sector of India also underwent big changes like Café Coffee Day, which brought specialty coffee blends in full earnest. Shopper's Stop and West Side opened departmental store chains in India.
- Finally, RPG group had gained the first mover advantage and a pre-emptive strategy against global players by opening up India's first hypermarket 'Giant' in Hyderabad.
- More of the same: Urban organized retail was getting crowded. To be different, a few specialty malls cropped up focusing on one segment like jewelry, furniture, luxury brand or even wedding.
- Green Evolution in Retail Sector: Established retailers like Tata, Reliance, Birla, Future Group, after a series of experiments with various retail formats, jumped into retailing of fresh vegetables, fruits, groceries and beverages. These contribute two third of the organized retail market at that time. This was called Green Evolution in Retail Sector.

#### **FDI a Boon: Advantages of FDI in Retail**

Those favoring the idea argue that opening up of FDI in retail world be a shot in the arm for this sector. Some of the direct benefits as a result of FDI in retail are said to be:

1. Best for retail and related activities.
2. Helps in infrastructural growth.
3. Provides employment opportunities.
4. Offers smoothed supply chain.
5. Inflow of technical know-how.
6. Strengths India's position as a sourcing hub.
7. Happy time for customers.

Some other benefits of FDI in retail include.

- It provides franchising opportunity for local entrepreneurs.
- It will stimulate the upcoming industries.

- Increase economic growth by dealing with different international products.
- 1 million (1 crore) employment will be created in three years—UPA government.
- Billion dollars will be invested in Indian market.
- Spread import and export business in different countries.
- Agriculture-related people will get good price of their goods.

No doubt, it appears from the above discussion that there are certain outstanding benefits to the Indian retail and allied sectors in case FDI is allowed with lesser restrictions than at present. Let us now look at some of the concerns regarding allowing FDI in retail.

#### **FDI Boiling Points: Disadvantages**

Along with the belief that FDI in retail with lesser restrictions can do wonders for this sector, there are others who have expressed deep concerns for the same. Let us have a look at some of these concerns:

- (i) Extinction factor of FDI in retail.
- (ii) Price factor
- (iii) Monopoly effects
- (iv) Cut-throat competition
- (v) Rural titanic
- (vi) Effects on real estate prices
- (vii) Some other demerits

Further,

- It will affect 50 million merchants in India
- Profit distribution, investment ratios are not fixed
- Market places are situated too far which increases traveling expenses
- Workers safety and policies are not mentioned clearly
- *Inflation may increase*
- History, India become slave because of FDI in retail sector



## Divided Industry Opinion

The analysis of FDI placed above is enough to indicate that opinion regarding the benefits and demerits of allowing FDI in retail with lesser restrictions seems to be divided. The same feeling is echoed when the researchers draw our attention on what the stalwarts of modern Indian retails have to say:

Mr. Sunil Bharti Mittal (CEO Bharti Group and leading Bharti's Joint venture with Wal-Mart in India) is of opinion that FDI rules are delaying their retail debut in India and hopes that these restrictions would go soon. He discards the concern over the negative impact on smaller stores. He says,

In a country of India's size, you never have one kind of Store, you will have small stores and you will have very large stores, and the customer will be better served in this manner.

He feels,

If there are more reform oriented people in this Government, we will see to it that the FDI restrictions go quicker.

—"Retail debut delayed over FDI Rules,"  
*Times of India*, June 28, 2007

On the other hand, Kishore Biyani, Managing Director, Pantaloon Retail (India) feels its perhaps too early for FDI (Retailing the retail story in India. [http://www.financialexpress.com/old\\_fe\\_full-story.php?content\\_id=101092](http://www.financialexpress.com/old_fe_full-story.php?content_id=101092)). According to this article,

Retail has captured the imagination of nation. It is all over the business newspapers, television channels cannot seem to have enough of it and now even Governments of other countries and multinational players are beginning to notice retail in India. I do not oppose FDI in retailing but am uncomfortable with the haste in opening in this sector. The lure of entering one of the last great emerging markets in retail is proving to be too much for large multinational retailers to resist, since their own markets are either barely growing or shrinking.

There is enough empirical evidence to indicate that most other governments allowed domestic retailers to gain size before opening

up this sector. I believe that Indian Retailer too should be given this opportunity and allowed a couple of years to demonstrate what they are capable of. Every country goes through a demographic boom, when a majority of the population enters the earning and the spending bracket. India is currently going through this and we should utilize it too to grow the country rather than gift-wrap it and allow others to grow.

However, the experts argue that the American Retail market, which is by far a much more matured retail market than India, has some of the well known retail global giants like Wal-Mart, Target, J.C. Penny etc. In spite of this, the mom 'n' pop stores still account for 50 percent of the total American retail trade. Even the Chinese experience shows similar results. In China (where FDI in retail was allowed a long time back), Small vendors and corner stores continue to co-exist with scores of superstores. The fear that the growth in organized retail, as a result of Foreign Direct Investment, would trample and crush the mom 'n' pop stores also seems to be unfounded to an extent.

In the Indian context, let us take a more realistic look at the study done by Indian Council of Research on International Economic Relations, Kirana Stores, especially those on the periphery of big super markets, will be the first ones to bear the brunt of rapid expansion of organized retail. However, these kirana stores have a lead time of 10 years which they can use, with support of the Government, to innovate and be a part of the retail revolution.

According to a report prepared by researchers of International Food Policy Research Institute and Michigan State University,

Structured changes in retail will surely start affecting a large number of small retailers at some stage be it after one or two decades. But experts are of opinion that to ensure that traditional retailers do not become losers in this revolution, innovation was needed to co-opt.



## Part II: Primary Data

Now let us explore the impact of FDI on Indian consumers from the sample of 100 respondents from the organized and unorganized outlets in the National Capital Region of Delhi.

### Analysis and Findings : Sample Description

Table: 4

Demographics	% (Respondents)
AGE	
Less than 30	15
Less than 35	16
36-40	18
41-45	38
Above 45	13
Gender	
Male	44
Female	56
Qualification	
Metric	6
HSC	8
Graduation	36
Post Graduation	31
Professional	15
Others(Specify)	4
Occupation	
Student	18
Government Employees	14
Private Employees	13
Business/Trade	6
Professional	10
Housewife/ (Part time-jobs)	23
Agriculture	12
Others (Specify)	4
Monthly Income	
Less than Rs. 10,000	20
Rs. 10,000-15,000	36
Above Rs. 15,000	44
Family Nature	
Joint	22
Nuclear	78
Location	
Urban	56
Semi-urban	32
Rural	12
Marital Status	
Single	26
Married	74
Family Structure	
Bachelor	18
Newly Married Without children	14
Married with Dependent children	21
Married with Independent Children	28
Married with No children	8
Others (Specify)	11

## Findings on Consumer's Perception

Table 5: Sources of Purchase

Sl.No	Source Purchases	Percentage
1	Unorganized Shops	42
2	Organiszd Outlets	58
	Total	100

Source: Primary data.

Note: We can observe from the above table that 42% of the respondents shopped for essentials at organized retail formats and 58% of the respondents purchased the same from unorganized shops.

Table 6: Purchase Preferences in Unorganized Stores

S. No.	Mode of Unorganized	No. of Respondents	Purchase Percentage
1	Conventional Stores	31	53
2	Neighborhood Stores	18	32
3	Others (Specify)	9	15
	Total	58	

Note: From the analysis of the respondents placed in the above table, we can observe that 53% of the respondents preferred to buy from conventional stores, 32% from neighborhood stores, and 15% preferred to make purchases from others places like street vendors, kirana stores and daily shops, etc.

Table 7: Purchase Preferences in the Organized Stores

S. No.	Mode of Purchase	No. of Respondents	Purchase Percentage
1	Supermarket	28	67
2	Chain Stores	10	24
3	Others (Specify)	4	9
	Total	42	100

Source: Primary data.

Note: Regarding the respondents' preference of buying from different organized retail formats, Table 4 shows that 67% buy from Supermarkets, 24% buy from chain stores, and 9% buy from other formats like departmental stores, etc.

Table 8: Products Purchased from the Unorganized Retailers

S. No.	Items Purchased from	Respondents	Percentage
1	Grocery	18	31
2	Textiles	7	12
3	Vegetables	10	17
4	Food Items	6	10
5	Stationery	7	12
6	Durables	6	10
7	All the above	4	8
	Total	58	100

Source: Primary data.

Note: From the analysis placed above in table 5, we can observe respondents' preference of buying different products from unorganized retail stores. 31% preferred to buy grocery items from unorganized retail stores. 12% purchased Textile items, 17% Vegetables, 10% preferred to buy Food items, 12% bought stationery and related items, 10% bought durable items from unorganized retailers, and 8% of the respondents purchased all the above mentioned items from unorganized retailers.



**Table 9: Products Purchased From Organized Retailers**

S. No.	Items Purchased from	Respondents	Percentage
1	Grocery	10	24
2	Textiles	6	14
3	Stationery	7	17
4	Vegetables	6	14
5	Food Items	9	21
6	Durables	2	5
7	All the above	2	5
	Total	42	100

Source: Primary data

Note: From the Table 6, we can observe that under the categories of organized retail formats, 24% of the respondents preferred to purchase grocery items from organized retail stores, 14 % preferred to buy textile products, 17% purchased Stationery and other items, 14% preferred to buy vegetables and fruits from organized retail stores. 5% preferred to buy durables items, 21% preferred to buy Food items and ready to eat items, and 5% preferred to make all the above mentioned purchases from organized retail formats.

**Table 10: Factors influencing shopping in Unorganized Retailers**

S. No.	Reasons for buying	Respondents	Percentage
1	Good Quality	14	24
2	Affordable Price	9	16
3	Offers	6	10
4	Customer Cars	14	24
5	Attractive Schemes	2	5
6	Home Delivery	5	9
7	Discount & Credit	5	8
8	Others (Specify)	3	4
	Total	58	100 %

Source: Primary data

Note: The above depicts the respondents' opinion for buying from the unorganized retailers. 24% made purchases due to good quality of products. 16% for competitive prices, 10% for offers, 24% for customer care and 14% for attractive schemes and home delivery. 8% of the respondents made purchases due to attractive discounts and credit facility and 4% made purchases for other reasons like convenience of making purchases and due to a good relationship with the store owner etc.

**Table 11: Reasons for Buying from Organized Retailers**

Reasons for buying	No. of Respondents	Percentage
Good Quality	15	35
Affordable Price	4	10
Offers	6	14
Attractive Schemes	4	10
Door Delivery	2	4
Self-Service and Satisfaction	4	10
Discount	3	7
Credit Facility	-	-
Value Added Customer Services	4	10
Total	42	100

Source: Primary data

Note : The above table shows respondents' opinion for buying from organized retailers. 35% of the respondents bought items due to good quality, 10% made purchases due to price factors, 24% (14+10) of the respondents preferred to make the purchase due to the incentive of Attractive schemes and Offers. 4% of the respondents made purchases due to home delivery, 10% attributed their reason for purchase to self-service arrangements and 10 % made their purchases for value added customer services.

**Table 12: Opinion on quality offered by Organized Vs Unorganized Retailers**

Sl. No	Quality of organized Vs. Unorganised Retailers	Organised					Unorganised				
		3	2	1	Total	Rank	3	2	1	Total	Rank
		G	N	B	Weight		G	N	B	Weight	
1	Grocery	26	12	4	2.52	1	29	23	6	2.40	2
2	Vegetables	14	20	8	2.14	4	30	20	8	2.38	3
3	Homemade Appliances	16	19	7	2.21	2	26	22	10	2.28	5
4	Textiles	12	21	9	2.07	6	32	21	5	2.47	1
5	Electrical Items	15	19	8	2.19	3	21	27	10	2.19	7
6	Food Items	13	20	9	2.09	5	24	30	4	2.34	4
7	Stationery & Casual Purchases	11	16	15	1.90	7	28	27	3	2.26	6

Source: Primary data \*\* G - Good N Neutral B - Bad

Note: Regarding the respondents' preference of buying different products from organized and unorganized retailers, under the category of organized retailers, most of the respondents preferred to buy products like grocery, home-made appliances and electrical and electronic appliances. Little preference was given to stationery and casual purchases. Under the category of unorganized retailers, most of the respondents preferred to buy Textiles, vegetables, grocery, stationery and casual purchases and textiles. Least preference was given to Stationery, casual purchase and electrical and electronic items.



**Table 13: Respondents' General Rating of Organized Retailers Vs. Unorganized Retailers**

Sr. No	Rating Given by	Weight	Respondents	Mean Score
1	Very Good	5	22	3.55
2	Good	4	36	
3	Neutral	3	24	
4	Bad	2	11	
5	Very Bad	1	7	
	Total		100	

Source: Primary data

Note: Regarding respondents' rating of organized retail formats, while compared with unorganized retail formats, most of the respondents had a neutral opinion about both types of retailers. So, it shows that respondents still do not have any particular preference for either type of retailer.

**Table 14: Pleasant Shopping Experience**

Sr.No	Types	Percentage	Rank
1	Organised Retailers	72	1
2	Unorganised Retailers	28	2
	Total	100	

Note: It can be inferred from the above table that the shoppers were getting a pleasant shopping experience at both the organized and unorganized retail shops. 72% of the respondents expressed that they got a pleasant shopping experience at organized retail shops, and 28% disclosed that they received the same experience at unorganized retail shops.

**Table 15: Purchases as per Income**

S.No.	Income	Organized (%)	Unorganized (%)
1	Less than Rs 10,000	12	22
2	Rs. 10,000- 15,000	50	46
3	Above Rs. 15,000	38	32
	Total	100	100

Note: The analysis of the responses received shows that majority of the purchases made by respondents, both at organized and unorganized retail stores, depended on their income level. 12% of the respondents, whose income was less than Rs. 10,000, preferred to buy from organized retailers, and at the same time, 22% of the respondents in the same income category preferred to buy from unorganized retailers. 50% of the respondents falling in the income category of Rs. 10,000-15,000 preferred to buy from organized stores and 46% of the respondents belonging to the same category preferred to make purchases from unorganized stores. 38% of the respondents in the income category of above Rs. 15,000 preferred to buy from organized stores, and 32% preferred to buy from unorganized stores.

**Table 16: Purchase and Family Pattern**

Sr. No	Family	Organized	Unorganized
1	Joint	22	28
2	Nuclear	78	72
	Total	100	100

Note: The above table depicts the pattern of purchases made by respondents both at organized and unorganized retail stores based on their family nature. It reveals that under the joint family system, 22% of the respondents preferred to buy from organized stores and 28% preferred to buy from unorganized stores. Under the nuclear family system, 78% of the respondents preferred to buy from organized retail stores, and 72% preferred to make purchases from unorganized retail stores.

**Table 17 : Purchases made based on the nature of location**

S. No.	Location	Organized (%)	Unorganized (%)
1	Urban	58	32
2	Semi-urban	28	48
3	Rural	14	20
	Total	100	100

Note: We can observe from the analysis of respondent's opinion of purchasing from organized and unorganized retail stores, based on their nature of location. It reveals that 58% of the respondents belonging to the urban category preferred to buy from organized retail stores, whereas, 32% preferred to buy from unorganized retail outlets. 28% of the respondents belonging to the semi-urban areas preferred to buy from organized stores, and 48% preferred to buy from unorganized stores. 14% of the respondents residing in rural locations preferred to buy from the organized stores, whereas, 20% preferred to buy from the unorganized retail stores.

### Suggestions : Observed by Researchers

#### For Unorganized Retail Outlets

- The unorganized retailers should give adequate importance to the consumers.
- The behavior of the retail shop owners helps a lot in retaining the consumers.
- They should also focus on the quality of the products.
- The retail outlets should be redesigned to facilitate the consumers.



- The consumers should be given the choice of product selection.
- They should provide some facilities to the consumers.
- They should get feedback from shoppers about the products they offer to them, that will help them to retain the existing buyers.
- If they target consumers with the strategy of "Category Killing" rather than specialized selling, they can increase their sales volume.
- A better product mix and assortment strategy may be reconstituted to target the low income consumers.

#### **For Organized Retail Outlets**

- The organized retailers should take effective steps on consumer complaint management.
- They should focus on retaining the consumers.
- They should work out a comprehensive credit scheme to enhance their sales potential and growth.
- They should respect the Indian ethos while displaying, presenting, advertising or in selling of the products.
- They should try to involve the Indian Small and Medium Enterprises in some way or the other.
- They should develop a comprehensive segmentation strategy to focus on the low income consumer groups with a positioning package of volume cum beneficial base.

#### **Conclusion**

The retailers in organized and unorganized sector or adopting new strategies to enhance their market share. The present study was conducted with the purpose of understanding the changes taking place in the minds of the consumers regarding organized and unorganized retailers. Indian Retail Industry is poised to grow to \$590 billion in 2011–12 which was at the level of \$322 billion in 2006–07. Retail growth in India has to be fuelled in the future to keep the rate of growth intact.

FDI in retail appears inevitable and preferable as this will at least prevent foreign player's entry to the Indian market using other routes. The Government of India has taken some positive steps by easing the norms in 2009. They streamlined the methodology for calculating the total foreign direct investment in Indian companies, under which it has excluded

indirect investment through entities ultimately controlled by Indians from the overall sectoral ceilings. However, in sectors with caps like retail, prior government approval would be required for transferring the ownership or control of an Indian company from resident Indian citizens to non-resident entities.

The basic and fundamental rule is that investment by an Indian company is not counted towards FDI as long as it is owned and controlled by Indian citizens. Otherwise such Indian company's investment will be counted towards FDI. If this policy is to apply retrospectively, companies will need to take a relook at their existing FDI status. However, the Indian government still remains silent on the 51% cap on single brand retail. Due to this, India lost FDI worth \$ 1 billion in retail, recently. IKEA, the iconic \$ 31 billion Scandinavian home products giant was planning to set-up 25 showrooms across India. Ingvar Kamprad in Sweden is owned by a Dutch registered foundation which is being controlled by the renowned Kamprad family. This group operates over 300 stores spread in 40 countries. This retail giant was expecting the Government to ease FDI norms in terms of relaxing the 51% cap in single brand retail. However, prolonged Government's silence has forced IKEA to shelve its Indian plans.

According to a survey by Real Estate Consultant, C.B. Richard Ellis, India currently ranks 39 in the list of Preferred Retail Destinations, slipping several ranks from the fourth position held previously. FDI restrictions are touted as one of the reasons contributing to this fall in preference. Government will have to seriously look at reviewing the FDI norms in retail if it wants this sector to grow in the times to come.

#### **Change is the need of the hour**

FDI in multi brand retail is a very crucial step that is been undertaken to ensure further growth in the Retail Sector of India. This will transform the retail environment of the country in a significant way. As per Standard Chartered Research, "The world has entered in its third super cycle characterized by Industrialization, Urbanization and International trade."

Foreign Direct Investment in Indian Retail will not only prove fruitful for the economy as a whole but it will also integrate this sector with the global retail market. The results of FDI in China are a case for example here. In Chinese market deployment of 100% FDI was done in 2004, today its retail sector is the second largest (in value) in the world. The Inter Ministerial Group appointed by Prime Minister of India observed in a working paper: "It is important



to allow the entry of FDI into this sector in a properly regulated fashion. We must guard against the risk of these new corporations becoming monopolistic and charging high prices."

The Survey Report 2010-11 also suggested that "Permitting FDI in retail in a phased manner could help address the concerns of farmers and consumers. FDI in retail may also help bring in technical knowhow to set up efficient supply chains which could act as models of development. In a true potential scenario, opening up of FDI can increase organized retail market size to \$260 billion by 2020."

Foreign Direct Investment in multi-brand retail will definitely give a boost to the organized retail sector of India, which positively impacts several stakeholders, including producers, workers, employees, farmers, consumers, the Government, the overall economy in real sense. Therefore, it is the right time when firms in India and abroad can enter into the retailing sector of India but with a lot of passion and determination to get the desired results.

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*Don't be afraid to give up the good to go for the great.*

*— John D. Rockefeller*



# Fresh Food Retail Chains and Traditional Fruit and Vegetable Retailers in India

SUKHPAL SINGH AND NARESH SINGLA

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*There are growing concerns about the likely adverse impacts of recently permitted FDI in retail sector including food, on traditional retailers. This article profiles the traditional fruit and vegetable (F&V) retailers in India, their procurement operations, and analyses the impact of modern retail chains on them. It is found that modern retailing of fresh F&Vs has led to decline in the sales of traditional F&V retailers in India reflected in lower footfalls, lower turnover, and net incomes. Although, entire sales decline can not be attributed to the modern retail chains as other factors like reduced household income, high prices, and recession would have also impacted their sales, the article still finds that modern retail chains in well entrenched markets in India are impacting the small retailers adversely. The article highlights the strategies adopted by traditional retailers to tackle the modern retail chain impact and discusses policy measures to protect the interest of the traditional retailers.*

The concept of modern food retailing took birth in India during the late 1990s with the advent of international formats of retailing, especially with the emergence of food retail chains, such as "Food World," "Nilgiris," and "Spencer's." Retailing presently contributes about 10 percent of India's Gross Domestic Product (GDP) and 6–7 percent of employment. But, only 4 percent of retail outlets are larger than 500 sq. ft. and almost all are family owned. The modern retail provides employment to 1.25 percent of the total retail workforce with its share being 4 percent. It is claimed that the productivity per person employed in modern retail is 65–70 percent higher than the productivity per person in traditional retail. Thus, it appears that the modern retail can lead to massive unemployment (Kumar et al., 2008).

In India, the number of street vendors increased after the economic liberalization policy was initiated in 1991. The total number of street vendors in India is estimated around 10 million, which constituted about 2 percent of the population of the metropolis (Bhowmik, 2005). The roadside hawkers contribute Rs 86,000-crore annually to India's GDP (Das, 2006). In Ahmedabad, 30 percent of the vendors had taken to street vending due to the loss of their jobs in the formal sector. 50 percent of laid off textile workers took to street vending in Ahmedabad where around 40 percent of the 80,000 street vendors were women (Bhowmik, 2005). But being unorganized, the loss of income incurred by them due to bribes, confiscation and destruction of goods approximately amounts to Rs 500 crore in Delhi, Rs 900 crore in Mumbai and Rs 80 crore in Ahmedabad (Das, 2006) which was 20 percent of their earnings. However, there is very little evidence of the likely impact of modern fresh food retail chains on the traditional F&V retailers in India.

A survey of literature on the subject revealed that FDI in the modern retailing sector in Mexico accelerated

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the transformation of the sector by reducing the market share, productivity, and margins of traditional retailers. FDI flows in retailing had a negative effect on remuneration since wages in retailing were still far lower than the average wage in the economy (Durand, 2007). In India, in Mumbai, 71 percent of the traditional retailers and all of the F&V retailers reported decline in sales with the emergence of the modern retail. The decline in sales had most frequently impacted larger shops (400–500 sq ft and 300–400 sq ft) and least commonly the size range of 100–200 sq ft. 63 percent of the retailers felt threatened by malls and 16 percent felt threatened with closure (Kalhan, 2007). 39 percent of the fixed F&V sellers and 34 percent F&V hawkers reported decline in turnover. The annualized closure of the traditional retailers due to the competition from modern chain retailers was higher in West (3.2 percent), 1.5 percent each in North and South and the least in the East (0.4 percent); the overall in India being 1.7 percent (Joseph and Soundrarajan, 2009). Another recent survey based study reports 78-89 percent traditional retailers reporting decline in sales, profits and customers across cities in Haryana, Tamil Nadu, Uttar Pradesh, Karnataka and Delhi. They reported 17–29 percent decline

in sales, 16–23 percent in profits and 13–25 percent decline in customers and 49 percent were aware of closure of some traditional outlets (Kalirajan and Singh, 2009).

This article aims at investigating the impacts of modern food retailing on traditional F&V sellers and recommends suitable policy measures to protect and promote the livelihoods of traditional retailers in India. It examines the impact of modern retail chains on the business and livelihoods of traditional F&V retailers in three major cities- Ahmedabad, Bangalore and Chandigarh in 2009. It analyses the business profile of traditional retailers and their perception of the impact as well as makes a quantitative assessment of the impact. It further goes into strategies adopted or proposed by the traditional retailers to tackle the presence of modern retail chains and concludes with discussion of role of policy. The cities of Ahmedabad, Bangalore and Chandigarh each were divided into four zones: North, East, West and South. About 15 traditional F&V retailers were interviewed in each zone making approximately 60 such interviews in each city (Table 1). The four zones largely represented the different segments of the market and coverage of all four types of

Table 1: City-wise traditional F&V retailers surveyed

Location Type of retailer	Ahmedabad	Bangalore	Chandigarh	All
Fixed Shop owner	21(33.3)	17(28.3)	21(34.4)	59 (32.1)
Roadside fixed hawker	19 (30.2)	22 (36.7)	16(26.2)	57 (31)
Home delivery hawker	10 (15.9)	7(11.7)	12(19.7)	29 (15.8)
Roadside -cum-home delivery hawker	13(20.6)	14(23.3)	12(19.7)	39 (21.2)
All	63(100)	60(100)	61 (100)	184 (100)

Note: Figures in brackets are percent share in total.

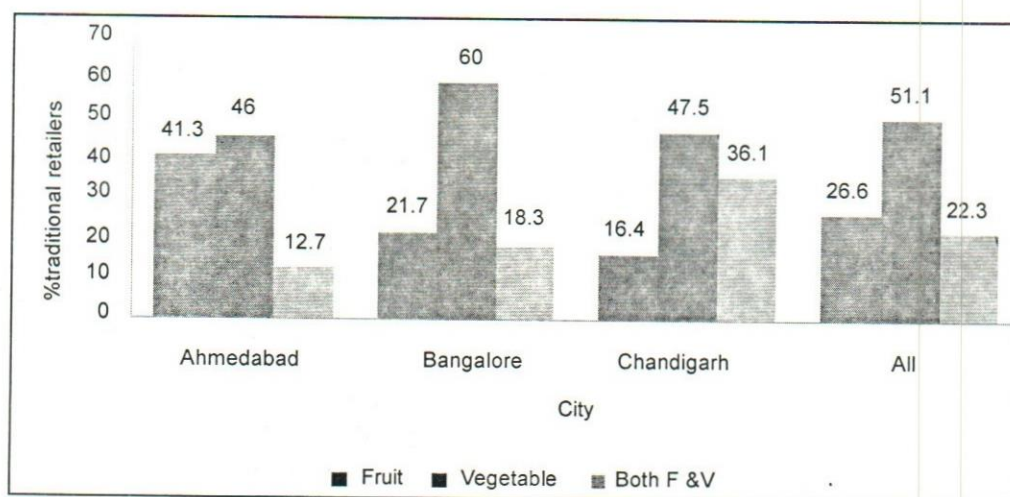


Figure 1: City-wise distribution of traditional retailers by product sold



retailers—fixed F&V shops, roadside fixed retailers, roadside-cum-home delivery retailers and only home delivery hawkers ensured that all modes of selling to different segments of the buyers are covered. Section 2 profiles the business of traditional F&V retailers, and section 3 examines their procurement strategies. Section 4 examines the impact followed by section 5 which explores the strategies to tackle the impact. Section 6 provides a summary and concludes with policy suggestions for protection of traditional retailer interest.

### Traditional retailer profile

A majority of the traditional F&V retailers interviewed across the three cities were vegetable sellers (51 percent) followed by fruit sellers (27 percent) and fruit-cum-vegetable sellers (22 percent) (Figure 1). 41 percent of the traditional retailers in Ahmedabad were only fruit sellers compared to only 22 percent in Bangalore and 16 percent in Chandigarh.

However, in Bangalore, 60 percent traditional retailers sold only vegetables compared to 46–48 percent each in Ahmedabad and Chandigarh. However, both F&V selling traditional retailers were higher in Chandigarh (36 percent) compared to only 13 percent in Ahmedabad and 18 percent in Bangalore. Shop owners were mainly found to sell either both F&Vs or vegetables only. Only fruit sellers were rare. All hawker categories, except those in Ahmedabad, dominantly sold vegetables only (Table 2).

Most of the retailers interviewed were owners of the F&V outlets. The average age of the traditional retailers varied between 36 and 39 years across cities. 82–89 percent of the traditional F&V retailers had owned outlets/carts in Ahmedabad and Chandigarh each compared to only 43 percent in Bangalore, where about 32 percent had rented outlets/carts and the rest (25 percent) were footpath sellers. Reliance Fresh (RF) and Aditya Birla Retail Limited (ABRL)'s More in that order were the major nearby modern retail outlets to traditional retailers in Ahmedabad and

Table 2: City-wise distribution of traditional retailers by product sold (percent)

Type of retailer	Location	Fruit	Vegetable	Both F&V
Fixed shop owner	Ahmedabad	23.8	47.6	28.6
	Bangalore	11.8	41.2	47.1
	Chandigarh	9.5	28.6	61.9
	All	15.3	39	45.8
Roadside fixed hawker	Ahmedabad	68.4	31.6	-
	Bangalore	18.2	72.7	9.1
	Chandigarh	31.3	43.8	25
	All	38.6	50.9	10.5
Home delivery hawker	Ahmedabad	20	80	-
	Bangalore	14.3	85.7	-
	Chandigarh	-	75	25
	All	10.3	79.3	10.3
Roadside -cum-home delivery hawker	Ahmedabad	46.2	38.5	15.4
	Bangalore	42.9	50	7.1
	Chandigarh	25	58	16.7
	All	38.5	48.7	12.8
All	Ahmedabad	41.3	46	12.7
	Bangalore	21.7	60	18.3
	Chandigarh	16.4	47.5	36.1
	All	26.6	51.1	22.3



Table 3: City-wise distribution of traditional retailers by presence of nearest chain outlet (percentage)

City	Type of retailer > Chain outlet	Shop owner	Roadside fixed hawker	Home delivery hawker	Roadside fixed-cum-home delivery hawker	All
Ahmedabad	Reliance Fresh	38.1	57.9	40	53.8	47.6
	More	42.9	21.1	30	46.2	34.9
	6Ten	4.8	10.5	-	-	4.8
	Star Bazaar	4.8	10.5	30	-	9.5
	Big Bazaar	9.5	-	-	-	3.2
Bangalore	Reliance Fresh	47.1	50	28.6	42.9	45
	More	11.8	18.2	28.6	21.4	18.3
	Food World	17.6	9.1	-	-	8.3
	Safal	-	-	-	21.4	5.0
	Heritage@ fresh	-	-	-	14.3	3.3
	Nilgiris	11.8	-	-	-	3.3
	Spencer's	5.9	4.5	-	-	3.3
	Unable to name	5.9	18.2	42.9	-	13.3
Chandigarh	Reliance Fresh	38.1	12.5	-	25	21.3
	More	9.5	25	50	33.3	26.2
	Choupal Fresh	23.8	18.8	8.3	-	14.8
	Spencer's	28.6	25	-	-	16.4
	Big Bazaar	-	18.8	41.7	41.7	21.3
All	Reliance Fresh	40.7	42.1	20.7	41.0	38.0
	More	22.0	21.1	37.9	33.3	26.6
	Others	37.3	36.8	41.4	25.6	35.3

Note: Others include all other responses of the traditional retailers except for Reliance Fresh and More.

Bangalore. However, in Chandigarh, More followed by RF and Big Bazaar respectively were the nearby modern retail outlets.

Thus, RF and More emerged as nearby modern retail outlets for 65 percent of traditional F&V retailers across all locations (Table 3). In general, Bangalore had presence of many more retail chains (as many as seven with most dedicated to F&V) than that in Ahmedabad or Chandigarh (only five in each case which also included Big Bazaar and Star Bazaar which are not exclusively focused on F&V). The traditional retailers in Ahmedabad were found to sell F&Vs closer to modern retail outlets (0.5 km) compared to those in Bangalore and Chandigarh (0.7 and one km. respectively) which pointed to lower density of modern retail outlets in Chandigarh. The home delivery hawkers

across all locations preferred to operate the farthest from the modern retail outlets (1 km.) compared to the distance of 0.5 km in case of shop owners and 0.8 km each in case of roadside and roadside-cum-home delivery hawkers. Further, traditional retailers in Bangalore perceived that modern retailing in F&Vs was present for the last two years. However, those in Chandigarh and Ahmedabad felt its presence for the last 1.6 years only (Table 4). About 32 percent of traditional F&V retailers across all locations were illiterate. The illiteracy was the lowest among fixed shop owners (5–23 percent) and 39–44 percent across hawker categories across cities. However, 31 percent of the roadside-cum-home delivery hawkers in Ahmedabad were senior secondary degree holders compared to only 7 percent in Bangalore and none in Chandigarh.



Table 4: City-wise distribution of traditional retailers by average distance from nearest modern retail outlet and average years of presence of chain outlet

City	Type of retailer> Chain outlet	Fixed Shop owner	Roadside fixed hawker	Home delivery hawker	Roadside fixed-cum- home delivery hawker	All
Distance from nearby modern outlet (in kms.)	Ahmedabad	0.40	0.57	0.58	0.43	0.48
	Bangalore	0.40	0.70	1.30	0.79	0.69
	Chandigarh	0.82	1.15	1.21	1.16	1.11
	All	0.55	0.78	1.01	0.78	0.76
No. of years of presence of the modern outlet	Ahmedabad	1.40	1.87	1.70	1.23	1.56
	Bangalore	1.40	1.90	2.20	2.50	2.00
	Chandigarh	1.35	1.61	1.90	1.27	1.59
	All	1.38	1.81	1.90	1.70	1.71

Table 5: City-wise distribution of traditional retailers by their location (percent)

Location Type of retailer	Type of retailer> Chain outlet	Shop owner	Roadside fixed hawker	Home delivery hawker	Roadside fixed- cum-home delivery hawker	All
Small Mall	Ahmedabad	4.8	-	-	-	1.6
	Bangalore	35.3	9.1	28.6	-	16.7
	Chandigarh	14.3	-	8.3	-	6.6
	All	16.9	3.5	10.3	-	8.2
Big Mall	Ahmedabad	4.8	-	-	-	1.6
	Bangalore	29.4	13.6	-	28.6	20.0
	Chandigarh	14.3	6.3	-	-	6.6
	All	15.3	7.0	-	10.3	9.2
Local neighborhood/ colony marke	Ahmedabad	19.0	10.5	50.0	15.4	20.6
	Bangalore	11.8	18.2	71.4	21.4	23.3
	Chandigarh	38.1	37.5	25.0	66.7	41.0
	All	23.7	21.1	44.8	33.3	28.3
Market popular for special product	Ahmedabad	23.8	-	20.0	-	11.1
	Bangalore	5.9	-	-	7.1	3.3
	Chandigarh	19.0	31.3	16.7	16.7	21.3
	All	16.9	8.8	13.8	7.7	12.0
Stand-alone shops	Ahmedabad	47.6	-	-	-	15.9
	Bangalore	17.6	-	-	-	5.0
	Chandigarh	14.3	12.5	-	-	8.2
	All	27.1	3.5	-	-	9.8
Roadside/ street hawkers	Ahmedabad	-	89.5	30.0	84.6	49.2
	Bangalore	-	59.1	-	42.9	31.7
	Chandigarh	-	12.5	50.0	16.7	16.4
	All	-	56.1	31.0	48.7	32.6



Most of the traditional F&V retailers were found to sell away from the malls as hawkers, in local colony markets and markets popular for special products while some also had stand alone shops across all locations (table 5). But, 1/3<sup>rd</sup> of them all were street hawkers with such proportion being the highest in Ahmedabad (49 percent) and the least in Chandigarh (16 percent).

The average size of the shop was around 105 sq. ft. among fixed shop owners in Ahmedabad and Chandigarh compared with 89 sq. ft. in Bangalore. This is also corroborated by Joseph and Soundarrajan (2009) which found the average size of the fixed F&V shop to be 119 sq. ft. More than 66 percent of traditional retailers across all cities started F&V business of their own, 29 percent acquired it from their ancestors while only 5 percent worked in acquired business from relatives.

Size of cart varied between 24 and 29 sq. ft. in Ahmedabad and Chandigarh. However, in Bangalore, size of cart/floor was between 24 and 40 sq. ft. About 41 percent traditional retailers in Ahmedabad were in F&V business for more than 20 years while about 22 percent established it in last 10 and 19 years and 22 percent started in the last 5 years only. However, in Bangalore 42 percent retailers were present in this business for the last 5 years only while 27 percent established it for more than 20 years. In Chandigarh, 38 percent reported their presence in F&V

for 10–19 years, while 31 percent between 5 and 9 years (Table 6) More than 56 percent of shop owners and 54 percent roadside hawkers across all locations established F&V business for more than 10 years. 41 percent home delivery hawkers were in business for last 5 years while 35 percent established during last 5-9 years. Among roadside-cum-home delivery retailers, 36 percent ran F&V business for more than 20 years, while another 33 percent started to sell F&Vs in last 5 years. Thus, among all traditional retailers across all cities, 29 percent were present in F&V business for last 5 years only, 26 percent each for 10-19 years and > 20 years while only 20 percent for 5-9 years (table 6).

The quantity of F&Vs bought for sale was the highest in Chandigarh (Rs. 3669) followed by that in Ahmedabad (Rs. 2778) and Bangalore (Rs. 2550). Across traditional retailer categories, amount of F&V bought was higher in case of shop owners (Rs. 4346) followed by roadside fixed hawkers (Rs. 2626), roadside-cum-home delivery hawkers (Rs. 2313) and only home delivery hawkers (Rs. 1941). However, the proportion of F&Vs left unsold at the end of the day was the highest in Bangalore (41 percent) followed by Chandigarh (29 percent) and Ahmedabad (26 percent); the overall among all traditional retailers being 32 percent. The proportion of left over produce among retailers was higher in roadside-cum-home delivery hawkers (38 percent)

Table 6: City-wise distribution of traditional retailers by years in business (percentage)

Years in business City	Type of retailer>	Fixed shop	Road side fixed	Home delivery	Road side fixed-cum-home delivery	All
<5	Ahmedabad	19.0	15.8	70	-	22.2
	Bangalore	58.8	31.8	28.6	42.9	41.7
	Chandigarh	4.8	18.8	25.0	58.3	23.0
	All	25.4	22.8	41.4	33.3	28.8
5-9	Ahmedabad	4.8	21.1	20	15.4	14.3
	Bangalore	5.9	22.7	28.6	7.1	15.0
	Chandigarh	42.9	25.0	50.0	-	31.1
	All	18.6	22.8	34.5	7.7	20.1
10-19	Ahmedabad	28.6	21.1	10	23.1	22.2
	Bangalore	11.8	13.6	28.6	21.4	16.7
	Chandigarh	42.9	50.0	25.0	25.0	37.7
	All	28.8	26.3	20.7	23.1	25.5
20+	Ahmedabad	47.6	42.1	-	61.5	41.3
	Bangalore	23.5	31.8	14.3	28.6	26.7
	Chandigarh	9.5	6.3	-	16.7	8.2
	All	27.1	28.1	3.4	35.9	25.5



and shop owners (35 percent), compared with those of roadside hawkers (28 percent) and the least in home delivery hawkers (14 percent). The daily wastage of F&Vs was around 17 percent and did not vary much except that fixed

shops and home delivery hawkers had somewhat lower wastage (Table 7).

The proportion of the credit sales was higher in Ahmedabad (70 percent) followed by Bangalore (50 percent) and Chandigarh (33 percent); the average across

Table 7: City-wise distribution of traditional retailers F&Vs handled daily

Parameter	Type of retailer> City	Fixed shop	Roadside fixed	Home delivery	Roadside fixed-cum-home delivery	All
Produce bought for sale/day (Rs.)	Ahmedabad	4133.3	2057.9	1780	2407.7	2777.8
	Bangalore	3359.4	2403.4	1357.1	2450	2549.6
	Chandigarh	5357.1	3606.2	2416.7	2050	3668.8
	All	4345.9	2625.9	1941.4	2312.8	2998.8
% of daily unsold produce	Ahmedabad	20.5	31.6	9.8	42.8	26.5
	Bangalore	37	38.7	24.7	53.2	41.1
	Chandigarh	44.1	15.8	12.8	12.2	29.2
	All	34.5	28	13.8	38.4	31.7
Daily wastage (%)	Ahmedabad	15.5	16.1	8	15.5	14.5
	Bangalore	17.1	20.7	10.3	15.8	17.4
	Chandigarh	15.2	18	20	21.5	18.1
	All	15.9	18.4	13.5	17.5	16.6

Table 8: City-wise distribution of traditional outlets by credit sales

Credit Sale	Type of retailer> City	Fixed shop	Roadside fixed	Home delivery	Roadside fixed-cum-home delivery	All
%age outlets	Ahmedabad	76.2	57.9	100	61.5	69.8
	Bangalore	58.8	36.4	57.1	57.1	50
	Chandigarh	61.9	6.25	33.3	16.7	32.8
	All	66.1	35.1	62.0	46.1	51.1
%age of customers	Ahmedabad	10.1	5.5	8	5.1	7.3
	Bangalore	30	10	8.3	13	14.7
	Chandigarh	12.7	4	10	15	10.3
	All	16.8	6.8	8.9	11	10.7
Credit Sale	Type of retailer> City	Fixed shop	Roadside fixed	Home delivery	Roadside fixed-cum-home delivery	All
%age outlets	Ahmedabad	76.2	57.9	100	61.5	69.8
	Bangalore	58.8	36.4	57.1	57.1	50
	Chandigarh	61.9	6.25	33.3	16.7	32.8
	All	66.1	35.1	62.0	46.1	51.1
%age of customers	Ahmedabad	10.1	5.5	8	5.1	7.3
	Bangalore	30	10	8.3	13	14.7
	Chandigarh	12.7	4	10	15	10.3
	All	16.8	6.8	8.9	11	10.7



all cities being 51 percent. Among traditional retailers, 62-66 percent each of shop owners and home delivery hawkers, 46 percent roadside-cum-home delivery hawkers, and 35 percent roadside/fixed hawkers were found to sell on credit. 15 percent of customers in Bangalore were found to purchase F&Vs on credit from the traditional retailers compared to only 10 percent in Chandigarh and 7 percent in Ahmedabad. Further, 30 percent of the customers in case of fixed shop owners in Bangalore bought F&Vs on credit compared to only 10-13 percent each in Ahmedabad and Chandigarh. More of fixed shops and home delivery hawkers (>60 percent) tended to sell on credit than any other category (Table 8).

### Procurement Channels of Traditional Retailers

The proportion of traditional retailers buying directly from wholesale *mandi* and quantity of F&Vs procured through *mandi* wholesalers was higher in Bangalore followed by Ahmedabad and Chandigarh. However, procurement through commission agents was higher in Chandigarh compared to that in Bangalore and Ahmedabad. In Bangalore, only hawkers bought through commission agents. In Ahmedabad, 35 percent of traditional retailers also procured from the semi-wholesalers located in Kalupur

*mandi*. About 8 percent of the traditional retailers in Bangalore and 2-3 percent each of fixed shop retailers in Ahmedabad and Chandigarh also procured some proportion of F&Vs from the farmers directly (4 percent of total retailers). Some of the traditional retailers in Bangalore (6 percent) also purchased some quantity of F&Vs from Safal wholesale market. In Chandigarh, 38 percent of traditional retailers also sourced F&Vs from the traders outside the *mandi*. Thus, *mandi* wholesalers and commissions agents were the major procurement sources for all types of traditional retailers across all locations (table 9). In Bangalore, 82 percent bought from *mandi* directly and in Ahmedabad, from *mandi* and semi-wholesalers and in Chandigarh, it was largely through commission agents in *mandi*. On an average, traditional retailers bought about 90 kgs. of F&V

The traditional retailers across all locations purchased F&Vs mainly through open auctions and price negotiations while a few bought through secret bidding. In general, the tendency to buy F&Vs in open auction was higher among the fixed shop owners as compared to other categories. In sharp contrast to this, 79% of roadside-cum-home delivery hawkers procured F&Vs through open auction in Bangalore compared with only 31% in Ahmedabad and 42% in Chandigarh. Furthermore, 59%

Table 9: City-wise distribution of traditional retailers by channel-wise F&V procured (in Kg./day)

Procurement channel	Type of retailer > City	Fixed shop	Roadside fixed	Home delivery	Roadside fixed-cum-home delivery	All
<i>Mandi</i> wholesaler	Ahmedabad	45.3 (57)	55.3 (57.9)	50 (70)	69.2 (69.2)	54 (61.8)
	Bangalore	77.9 (82.3)	66 (72.7)	100 (100)	80.4 (85.7)	76.7 (81.7)
	Chandigarh	27.4 (42.8)	25 (31.2)	33.3(33.3)	33.3 (41.7)	29.1 (37.7)
	All	48.3 (59.2)	50.9 (56.1)	55.2 (62.1)	62.2 (66.7)	53.1 (60.3)
Local <i>mandi</i> through commission agent	Ahmedabad	26.2 (28.6)	5.3 (5.3)	20 (20)	-	13.5 (14.3)
	Bangalore	-	11.4 (13.6)	-	8.9 (14.3)	6.3 (8.3)
	Chandigarh	51.2 (71.4)	59.4 (68.7)	54.2 (66.7)	45.8 (75.0)	52.9 (70.5)
	All	27.5 (35.6)	38.7 (42.2)	29.3 (34.5)	17.3 (28.2)	24.2 (31)
Farmer	Ahmedabad	2.9 (4.8)	-	-	-	1.0 (1.6)
	Bangalore	11.8 (11.8)	9.1 (9.1)	-	7.1 (7.1)	8.3 (8.3)
	Chandigarh	2.4 (4.8)	-	-	-	0.8 (1.6)
	All	5.3 (6.8)	3.5 (3.5)	-	2.5 (2.5)	3.3 (3.8)
Semi-wholesaler Trader outside <i>mandi</i>	Ahmedabad	25.7 (33.3)	39.5 (42.1)	30 (30)	30.8 (30.8)	31.6 (34.9)
	Bangalore	1.5 (5.9)	9.1 (13.6)	-	-	3.8 (6.7)
	Chandigarh	19 (47.6)	15.6 (31.2)	12.5(25.0)	20.8 (41.7)	17.2 (37.7)
	All	7.2 (18.6)	7.9 (14)	5.2 (10.3)	6.4 (12.8)	6.9 (14.7)
Safal wholesale market	Bangalore	8.8 (11.8)	4.5 (4.5)	-	3.6 (7.1)	5.0 (6.7)

Note: Figures in brackets indicate the percentage of each type of retailer using each channel. Since some of the retailers used multiple channels to procure fruits and vegetables, their percentage would add up to >100.



of the traditional retailers in Chandigarh bought F&Vs through price negotiations with wholesalers/commission's agents in *mandi* as compared with 33-35% each in Ahmedabad and Bangalore. In Ahmedabad and Bangalore,

a significant proportion of retailers (27% and 17%) also purchased F&Vs through secret bidding process which was found to be totally absent in Chandigarh market (Table 10).

Table 10: City-wise distribution of retail outlets by mode of purchase of F&Vs ( percent)

Mode of purchase	Type of retailer outside	Fixed shop	Roadside fixed	Home delivery	Roadside fixed-cum-home delivery	All
Open auction	Ahmedabad	43	37	40	31	38
	Bangalore	47	36	43	79	50
	Chandigarh	48	38	33	42	41
	All	46	37	38	51	43
Price negotiation	Ahmedabad	43	32	40	23	35
	Bangalore	35	41	43	14	33
	Chandigarh	52	63	67	58	59
	All	44	44	52	31	42
Secret bidding	Ahmedabad	14	32	20	46	27
	Bangalore	18	23	14	7	17
	All	10	19	10	18	15

Table 11: City-wise distribution of traditional retail outlets by payment terms in *mandi* (%)

Payment terms	Type of retail outlet>	Fixed shop	Roadside fixed	Home delivery	Roadside fixed-cum-home delivery	All
Cash	Ahmedabad	43	79	80	54	62
	Bangalore	47	50	71	71	57
	Chandigarh	38	75	67	58	57
	All	42	67	72	62	59
Credit	Ahmedabad	10	11	-	15	10
	Bangalore	29	14	29	14	20
	Chandigarh	29	13	17	8	18
	All	22	12	14	13	16
Both cash and credit	Ahmedabad	48	11	20	31	29
	Bangalore	24	36	-	14	23
	Chandigarh	33	13	17	33	25
	All	36	21	14	26	26
Average commission paid (%)	Ahmedabad	7.5	8	8.5	8.5	8
	Bangalore	8	8.5	8.5	8.25	8.3
	Chandigarh	8	8.5	8.5	9	8.4
	All	7.8	8.3	8.5	8.6	8.2
Procurement cost (Rs./qtl.)	Ahmedabad	35	35.9	31.8	33.1	34.3
	Bangalore	75.7	80	60	62	72.2
	Chandigarh	33	50	30	42	39
	All	46	56.9	37.9	46.2	48.2



About 59 percent of traditional retailers paid in cash, 26 percent in both cash and credit while only 16 percent bought on credit. The proportion of traditional retailers buying in cash was higher in non-fixed shop categories (62-72 percent) as compared to shop owners (42 percent) across all the cities especially in Ahmedabad. However, credit and cash-cum-credit purchases were higher in case of fixed shops compared to that in other categories.

Hawkers also paid higher commission in *mandi* as compared to that by the fixed shop owners, the average being 8.2%. The procurement cost among home delivery hawkers was the lowest as compared to the other categories and fixed shops. It was mainly due to the fact that they used their carts to buy F&Vs instead of hiring any auto-rickshaw/

four wheeler. The procurement cost in Bangalore was the highest (Rs. 72/qtl.) as compared to that in Ahmedabad and Chandigarh (Rs. 34-39/qtl.) (Table 11).

### Retail Chain Impact on Traditional Retailers

The proportion of regular customers visiting the traditional retail outlets was about 22 percent each in Ahmedabad and Bangalore compared to only 13 percent in Chandigarh. However, the percentage decline in regular customers due to the presence of modern retail outlets was higher in Ahmedabad (23 percent) compared with 19 percent in Bangalore and only 8 percent in Chandigarh (Fig. 2). The percent decline across traditional retailers was higher in roadside-cum-home delivery hawkers (27 percent) and

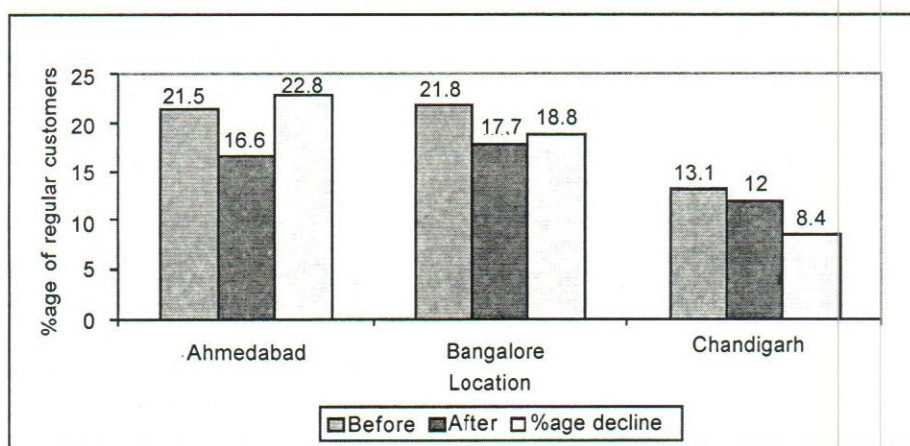


Fig. 2: City-wise of percentage of regular customers at traditional outlets before and after modern retail chain entry and percentage decline

Table 12: City and category wise percent decline in regular customers due to chain outlets

Type of retailer	City>	Ahmedabad	Bangalore	Chandigarh	All
Fixed shop	Before	32.3	25.7	25.5	27.8
	After	29.3	23.1	23.1	25.2
	percentage decline	9.3	10.1	9.4	9.6
Roadside fixed	Before	22.1	18.7	3.5	14.8
	After	14.0	15.0	3.2	10.7
	percentage decline	36.7	19.8	8.6	27.3
Home delivery	Before	8.8	19.3	10.8	13.0
	After	7.3	16.2	10.8	11.4
	percentage decline	17.0	16.1	-	11.8
Roadside-cum-home delivery	Before	12.7	27.1	6.2	15.3
	After	7.5	20.2	5.5	11.1
	percentage decline	40.9	25.5	11.3	27.8
All	Before	21.5	21.8	13.1	18.8
	After	16.6	17.7	12.0	15.4
	percentage decline	22.8	18.8	8.4	17.9



roadside fixed hawkers (28 percent) while it was only 10 percent each among fixed shop owners and home delivery hawkers (Table 12). The highest decline in general across all categories and specifically among roadside hawkers was

in Ahmedabad (23 percent and 37 percent respectively) followed by Bangalore (19 percent and 20-25 percent).

The average footfalls on weekdays and weekends before the emergence of modern retail outlets were higher

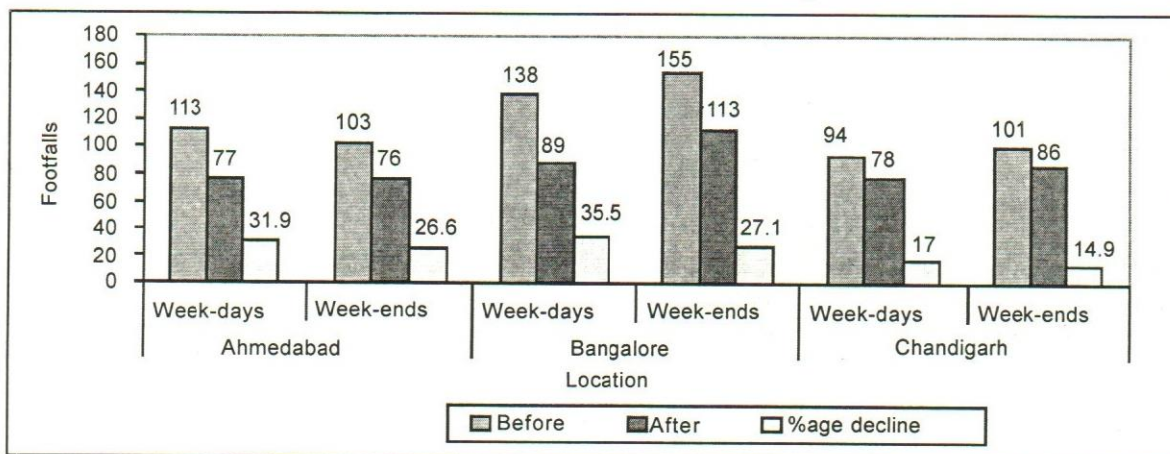


Figure 3: City-wise average footfalls before and after retail chain entry and percent decline

Table 13: City-wise distribution of traditional outlets by average footfalls (week day and week end) before and after retail chain entry and percent decline

Day	Footfall and Decline (percent)	Fixed shop		Road side fixed		Home delivery		Roadside-cum-home delivery		All	
		Before	After	Before	After	Before	After	Before	After	Before	After
<b>Ahmedabad</b>											
Week-day	Footfalls	139	113	115	61	68	63	102	52	113	77
	Decline	18.7		47		7.4		49		31.9	
Week-end	Footfalls	127	102	102	67	72	67	88	48	103	76
	Decline	19.7		34.3		6.9		45.5		26.6	
<b>Bangalore</b>											
Week-day	Footfalls	117	93	165	101	143	89	120	65	138	89
	Decline	20.5		38.8		37.8		45.8		35.5	
Week-end	Footfalls	129	101	189	140	150	107	139	87	155	113
	Decline	21.7		25.9		28.7		37.4		27.1	
<b>Chandigarh</b>											
Week-day	Footfalls	117	104	77	69	75	57	93	65	94	78
	Decline	11.1		10.4		24		30.1		17	
Week-end	Footfalls	135	123	86	77	70	54	98	72	101	86
	Decline	8.9		10.5		22.9		26.5		14.9	
<b>All</b>											
Week-day	Footfalls	124.8	104.0	123.6	78.7	89.0	66.8	105.7	60.7	114.9	81.2
	Decline	16.7		36.4		25.0		42.2		29.3	
Week-end	Footfalls	130.4	109.2	131.1	98.0	90.0	71.3	109.4	69.4	119.3	91.4
	Decline	16.3		25.3		20.8		36.6		23.4	



Table 14: City-and category-wise distribution of traditional retailers by impact of retail chains on sales (percent of respondents)

Sales impact	Type of outlet> City	Shop owner	Roadside fixed/hawker	Home delivery hawker	Roadside fixed-cum-home delivery hawker	All
Sales decline	Ahmedabad	38	79	20	100	60
	Bangalore	41	50	29	50	45
	Chandigarh	33	25	33	42	33
	All	37	53	28	64	46

in Bangalore (138 and 155 respectively) followed by Ahmedabad (113 and 103 respectively) and Chandigarh (94 and 101 respectively). The percentage decline in footfalls during weekdays and weekends was also higher in Bangalore (36 percent and 27 percent respectively) compared to Ahmedabad (32 percent and 27 percent respectively) and Chandigarh (17 percent and 15 percent respectively) (Figure 3). The fixed shop owners in Ahmedabad reported the highest footfalls during weekdays (139) compared to that in Bangalore and Chandigarh (117 each). However, during weekends, footfalls were found to be the highest in Chandigarh (135) followed by Bangalore (129) and Ahmedabad (127). But, the decline in footfalls in case of fixed shops due to the emergence of retail chain outlets was the highest in Bangalore (21–22 percent each during week days and weekends) followed by that in Ahmedabad (19–20 percent each during week days and weekends) and Chandigarh (9–11 percent each during week days and weekends): overall decline among all shop owners across all locations being 16 percent each during weekdays and weekends. In case of non-fixed shop categories, the highest footfalls during weekdays and weekends before the emergence of the modern retailing were observed in Bangalore followed by Ahmedabad and Chandigarh. The decline across traditional retailers was the highest in case of roadside-cum-home delivery hawkers

(37 percent) followed by roadside hawker (26 percent and home delivery hawker (21 percent). Among all retailers, weekends footfalls turned out to be higher than the weekday footfalls. But, the decline in footfalls was observed to be higher during the weekdays compared to that during the weekends (Table 13).

About 60 percent of traditional retailers in Ahmedabad, 45 percent in Bangalore and 33 percent in Chandigarh reported decline in sales due to the emergence of modern retail outlets. The impact of modern retail outlets was witnessed to be higher on roadside and roadside-cum-home delivery hawkers (53–64 percent) compared to home delivery hawkers (28 percent). Impact among roadside and roadside-cum-home delivery hawkers was observed more in Ahmedabad followed by Bangalore and Chandigarh (Table 14).

The average turnover and net income among traditional retailers was higher in Chandigarh followed by Ahmedabad and Bangalore both before as well as after the opening of modern retail outlets. However, percentage decline in turnover and net income was higher in Bangalore (23 percent and 31 percent respectively) followed by Ahmedabad (12 percent and 28 percent respectively) and Chandigarh (10 percent and 20 percent respectively) (Fig. 4). The average turnover and net income before and

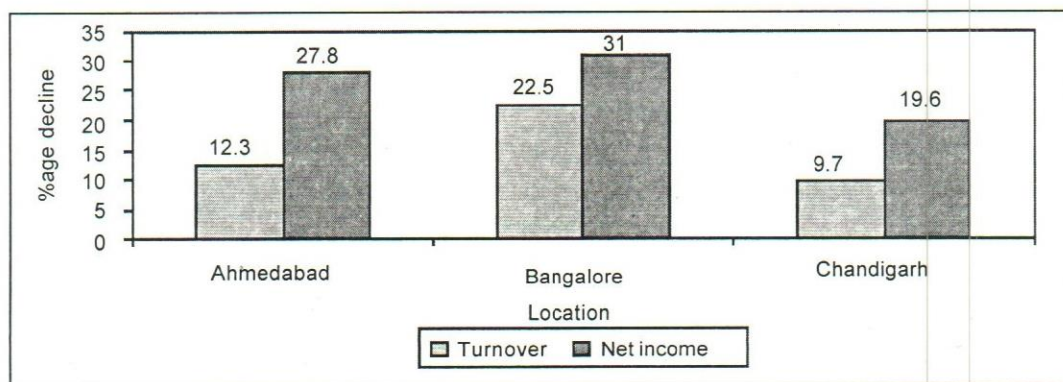


Figure 4: City-wise percent decline in traditional retailer turnover and net income after the entry of modern retail chains



Table 15: City-and category-wise change in turnover and income of the traditional retailers due to modern retail chains

Business parameter>		Turnover (Rs./day)				Net income (Rs./day)			
City> Retailer category		Ahmedabad	Bangalore	Chandigarh	All	Ahmedabad	Bangalore	Chandigarh	All
Fixed shop	Before	4419	3205.9	4119	3962.7	576.2	370.6	578.6	517.8
	After	4100	2726.5	3790.5	3594.1	461.9	302.9	473.8	420.3
	percentage decline	7.2	15	8	9.3	19.8	18.3	18.1	18.8
Roadside fixed	Before	2142.1	2081.8	3437.5	2482.4	244.7	314.8	314.1	291.2
	After	1684.2	1484.1	3037.5	1986.8	158.9	190.9	264.1	200.8
	percentage decline	21.4	28.7	11.6	20.0	35.1	39.4	15.9	31.0
Home delivery	Before	2080	1657.1	2050	1965.5	212.5	235.7	387.5	290.5
	After	2020	1342.9	1858.3	1789.7	190	189.3	283.3	228.4
	percentage decline	2.9	19	9.4	8.9	10.6	19.7	26.9	21.4
Roadside-cum-home delivery	Before	2276.9	1996.4	1848.3	2044.3	303.8	275	245.8	275.6
	After	1761.5	1432.1	1633.3	1603.8	143.5	160.7	195.8	165.8
	percentage decline	22.6	28.3	11.6	21.5	52.8	41.6	20.3	39.8
All	Before	2919	2330.8	3086.5	2782.7	362.3	312.1	406.1	360.5
	After	2558.7	1807.5	2788.5	2389.5	261.7	215.4	326.6	268.1
	percentage decline	12.3	22.5	9.7	14.1	27.8	31.0	19.6	25.6

after the opening of modern retail chains was higher in case of fixed shops as compared to that in case of other categories. However, decline in turnover was reported to be higher among roadside-cum-home delivery and roadside/fixed hawkers (20-21 percent) compared to that among shop owners and home delivery hawkers (9 percent). The impact on net income of the traditional retailers was observed to be the higher in case of roadside-cum-home delivery hawkers (40 percent) followed by roadside hawkers (31 percent), home delivery hawkers (21 percent) and the least in case of shop owners (19 percent) (Table 15).

About 41 percent of traditional retailers in Ahmedabad, and 31-33 percent each in Bangalore and Chandigarh were aware of the F&V outlets closed down in the vicinity. Such awareness was higher among the home delivery hawkers (52 percent) followed by roadside-cum-home delivery hawkers (39 percent), shop owners (34 percent), and roadside hawkers (26 percent) across cities.

The traditional retailers across all locations reported that their sales primarily declined due to the presence of

the modern retail outlets in their vicinity. However, proportion of traditional retailers who reported decline in sales was the highest in Ahmedabad (52 percent) followed by Bangalore (37 percent) and Chandigarh (33 percent); overall across all traditional retailers being 41 percent. The impact was higher among roadside-cum-home delivery hawkers as 85 percent in Ahmedabad, 42-43 percent each in Bangalore and Chandigarh reported retail chains as the reason for decline in sales followed by roadside fixed hawkers. Home delivery hawkers in Ahmedabad, fixed shop owners and home delivery hawkers in both Bangalore and Chandigarh faced the least competition from the modern retailers. The sales were also reported to decline due to the competition from traditional retailers like themselves as 23 percent traditional retailers in Bangalore and 20 percent in Chandigarh faced tough competition as compared to almost no competition faced in Ahmedabad. Another 9 percent of retailers also agreed that their sales declined due to the recession or reduced household income, with 12 percent mentioning it in Bangalore. Thus, all sale declines of traditional retailers could not be attributed to the emergence of modern retailing (Table 16).



Table 16: City-and category-wise distribution of traditional outlets on reasons for decline in sales (percent) (Ranking: Most important=I and less important=II)

City>			Ahmedabad		Bangalore		Chandigarh		All	
Reasons	Type of retailer	Ranking>	I	II	I	II	I	II	I	II
Competition from modern retailers	Fixed shop owner		33	5	29	12	33	5	32	7
	Roadside fixed hawker		68	11	41	5	25	13	46	9
	Home delivery hawker		20	-	29	-	33	8	28	3
	Roadside-cum-home delivery hawker		85	15	43	7	42	8	56	10
	All		52	8	37	7	33	8	41	8
Competition from small retailers	Fixed shop owner		-	14	18	12	14	10	10	12
	Roadside fixed hawker		5	32	27	-	13	25	16	18
	Home delivery hawker		-	10	14	-	25	33	14	17
	Roadside-cum-home delivery hawker		8	39	29	7	33	17	23	21
	All		3	24	23	5	20	20	15	16
Recession	Fixed shop owner		10	5	12	24	5	5	8	10
	Roadside fixed hawker		5	11	5	23	6	13	5	16
	Home delivery hawker		10	10	14	14	8	17	10	14
	Roadside-cum-home delivery hawker		15	8	21	14	-	25	13	15
	All		6	8	12	20	5	13	9	14

Table 17: City and category-wise traditional retailer response on strategies 'if sales decline' (percent)

Survival strategies	Type of traditional Retailer	Ahmedabad	Bangalore	Chandigarh	All
Continue the business as it is	Fixed shop	63	56	20	44
	Roadside fixed	42	50	25	41
	Home delivery	50	33	11	21
	Roadside-cum-home delivery	55	40	25	41
	All	52	47	20	39
Shift to other business/job	Roadside fixed	33	21	13	24
	Roadside-cum-home delivery	27	40	38	34
	All	21	19	11	17
Work as laborer	Roadside fixed	17	21	25	21
	Home delivery	50	-	33	29
	Roadside-cum-home delivery	18	10	38	21
	All	15	11	23	16
Shift to grocery business	Fixed shop	13	11	30	19
	Roadside fixed	8	-	13	6
	Roadside-cum-home delivery	-	10	-	3
	All	6	6	11	8
Put <i>karyana</i> shop in village	Fixed shop	13	-	-	4
	Home delivery	-	33	-	7
	All	3	3	-	2



### Strategies to tackle the Modern Retail Chain Impact

Among the 57 percent of traditional retailers across all locations who responded, 47-51 percent of traditional retailers in Ahmedabad and Bangalore each stated that they would continue F&V retailing. Another 11-15 percent retailers in both the cities reported that they would have to work as laborer if their sales continued to decline further. In Chandigarh also, 23 percent retailers (mainly hawkers) opined that they would work as daily wage laborer while another 20 percent reported to continue and compete with modern retailers by involving additional family members in retailing. About 19-21 percent traditional F&V retailers mainly hawkers in Ahmedabad and Bangalore each and

11 percent in Chandigarh felt they would shift to other related business/job like fruit juice retailing. Some fixed shop owners in Ahmedabad wanted to shift to grocery retailing, purchase auto rickshaw on loan, or put *karyana* (grocery) shop in a village. In Bangalore, some of F&V sellers also reported that they would prefer to do farming in the village by taking land on lease while some also highlighted the need for loans to expand the retailing business. Traditional F&V retailers in Chandigarh also emphasized that they would sell durables at public places, increase the delivery hours or shift to another location with less competition, if decline in sales continued (Table 17).

**Table 18: City-and category wise distribution of traditional retailers by steps to neutralize retail chain impact (percent)- Rank 1- Most important, II- important**

City	Traditional retailers (Ranking)	Ahmedabad		Bangalore		Chandigarh		Initiatives	
		I	II	I	II	I	II	I	II
All	Fixed shop	38	38	57	14	71	29	55	27
	Roadside fixed	40	27	55	18	75	25	50	23
	Home delivery	50	50	100	-	75	25	75	25
	Roadside-cum-home delivery	54	15	43	14	80	20	56	16
	All	45	26	56	15	75	25	55	22
Credit Facility	Fixed shop	13	13	-	43	-	14	5	23
	Roadside fixed	-	20	-	18	-	-	-	17
	Home delivery	-	100	-	50	-	-	-	38
	Roadside-cum-home delivery	-	23	14	29	-	-	4	20
	All	3	24	4	30	-	5	2	21
Home delivery	Fixed shop	13	-	29	14	29	14	23	9
	Roadside fixed	7	-	-	9	25	-	7	3
	Roadside-cum-home delivery	8	-	-	-	-	-	4	-
	All	8	-	7	7	15	5	9	4
Reduced price	Fixed shop	25	13	14	-	14	14	18	9
	Roadside fixed	53	20	18	9	-	25	33	17
	Home delivery	-	50	-	-	-	25	-	25
	Roadside-cum-home delivery	39	23	14	-	-	20	24	16
	All	40	21	15	4	5	20	24	15
Better Display	Fixed shop	38	13	-	14	14	-	18	9
	Roadside fixed	13	13	-	18	25	-	10	13
	Home delivery	-	-	-	50	-	-	-	13
	Roadside-cum-home delivery	23	23	-	-	-	-	12	12
All	21	16	-	15	10	-	12	12	

Note: Figures in brackets are percent in total retailers; data pertains to percent of the retailers who reported the impact on their sales.



The traditional retailers started to bring F&Vs of better quality to neutralize the impact of the modern retail chains as 75 percent of retailers in Chandigarh, 56 percent in Bangalore and 45 percent in Ahmedabad reported it as a major initiative undertaken. 40 percent retailers (mainly roadside hawkers) in Ahmedabad and 14 percent in Bangalore reported reduction in price of F&Vs to minimize retail chain impact. Some of the traditional retailers also started home delivery and credit facilities to attract the customers. Better display of the produce was also reported by some retailers (Table 18).

A few shop owners mainly in Bangalore and Chandigarh also began to give attention on cleaning their outlets and carts to bring in more customers. 13 percent of the retailers in Ahmedabad increased the floor area of the cart/shop to increase business. A small proportion of traditional retailers in Bangalore added some imported products to their shop/cart. Longer opening hours of the shop, introduction of self service facilities, and increasing the price for some customers were other steps undertaken to minimize the impacts of the retail chains. Only fixed shop owners had the facilities like computerized billing, computerized accounting, inventory control, refrigerator, air-conditioning and electronic weighing machine. Many fixed shop owners had also planned to use these facilities (Table 19). Further, 49-51 percent each of traditional retailers in Ahmedabad and Chandigarh and 37 percent in Bangalore wanted to avail bank finance. The need for bank credit was in general higher among the hawkers as compared to the fixed shop owners.

About the perception of services of modern retail chains, 17 percent of traditional retailers across all cities

reported that modern retail outlets sold F&Vs of poor quality. 14 percent of traditional retailers across cities (22 percent of retailers in Ahmedabad, 15 percent in Chandigarh) responded that since modern retail chain outlets affected their sales, they should be closed. Further, 14 percent retailers in Ahmedabad and 8 percent in Chandigarh opined that modern retail outlets should not retail FFVs. Another 8 percent argued that modern retail outlets offered lower prices to customers during weekends and vegetable markets organized during weekdays. Some traditional retailers were of the view that big companies had the capacity to bear the losses and could dump the unsold produce (Table 20). In Ahmedabad and Bangalore, 13 percent retailers each were also aware of direct procurement from farmers by modern retail chains at lower price and hence, it was difficult for them to compete with such chains. Moreover, 13 percent hawkers in Bangalore described that retail chains weighed each and every gram of produce while sometimes, they had to give 25-50 gm extra to satisfy customer.

None of the shop owners in Ahmedabad and Chandigarh wanted to be a part of the modern retail chains. However, 24 percent shop owners in Bangalore showed interest to work in franchisee model of retail chains. Other than 14-17 percent hawkers in general and more so in Chandigarh (33 percent) who did not know the approach to working with modern retail chains, others were not generally open to work with retail chains though in Chandigarh, 63-67 percent fixed and fixed-cum-home delivery hawkers each reported their willingness to become part of the retail chain compared to that by 32 percent roadside hawkers in Bangalore and 21 percent roadside hawkers in Ahmedabad and 36-46 percent roadside-cum-

Table 19: City-wise distribution of fixed shop owners by facilities and services currently used and planned (in percent)

City	Facilities and services	Computerized billing	Computerized accounting, inventory control etc.	Refrigerator	Air-conditioning	Electronic weighing machine
Ahmedabad	Using	33	9.5	23.8	14.3	38.1
	Planning to use	23.8	14.3	38.1	33.3	47.1
Bangalore	Using	11.8	5.9	17.6	5.9	35.3
	Planning to use	23.5	17.6	29.4	11.8	58.8
Chandigarh	Using	9.5	-	14.3	4.8	61.9
	Planning to use	9.5	-	38.1	19	28.6
All	Using	13.6	3.9	13.9	6.3	33.8
	Planning to use	14.2	8.0	26.4	16.0	33.6



Table 20: City-and category wise distribution of traditional retailers by perception of services of modern F&V retail chains (percent)

Perception of modern F&V retail outlets	Type of traditional retailer	Ahmedabad	Bangalore	Chandigarh	All
Selling poor quality and frozen vegetables	Fixed shop	9.5	17.6	14.3	13.6
	Roadside fixed	21.1	13.6	18.8	17.5
	Home delivery	10.0	28.6	16.7	17.2
	Roadside-cum-home delivery	30.8	21.4	8.3	20.5
	All	17.5	18.3	14.8	16.8
Affect their sales so these should be closed	Fixed shop	19.0	-	14.3	11.9
	Roadside fixed	15.8	-	12.5	8.8
	Home delivery	40.0	-	16.7	20.7
	Roadside-cum-home delivery	23.1	14.3	16.7	17.9
	All	22.2	3.3	14.8	13.6
Should not retail FFVs	Fixed shop	14.3	-	9.5	8.5
	Roadside fixed	21.1	4.5	6.3	10.5
	Home delivery	20.0	-	16.7	13.8
	All	14.3	1.7	8.2	8.2
Selling at lower price on week-ends and vegetable fairs during week-days	Fixed shop	-	-	9.5	3.4
	Roadside fixed	5.3	-	18.8	7.0
	Home delivery	-	14.3	25.0	13.8
	Roadside-cum-home delivery	15.4	7.1	16.7	12.8
	All	4.8	3.3	16.4	8.2
Big companies can bear losses and dump unsold produce, but we can't	Roadside fixed	4.8	11.8	4.8	6.8
	Fixed shop	-	4.5	6.3	3.5
	Roadside-cum-home delivery	7.7	14.3	8.3	10.3
	All	3.2	8.3	4.9	5.4
Running into losses (as they sell at lower price, paying higher salaries and rent) and will close down	Fixed shop	4.8	5.9	-	3.4
	Roadside fixed	-	9.1	6.3	5.3
	Home delivery	20.0	-	8.3	10.3
	Roadside-cum-home delivery	-	-	8.3	2.6
All	4.8	5.0	4.9	4.9	

home delivery hawkers each in Ahmedabad and Bangalore. Half of the home delivery hawkers in Ahmedabad wanted to associate with modern FFV retail chains. Thus, on an average about 29 percent of traditional retailers across all cities were willing to work with retail chains.

On major problems in F&V retailing, 29 percent of traditional retailers (mainly hawkers) in Ahmedabad,

20-21 percent in Bangalore and Chandigarh each reported the emergence of large number of modern retail outlets in their vicinity as their major problem. Higher wastages of F&Vs while retailing was reported to be higher in Chandigarh (26 percent) followed by Ahmedabad (13 percent) and Bangalore (8 percent); overall across all cities being 16 percent. 25 percent of traditional retailers in



Bangalore faced harassment from police as they did not allow them to sell F&Vs from roadside. Sometimes, police took *hafta* (weekly bribe)/F&Vs to permit them to sell from roadsides. 14-17 percent of traditional retailers in Bangalore and Chandigarh also faced completion from other push cart sellers. High labour intensity of the business, payment of commission and cheating in weighing in *mandi* and lack of well built shops, especially

in Chandigarh were some of the common problems. Other major problems in F&V business in Ahmedabad were: ability to buy only small quantity of F&Vs, no retailing from roadsides and higher prices of F&Vs (reported by about 10-11 percent retailers each). In Bangalore and Chandigarh, scores of traditional retailers (mainly vendors) did not have adequate finance for F&V business (Table 21).

Table 21: City-and category-wise distribution of traditional retailers by major problems in F&V retailing (percent) (multiple responses)

Problems in F&V retailing	Traditional Retailers	Ahmedabad	Bangalore	Chandigarh	All
Emergence of large no. of modern retail outlets	Fixed shop	14.3	17.6	14.3	15.3
	Roadside fixed	31.6	13.6	18.8	21.1
	Home delivery	40.0	28.6	8.3	24.1
	Roadside-cum-home delivery	38.5	28.6	50.0	38.5
	All	28.6	20.0	21.3	23.4
Higher wastages	Fixed shop	23.8	-	33.3	20.3
	Roadside fixed	5.3	13.6	12.5	10.5
	Home delivery	-	14.3	41.7	20.7
	Roadside-cum-home delivery	15.4	7.1	16.7	12.8
	All	12.7	8.3	26.2	15.8
Not allowed to sell from roadside	Fixed shop	-	5.9	-	1.7
	Roadside fixed	21.1	36.4	6.3	22.8
	Home delivery	-	14.3	25.0	13.8
	Roadside-cum-home delivery	15.4	35.7	-	17.9
	All	9.5	25.0	6.6	13.6
Large no. of push cart vendors	Fixed shop	9.5	11.8	14.3	11.9
	Roadside fixed	-	4.5	12.5	5.3
	Home delivery	-	14.3	16.7	10.3
	Roadside-cum-home delivery	-	14.3	16.7	10.3
	All	3.2	10.0	14.8	9.2
Highly labor intensive business	Fixed shop	4.8	17.6	19.0	13.6
	Roadside fixed	5.3	4.5	-	3.5
	Home delivery	10.0	-	-	3.4
	Roadside-cum-home delivery	-	-	16.7	5.1
	All	4.8	6.7	9.8	7.1
Payment of commission and cheating in weight in <i>mandi</i>	Fixed shop	4.8	-	-	1.7
	Roadside fixed	5.3	4.5	12.5	7.0
	Home delivery	-	-	8.3	3.4
	Roadside-cum-home delivery	7.7	-	-	2.6
	All	4.8	1.7	4.9	3.8



The traditional retailers were of the opinion that government should provide interest free loans to make their business viable. The need for such loans was much more prevalent among the hawkers. Push cart sellers (22-28 percent) also stressed the allocation of permanent shops or a place with lower rent near the popular markets in the cities. About 13 percent of retailers wanted that government should assist in the form of subsidies to promote F&V marketing. Some of the retailers also were of the view that government should organize the cooperatives of traditional retailers for better business.

On the policy front, about 51 percent of retailers in Ahmedabad, 26-27 percent each in Bangalore and Chandigarh asked for the closure of the modern retail chains to maintain their livelihoods. 13 percent of retailers each in Ahmedabad and Chandigarh wanted that bigger players should not retail F&Vs. Some of the traditional retailers in Ahmedabad were in favor of zoning i.e. malls should be located in bigger markets, not around the colony markets. Further, 3-4 percent retailers each in Ahmedabad and Chandigarh, interestingly, also opined that retail chains should not be allowed to sell at lower price.

### Summary and policy steps

More of traditional sector retailers sold vegetables in Bangalore (60 percent) compared with that in Ahmedabad and Chandigarh (46-47 percent each) whereas the proportion of fruit sellers was higher (41 percent) in Ahmedabad and that of both F&V sellers higher in Chandigarh (36 percent). The average distance of the retailers from modern retailers was higher in Chandigarh (1.1 kms.) than that in Bangalore (0.7 kms) and Ahmedabad (0.5 kms.) which perhaps points to the lower density of modern retail outlets in Chandigarh. Across both Ahmedabad and Bangalore, RF and More were the nearest modern retail outlets to the local retailers as reported by 48 percent and 35 percent retailers respectively in Ahmedabad and 45 percent and 18 percent retailers respectively in Bangalore. However, in Chandigarh, More, Big Bazaar, RF, and Spencer's were the nearest retail chain outlets. The average number of years of presence of the retail chain outlets was two in Bangalore and only 1.6 years each in Ahmedabad and Chandigarh. The home delivery hawkers across all locations preferred to operate the farthest from the modern retail outlets (1 km) compared to the distance of 0.5 km in case of the shop owners and 0.8 km each in case of roadside and roadside-cum-home delivery hawkers. About 32 percent of traditional retailers across all locations were illiterate.

With the emergence of modern retail chains, number of footfalls in traditional outlets declined across all locations. The percentage decline in footfalls was the highest in Bangalore (35.5 percent during weekdays and 27 percent during weekends) followed by Ahmedabad (32 percent during weekdays and 26.6 percent during weekends) and Chandigarh (17 percent during weekdays and 14.9 percent during weekends). Further, number of regular customers visiting the outlets also came down everywhere after the entry of modern retail chains, more so in Ahmedabad (23 percent) and Bangalore (19 percent) and only 8 percent in Chandigarh. In Ahmedabad 60 percent traditional retailers reported decline in sales compared with only 45 percent in Bangalore and 33 percent in Chandigarh. Thus, 46 percent traditional retailers across cities reported decline in sales due to the presence of retail chain outlets. Bangalore traditional retail sellers reported the largest decline in their turnover (22.5 percent) and income (31 percent) followed by Ahmedabad (12.3 percent and 27.8 percent respectively) and Chandigarh (9.7 percent and 19.6 percent respectively). Further, about 35 percent of traditional retailers across cities were aware of the push cart vendors/F&V outlets closed in their vicinity. Majority of the traditional retailers reported the decline in sales due to presence of the retail chain outlets. However, entire sales decline can not be attributed to the modern retail chains as other factors like reduced household income, high prices, and recession have also impacted their sales. On being asked about the survival strategies, 39 percent traditional retailers across all cities responded that they would continue the F&V business. Shifting to other business related to F&V retailing and grocery business, working as laborer, and putting up of *karyana* shop in the villages were some of the other survival strategies reported by the traditional retailers. About 55 percent of traditional retailers started to bring F&Vs of good quality while some resorted to credit facility, home delivery, reduction in price and better display of F&Vs to neutralize the retail chain impact. 46 percent traditional showed their willingness to avail of bank finance. Emergence of modern retail outlets, higher wastages of F&Vs, harassment by police were the major problems faced by the traditional retailers.

There is no inherent contradiction in the co-existence of the two sectors of retailing if there is sufficient interest in mutual co-existence. For example, In South Africa, the Venda and surrounding areas were major production zones for mangoes and tomatoes and these were the major vegetables sold by the informal traders (hawkers) in



as the year 2008-09 also saw recession but, definitely, there is an impact of the chains on the traditional retailers as they do attract their buyers due to the ambience of the stores and, sometimes, cheaper F&Vs as these chains buy in bulk or buy directly from growers and avoid many market charges which traditional retailers have to pay. Therefore, at least, the residential localities of cities could be kept free of retail chain outlets.

There have been some Corporate Social Responsibility (CSR) attempts by a few chains to rope in traditional F&V retailing into their operations as partners which did not succeed. ITC Choupal Fresh tried it unsuccessfully and abandoned as when the vendors were given the push carts free and promised a minimum daily remuneration, they had no incentive to sell well. Similarly, Best Price wholesale of Walmart-Bharti has financed about a dozen pushcart vendors who sell under the banner of Best Price wholesale in Amritsar but the initiative does not seem to make a mark as these carts are not frequently seen in the city. On the other hand, a local initiative in Ahmedabad – Harra Fresh-seems to be more promising as it involves former traditional F&V retailers in mobile van based sales of perishables which has computerized billing and weighing system and delivers almost at the door steps as it visits identified housing colonies/areas on a fixed day and timing basis.

collection of charges. At Jivraj Park Cross roads, Vejalpur, 400 vegetable vendors had been allowed to carry out business on the street side in exchange for payment by the Vejalpur municipality (Dalwadi, 2010). Various stakeholders in street vending i.e. Municipal Corporations, traffic authorities, city planners, corporate bodies, NGOs and vendors' groups or associations can be involved in the process of planning for street vending. Finally, there is need to combine the value chains promotion approach with the livelihood perspective to enable the resource poor to enter into and stay with modern value chains- domestic or global. Support by state/development agencies for traditional retailers to enable them to compete with quality and cost efficiency can be quite helpful.

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Competition and cost - cutting among retailers have yanked the traditional supply chain completely apart.

— Jane Hoffer



Feature

# A Contemporary Study on Innovation and Marketing Effectiveness Paradigms in Economic Downturns

J. MOHAN RAJ

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*Innovation is the key factor and competitive advantage tool to increase the productivity and GDP achievement of the country. Globalization in an economy has many advantages and disadvantages for the country and also for the company. Executives redefine the products or services as per customers' taste and preference to increase the market share.*

During the recession time period, economic activity was reduced known as less spending, affects consumers and businesses. Global economic meltdown created many challenges for the country in terms of consumption, exchanges, distribution, production and also in the employment sector. Companies faced challenges to sustain in the market and expected positive policies from the government. Recent growth of developing countries' GDP achievement had to go back to its introductory stage of the business lifecycle and it directly or indirectly has had an effect on the society's wealth and welfare.

## **Impact of the Economic Recession**

- Dumping of goods
- Affected the infrastructural facilities development
- Withdrawal of FDIs and the stock values reduced
- Unemployment percentage increases
- Non performance of assets
- Investors hesitate to invest in core sectors
- Inflation due to oil price hike, and so on

During the economic downturn, the purchasing power of the consumers gets reduced due to job insecurity and unemployment. The spending patterns would have a dramatic change due to an attempt to cut expenses. This leads to many challenges for the organizations to market their goods and services to target audience and attract new customers in a competitive environment.

Marketers would also face a high demand to cut expenses in an attempt to remain profitable. As a result they downsize employees and optimize costs.

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In this scenario, the role of marketing executives face intensified challenge to market their products and services and to sustain despite the lack of motivation either from the organizations or from the market.

### Objectives

- Customizing marketing objectives according to market environment
- Concentrating on innovative products and services offered to market
- Realistic and timely decision making in solving marketing problems
- Focusing more on consumer feedback
- Designing loyalty programs for the retention of regular customer
- Designing cost effective perks for marketing executives' efficiency

According to William A. Cohen and Nurit Cohen guidelines in the book *Top Executive Performance*, there are 11 keys to success and power that are essential for succeeding in management in business, industry, government, or any nonprofit organization.

According to Peter Drucker's guidelines in the book *Effective Executive*, adopt the concepts in order to face the job pressure of the marketing department by taking into account the external environment and market trends and refine a marketing strategy. Marketing department only can increase the revenue to the company directly.

Marketing executives have the learning, knowledge and experience pertaining to

- Assess the remote environment, industry environment and operating environment
- Ample understanding of target market demographic variables
- Positioning the goods in the minds of customer by POD
- Develop and articulate strong values of the goods
- Value-based pricing
- Evaluate the goods in terms marketing mix elements and demands
- Recognize the customer feedback

- Mass customization and implementation of technology.

Raji Srinivasan, Arvind Rangaswamy, and Gary L. Lilien (2005) suggest that not all firms do, or should, respond in a proactive manner during a recession. Those firms with a strategic emphasis on marketing already have programs in place (e.g., well-recognized brands, differentiated products, targeted communications, good support and service, etc.) that enable them to derive benefits from a proactive marketing response during the recession.

A. Kazim Kirtis, and Filiz Karahan (2011) highlight the economic recession that affects the firms' marketing strategies as well as consumers' perceptions and behaviors. During and after recession, the marketing function plays an important role to survive or stay profitable and consumer-responsive. One of the most distinctive ways the firm lowers its costs is by turning to social media marketing. When promoting brands and other marketing activities through social media doesn't cost the firm so much, it is widely evaluated as the most convenient instrument to market products to the target segment especially in these difficult times. Social media which allows anybody to become a producer of such content and deliver it through interactive communication in the form of pyramid based on relationship is recognized as the most potentially powerful tool in business practice so marketers are intensively using social media to realize their strategies in a lower cost.

John A. Pearce II and Steven C. Michael (1997) explain how the business cycle influences performance and what strategies are effective in such turbulent times that have practical values for managers of entrepreneurial firms. In their article, they report a large-scale empirical research study involving subjective and financial information from 118 publicly traded U.S. manufacturing firms. The participating firms are involved in technologically demanding and highly innovative industry segments: industrial and computer equipment; electrical equipment and components; and measuring, analysis, and control instruments. None of the firms have achieved market share of more than one half of one percent (< 0.5%). The goal of the study was to determine the components of a marketing strategy that would enable a firm in these industries to withstand the negative financial consequences of a recession.

Secil Bayraktar Kazozcu's (2011) study contributes to the analysis and management of turnaround situations



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by investigating how the interaction of these two important factors affects the optimum strategy choice during the recovery period.

These are turbulent times in the world of organizations, observed Miles and Snow more than a decade ago, and there is every indication that the bumpy ride will continue beyond the turn of the century and into the new millennium. Behind the turbulence lies a series of frequently cited environmental factors: technological advances and the deregulation of markets, creating intensified global competition.

John A. Pearce II and D.Keith Robbins (1994) suggested by a recent stream of research, that the most promising of these ways is for businesses that have retrenched to initiate recovery strategies designed to redirect their remaining resources toward more promising product-market combinations. The choice of this set of alternatives, known as entrepreneurial recovery strategies, is the topic of the research that was undertaken.

Yair Berson, Louise A. Nemanich, David A. Waldman, Benjamin M. Galvin, and Robert T. Keller (2006) reviewed the theoretical and empirical works relevant to the nexus of leadership with organizational learning. We build the classic distinction between exploration and exploitation and the 4I framework of organizational learning.

### **Marketing Challenges in Economic Recession**

- The economic downturn will last a long time: until at least mid-2012 by most estimates.
- Retail spending has dropped significantly in most markets, and not all retailers will survive. Many people are choosing to put their money into savings or to pay off their credit cards, rather than spend.
- The decline of most currencies against that of China—the world's factory—puts pressure on margins.
- Credit will continue to be in short supply (and expensive, at the consumer level) throughout 2011.
- High levels of consumer debt will choke demand for non-essentials: In developed markets such as the UK, USA and Australia, during the last few years much of the consumer spending on big ticket items (flat screen TVs, cars, expensive holidays, etc.) was funded by debt—either on credit cards (which are now full) or against the value of real-estate (which has now plummeted).
- Unemployment is a real fear for most consumers—and they are right to be scared. No one can tell what

the future holds in 2012 especially for organizations in financial services, the automotive industry, retail, entertainment, cafes and restaurants, and in many other industries. The fear of job losses is very real and personal in most western countries.

- Demand for luxury goods has evaporated, as previous high-income earners join the unemployment register (perhaps for the long term).
- There are large quantities of quality second-hand goods appearing on eBay and in other marketplaces.
- People are downsizing their cars and other high-ticket items in such volumes that the price gap between second-hand and new is growing.
- People are repairing and maintaining their possessions more, rather than buying new.

### **Marketing Opportunities in Economic Recession**

- Markets still exist. A drop in demand of 20 or even 50 percent does NOT equal "no demand".
- Businesses can grow by winning market share or spotting new markets.
- Customer needs and priorities will change rapidly. Identifying these changes and responding to them will create business opportunities.
- New differences among segments or micro markets will emerge. Developing a granular view of patterns of demand will enable scarce sales and marketing resources to be focused on growth opportunities.
- Many of the competitive strengths of rival businesses no longer apply. By rethinking the basis of competition, businesses can become more relevant to customers and more profitable.
- Trust and confidence in suppliers will become even more important. No one wants to buy toxic goods, or to order things which never arrive.
- Being local is an advantage. Businesses with local relationships (and operating in local currencies) may be seen as more trustworthy. In a period of turmoil, global scale no longer means "dependable".
- Value for money (not just the cheapest) will be more important for many customers. These people need to feel confident that products will not need replacing or repairing.
- Energy efficiency will be more important, as this saves money.



- Cash is the king. Avoid customers who demand long credit terms and focus on markets where payment is more immediate. Let your competitors go bust acting as bankers to their customers.
- Speed of taking customer orders will be increasingly important. Customers may have very short "buying windows," and the ability to complete a transaction in a short time frame (paying attention to credit and other customer risk factors!) will enable a business to take full advantage of all available sales opportunities.
- Focus on the customer experience. Being easy to do business with the customers will become more important, as customers become more pressured and hassle-intolerant.

#### Effective Marketing Priorities in Economic Downturn

- Target a real need – by learning, knowledge and experience
- Prompt service
- Contributions to resistant customer segments
- Ensure organizations compete on value not on price
- Work prioritization
- Eliminate uncertainty for your customers.
- Make realistic decision and not by opinion of others
- Do not blame it on the economy—develop a "never give up" attitude and support it with affordable perks.
- Collect feedback from the marketing system and redesign the system for accomplishment of objectives

Contrary to conventional wisdom (among accountants), a recession is absolutely not the time to pull back from marketing. Less money might be spent on it, but marketing know-how and focus can mean the difference between success and calamity.

#### Conclusion

The recession poses a challenge to marketers as the market is shrinking. It just means that as an effective marketer, you need to persuade the share of your competitors too. Since business history was full of corporate success stories who had "demoralizing the opposition" as part of their marketing strategy, it is tough out there, but by taking an intelligent, well thought approach and empowering the morale of employees with a "never give up attitude" strengthens your marketing strategy and can gain your organization a competitive edge over your competitors.

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*Innovation distinguishes between a leader and a follower.*

– Steve Jobs



# Working Capital Management in Dairy Industry

P. SARVESWARA RAO

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*In this study two dairy units were studied from the point of view of the management of working capital. Debtors turnover reveals that Sangam Dairy is following a little liberal credit policy than heritage. Inventory turnover ratio conveyed that Heritage is more efficient than Sangam. Working capital turnover ratio revealed that Sangam is using its working capital more efficiently to improve sales. Current and quick ratios showed that the creditors in Heritage are more secured than that of Sangam. The findings revealed that in certain areas of working capital management Heritage Foods (India) Ltd is having better performance. It is inferred from the study that Sangam Dairy is better in working capital management besides protecting the interests of the milk producers.*

## 1. Backdrap

India is 'the oyster' of the Global Dairy Industry. It offers opportunities galore to entrepreneurs World wide who wish to capitalise on one of the World's largest and fastest growing markets for milk and milk products. A bagul of 'pearls' awaits the international dairy processor in India. The Indian Dairy Industry is growing rapidly and trying to keep pace with the galloping progress around the World.

Indian Dairy Sector is expected to triple its production in the next 10 years in view of the expanding potential for export to Europe and the West. Moreover with WTO regulations expected to come into force in coming years all the developed Countries which are among the big exporters today would have to withdraw the support and subsidy to their domestic milk products sector. India is the lowest cost producer of per litre of milk in the World, at 27 cents, compared with U.S.63 cents and Japan \$ 2.8.

## 2. Mission milk to increase milk production

National Dairy Development Board (NDDB) designed National Dairy Plan (NDP) to increase milk production intune with the increasing demand for the milk. According to the NDDB during 2010-11 the milk production was 12.28 crore tonnes and the demand for the same will be 20 crore tonnes by 2021-22. NDP is to be implemented in 14 States – Andhra Pradesh, Bihar, Gujarat, Haryana, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odissa, Punjab, Rajastan, Tamilnadu, Uttar Pradesh and West Bengal.

Recognising the importance of this Plan(NDP) World Bank expressed its willingness to sanction loan upto 80% of the Project cost (17,000 crores). It expressed its willingness to release Rs.2,242 crores for the Missions Milk's first phase.

Andhra Pradesh is the 3<sup>rd</sup> largest producer of milk in India. The first place occupied by Uttar Pradesh, followed



by Rajasthan producing 21,031,000 tonnes and 13,234,000 tonnes respectively. Andhra Pradesh has determined to increase its production from 11,203,000 tonnes in 2010-11 to 15 crore tonnes by 2020<sup>2</sup>. APDDCF under the brand name Vijaya has introduced "Vijaya Vitaminised Milk" recently and released into the market.

### 3. The Present Study

Two sample units one is from private sector and the other one is from cooperative sector they are Heritage Foods India Limited and Sangam Dairy (The Guntur District Milk Producers Mutually Aided Cooperative Union Limited) have been selected for the present study. A brief profile of these two sample units, is given below.

#### 3.1. Heritage Foods (India) Limited

Heritage Foods India Ltd., (HFIL) was incorporated under the Companies Act, 1956 in June, 1992 as a public limited company with its corporate office at Hyderabad.

The success story of Heritage Foods started with when its main promoters, Shri N. Chandrababu Naidu and his associates were overcome by a passion to contribute to the welfare of the milk farmers in Chittoor district of Andhra Pradesh through a fruitful partnership with the larger community of investors in the country. The delicensing of the dairy Industry under economic liberalization and globalization process started in 1991 came as a shot in the hand (arm) for the promoters of HFIL who saw the excellent opportunity to exploit the potential markets of the dairy Industry at home and abroad. Heritage Foods (India) Limited entered the capital market on 17<sup>th</sup> November, 1994 with a public issue of 6,50,000 equity shares of Rs. 10 each for cash at par aggregating to Rs. 65 millions to part finance the 147.5 millions project. The main Dairy plant 'Gokul' at Kasipentla on Tirupati – Bangalore high way in Chittoor District is having initially a capacity of processing 1,00,000 litres per day of milk produces and value added products like ghee, butter, skimmed milk powder and butter. The production plant of the company in Chittoor District is ideally located with respect to availability of raw material (Milk) and proximity to the major markets like Chennai and Bangalore. The company has started marketing liquid pasteurized milk in sachets in Bangalore since June, 1993 and in Chennai since July, 1993. The product is sold, under the brand name "HERITAGE". Heritage milk was also introduced in Hyderabad city by the end of June, 1995. In Visakhapatnam the company launched milk sale in November, 1995. Milk is sold through dealer (agents) network in these metros. Heritage is an

ISO 9002 certified company. The executive Director of Heritage is Mrs.N.Bhuvaneshwari.

#### 3.2. Sangam Dairy

Under the operation flood I programme, Guntur District was selected to develop dairy activities in Amul pattern. Keeping in view the 3 tier system, constituting of village dairy co-operative society at Village level, managed by the elective representatives of milk producers, a co-operative union at district level, managed by the representatives of village dairy co-operative societies and co-operative Federation at state level which is apex body, the Guntur District Milk producers co-operative Union Ltd., was registered under Andhra Pradesh Co-operative Societies Act, 1964 with registration No.836 DD with 81 affiliated milk producer cooperative societies. Presently around 643 milk producers cooperative societies and 325 milk collection centres are functioning in the area of Guntur District Milk producers cooperative Union Ltd., they are supplying a maximum quantity of 2.2 lakhs litres milk per day during flush season.

**Products:** 1.SMP, 2.Whole milks powder, 3. Ghee 4.butter – Table butter, white butter, 5. Tetra pack milk ½ litre and 6.Tetra brick – 1 litre.

**By Products:** 1.Luccy 2.flavoured milk – sakti, 3. Dood peda – Kova.

Milk producers welfare is only the aim of Sangam Dairy.<sup>4</sup>

#### Working Capital Management

Under this heading we try to examine the components of working capital, classification of working capital and the management of various components of working capital in the sample dairy units. The concept of working capital is viewed differently by different authors and financial analysts. One version is that working capital is the excess of current assets over current liabilities and the other is that the total of current assets this called the working capital. In this study the term working capital is used in the sense of current assets minus current liabilities.

Working capital is the life blood of a business. The adequacy of working capital contributes a lot in rising the credit standing of the company. A company with sufficient working capital is always in a position to take advantage of any favourable opportunity, either to purchase raw-materials or to execute a special order or to wait for better market conditions. The ability to meet all demands for cash without delay is a great psychological factor to improve the all round efficiency of the business and to create self



confidence in the persons at the helm of affairs of the company.

### Working Capital Management in Sample Dairies

Management of working capital implies management of the components of current assets and liabilities. Therefore, a brief study of components of working capital in sample units is undertaken.

#### Cash Management

Cash is an important item among the components of current assets, in any organization there will be urgent current obligations to be met and for such contingencies, cash should be necessarily provided for cash on hand is an idle asset and no organization would prefer to keep large cash balances. So normally it would form only a small percentage of the total assets.

#### Cash Balance as a Percentage of Total Assets

Cash as percentage of total assets in the sample dairies is computed and given in Table 1.

In case of Sangam Dairy in cash as a percentage to total assets for 7 years from 2004-05 to 2010-11 ranged between 6.98 and 14.84 while in the case of Heritage it varied between 8.20 and 24.98 with an average of 9.72 and 15.31 respectively on the whole both the firms were maintaining cash balance more than 6 percent of the total assets. This leads to the conclusion that both the dairies were keeping large amounts of cash balances as idle asset. Heritage was maintaining much more cash balance when compared to Sangam. This might be because of the reason that it enjoys too poor credit facilities. Perhaps, it might be due to heavy collection or non-payment of pending bills at the end of the year. Every firm has to maintain a minimum amount of cash at every point of time. This minimum may vary from firm to firm. It is only by experience each firm decides on the minimum balance below which it cannot go. If the actual balance kept is not enough to meet its current obligations, it may face the problem of being not able to pay its creditors. If it keeps more cash without any planning it is only wasting of resources, as cash is an unproductive idle asset.

Table 1: Cash As A Percentage To Total Assets

(Rs.in lakhs)

	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
<b>Sangam</b>							
Total Assets	5962.48	5613.79	5759.67	5544.80	6764.04	7327.86	8886.60
Cash and Bank Balance	555.01	446.04	402.25	528.43	1003.92	660.91	925.86
Percentage	9.31	7.95	6.98	9.53	14.84	9.02	10.42
Average: 9.72							
<b>Heritage</b>							
Total Assets	7477.00	9123.00	17429.00	27244.00	26356.00	27134.00	27259.00
Cash and Bank Balance	1525.00	2279.00	2464.00	5016.00	2968.00	2225.00	2658.00
Percentage	20.40	24.98	14.14	18.41	11.26	8.20	9.75

Source: Compiled from Annual reports.

#### Cash to Total Current Assets

Cash is compared with the total current assets to know the proportion of cash in the total current assets. This rate is calculated by dividing the cash by total current assets and the details are given in Table-2.

For Sangam Dairy during the 7 years period from 2004-05 to 2010-11 the proportion of current assets ranged between 0.1280 and 0.3426. In the case of Heritage it varied between 0.2011 and 0.4785 for the same period.

The average for seven years period is 0.1994 and 0.3448 for Sangam and Heritage respectively. By this we can say that Sangam is maintaining less idle cash balance compared to Heritage.

It can not be clearly said whether the cash ratio is low or high. So long as they are able to meet their current obligations without any difficulty it can be taken that they have maintained adequate amount of cash.



Table 2: Cash to Total Current Assets

(Rs.in lakhs)

	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
<b>Sangam</b>							
Cash & Bank	855.1	446.04	402.25	528.43	1003.92	660.91	925.85
Current Assets	3420.52	3039.24	3141.45	2924.15	2930.55	3506.65	3745.57
Ratio	0.1623	0.1468	0.1280	0.1807	0.3426	0.1885	0.2472
Average:0.1994							
<b>Heritage</b>							
Cash & Bank	1525.00	2279.00	2464.00	5016.00	2968.00	2225.00	2658.00
Current Assets	4051.00	5085.00	7390.00	10482.00	9053.00	11064.00	10709.00
Ratio	0.3765	0.4482	0.3334	0.4785	0.3278	0.2011	0.2482
Average:0.3448							

Source: Compiled from the annual reports

### Management of Debtors

The debtors turnover ratio indicates the average time lag in number of days between sales and collection thereof. The objective of this ratio is to know how many days credit is outstanding with sundry debtors. In other words the ratio will indicate the number of days credit enjoyed by debtors or credit period allowed and money blocked in sundry debtors. Moreover this ratio will indicate the effectiveness in collection of debts due, time taken in

conversion of sale proceeds into cash, effectiveness in formulating credit control policies and its administration. The financial soundness and solvency of the organization is also revealed in cases where there is no bad and doubtful debts to be written off.

The ratio is affected by the credit control policy adopted. A high ratio will indicate an unsound financial condition of the business so far that relates to realization of sundry debtors. Such a high ratio must be off-set by a

Table 3: Debtors Turnover in Days

(Rs.in lakhs)

	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	Average
<b>Sangam</b>							
Net Sales	11655.63	13683.45	15576.14	18962.81	21261.53	25112.35	
Sales per day	38.85	45.61	51.92	63.21	70.87	83.71	
Average Debtors	290.50	180.00	139.50	165.50	161.00	100.00	
No.of days outstanding	7.48	3.95	2.69	2.62	2.27	1.19	3.37
<b>Heritage</b>							
Net Sales	29207.00	34633.00	58803.00	79256.00	90038.00	109618.00	
Sales per day	97.36	115.44	196.01	264.19	300.13	365.39	
Average Debtors	199.50	335.50	682.50	1036.50	1177.00	1326.00	
No.of days outstanding	2.05	2.91	3.48	3.92	3.92	3.63	3.32

Source: Compiled from the annual reports



Table 4: Inventory Turnover Ratio

(Rs.in lakhs)

	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	Average
<b>Sangam</b>							
Opening Stock	23350.00	2223.00	2426.00	2113.00	1575.00	2586.00	
Closing Stock	2223.00	2426.00	2113.00	1575.00	2586.00	2674.00	
Average Inventory	2279.00	2324.50	2269.50	1844.00	2080.50	2630.00	
Cost of Goods sold	12005.54	13734.77	15918.61	19235.11	21,574.00	25331.00	
Inventory turn over ratio	5.27	5.91	7.01	10.43	10.37	9.63	8.10
<b>Heritage</b>							
Opening Stock	2360.00	2573.00	4488.00	4539.00	4939.00	7361.00	
Closing Stock	2573.00	4488.00	4539.00	4939.00	7361.00	6607.00	
Average Inventory	2466.50	3530.50	4513.50	4739.00	6150.00	6984.00	
Cost of Goods sold	26888.00	34239.00	60790.00	78596.00	85807.00	105240.00	
Inventory turn over ratio	10.90	9.70	13.47	16.58	13.95	15.07	13.28

Source: Compiled from the annual reports

higher current ratio. A lower ratio will indicate the effectiveness in credit control policy which is usually reflected by less or negligible bad and doubtful debts, quick liquidity of sundry debtors as on of the current assets etc.

This ratio is calculated by dividing the average debtors by sales per day. Table-3 gives the debtors turnover in days. The average credit period allowed by Sangam was 3.37 days where as the average credit period allowed by Heritage was 3.32 days. For Sangam the debtors turnover ratio (No.of days) decreased gradually from 7.48 in 2005-06 to 1.19 in 2010-11, ranging between the same. But for Heritage debtors turnover ratio gradually increased from 2.05 in 2005-06 to 3.92 in 2009-10 and slightly decreased at the end in 2010-11 to 3.63. By this we can say that Sangam and Heritage are following the same credit policy.

### Inventory Management

The term inventory includes the product a firm is manufacturing and the components that make up the product. Proper inventory management is required to ensure continuous supply of materials to facilitate uninterrupted production it involves keeping of sufficient stock of raw materials to avoid difficulties of short supply and price changes. It is also necessary to ensure that selling

operations are made as smooth as possible by maintaining sufficient stock of finished goods.

The inventory turn over ratio is calculated by dividing the cost of goods sold by the average inventory. The inventory turn over of the sample dairies is given in Table-4.

The inventory turn over ratio of Sangam Dairy for six years from 2005-06 to 2010-11 ranged between 5.27 and 10.43 while in the case of Heritage dairy it ranged between 9.70 and 16.58 where as the average of turnover ratio for 6 years is 8.10 and 13.28 for Sangam and Heritage respectively. This shows that the inventory turnover was more rapid in the case of Heritage than the Sangam Dairy.

### Short Term Borrowings

The short term borrowings from banks for working capital is an important component of current liabilities. The banks generally provide assistance through loans, open loans, cash credit, overdraft etc., for acquisition of current assets. Table 5 shows the short term borrowings as a percentage to current assets. As the details of loans and schedules for liabilities of Heritage are not available the sum unsecured loans are taken as short term borrowings. On an average for 7 years study 39.30% of current assets of Sangam



**Table 5: Short Term Borrowings as a Percentage to Current Assets**

(Rs.in lakhs)

	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	Average
<b>Sangam</b>								
Current Assets	3420.52	3039.24	3141.45	2924.15	2930.55	3506.65	3745.57	
Short Term Borrowings	1882.88	1541.54	1542.71	1100.14	1513.89	1059.39	2622.95	
Percentage	55.05	50.72	49.11	37.62	51.66	30.21	70.03	39.30
<b>Heritage</b>								
Current Assets	4051.00	5085.00	7390.00	10482.00	9053.00	11064.00	10709.00	
Short Term Borrowings	974.00	1747.00	4221.00	599.00	759.00	892.00	945.00	
Percentage	24.04	34.36	57.12	5.71	8.38	8.06	8.82	20.93

Source: Compiled from the annual reports

Dairy were financed through short term borrowings while it was 20.93% in the case of Heritage. This indicates Sangam took more advantage in utilizing short term borrowings for financing current assets.

**Sundry Creditors**

The item Sundry Creditors refers to outstandings by dairies for purchases made by them. Sundry Creditors turnover ratio is calculated in terms of number of days outstanding. The details of purchases made by Heritage were not

available it is assumed the raw material cost is the purchases. Creditors turnover in days for the sample units can be seen in Table-6.

The number of days outstanding for Creditors is arrived by dividing the average creditors with the purchases per day. On an average for the period under study number of days outstanding for creditors is 1.96 in the case of Sangam and it was 64.21 in the case of Heritage. Hence it can be said that Heritage is paying their creditors very late when compared to Sangam.

**Table 6: Creditors Turnover in days**

(Rs.in lakhs)

	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	Average
<b>Sangam</b>							
Total purchases	8929.10	10511.87	11636.27	14401.37	17922.91	19980.79	
Purchases per day	29.76	35.04	38.79	48.00	59.74	66.60	
Average Creditors	34.865	24.255	58.57	151.67	233.28	87.43	
No.of days outstanding	1.17	0.69	1.51	3.16	3.90	1.31	1.96
<b>Heritage</b>							
Total purchases	22935.00	28168.00	48693.00	63425	70519.00	87800.00	
Purchases per day	76.45	93.89	162.31	211.42	235.06	292.67	
Average Creditors	1543.50	6185.50	12926.50	16657.50	18202.50	18525.50	
No.of days outstanding	20.19	65.88	79.64	78.79	77.44	63.30	64.21

Source: Compiled from the annual reports



### Working Capital Turnover Ratio

Working Capital turnover ratio is calculated by dividing the net sales by working capital employed. It provides a test to assess the efficiency of the business. If a business is able to increase its sales performance with a comparatively lesser working capital it is considered as very efficient in employing its working capital. The working capital turnover ratio of the sample units for six years study period is given in Table-7.

In the case of Sangam Dairy working capital turnover ratio was ranging between 8.12 and 17.52 during the period from 2005-06 to 2010-11. Whereas in the case of Heritage it was ranging between 5.95 and 11.23 for the same period with an average of 10.93 and 9.21 to Sangam and Heritage

Dairies respectively. This conveys that Sangam Dairy utilized the working capital more efficiently than the Heritage.

### Current Ratio

The current ratio indicates the ability of a business to meet its current obligations. Current ratio is calculated by dividing the current assets by current liabilities. This ratio represents the margin of safety available to short-term creditors. A minimum of 2:1 is often referred to as Standard of liquidity for a business.

A criterion of 100% margin of current assets over current liabilities is a precaution based on the practical knowledge of the possible shrinkage in the value of current assets. There can be instances where even a business

Table 7: Working Capital Turnover Ratio

	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	Average
<b>Sangam</b>							
Net Sales	11655.63	13683.45	15576.14	18962.81	21261.53	25112.35	
Net working capital	2287.75	2313.21	1918.80	1264.52	1213.60	1802.60	
Turn over Ratio	5.90	5.92	8.12	15.00	17.52	13.93	10.93
<b>Heritage</b>							
Net Sales	29207.00	34633.00	58803.00	79256.00	90038.00	109618.00	
Net working capital	3338.00	3169.00	9883.00	8924.00	10172.00	9764.00	
Turn over Ratio	8.75	10.93	5.95	9.56	8.85	11.23	9.21

Source: Compiled from the annual reports

with a high current ratio might not be in a position to pay current liabilities because of unfavourable distribution of current assets. Improvement in the liquidity position of a business results when a greater part of the total current assets is invested in cash, bills and debtors with a lower percentage in inventories. The current ratio and quick ratios for the sample units are shown in Table-8.

The current ratio of Sangam varied between 1.53:1 and 4.14:1 where as in the case of Heritage it ranged between 1.75:1 and 17.50:1 averaging 2.87.1 and 8.85.1 for Sangam and Heritage respectively. The average of Sangam is nearer to the Standard Current Ratio and it is very higher for Heritage Foods India Limited. Hence we can say that the security for the creditors in Heritage is far better than the required.

### Quick Ratio

This ratio provides a more stringent test of solvency. In computation of this ratio only liquid assets and liquid liabilities are taken into account. Inventories are excluded from current assets since sale of products takes time to convert them into cash. Inventory may itself shrink in value due to various factors like slow moving, obsolete and unsaleable inventories. The raw materials also takes much time to be converted into finished products and sold. Quick liabilities means current liabilities minus bank over draft. Generally the ratio of 1:1 indicates that the business has short term financial strength to pay off its current liabilities at short notice. The quick ratio of sample units are shown in Table-8.



Table 8. Current and Quick Ratios

(Rs.in lakhs)

	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	Average
<b>Sangam</b>								
Current Assets	3420.52	3039.24	3141.45	2924.15	2930.55	3506.65	3745.57	
Current liabilities	826.34	751.49	828.24	1005.35	1666.03	2293.05	1942.96	
Inventories	2334.88	2222.92	2426.11	2112.65	1575.08	2585.66	2673.75	
Share capital suspense	250.65	205.65	205.65	205.65	205.65			
Current Ratio	4.14	4.04	3.79	2.91	1.76	1.53	1.93	2.87
Quick Ratio	1.31	1.09	0.86	0.81	0.81	0.40	0.55	0.83
<b>Heritage</b>								
Current Assets	4051.00	5085.00	7390.00	10482.00	9053.00	11064.00	10709.00	
Current liabilities	974.00	1747.00	4221.00	599.00	759.00	892.00	945.00	
Inventories	2360.00	2573.00	4488.00	4539.00	4939.00	7361.00	6607.00	
Current Ratio	4.16	2.91	1.75	17.50	11.92	12.40	11.33	8.85
Quick Ratio	1.74	1.44	0.69	9.92	5.42	3.85	4.34	3.91

Source: Compiled from the annual reports

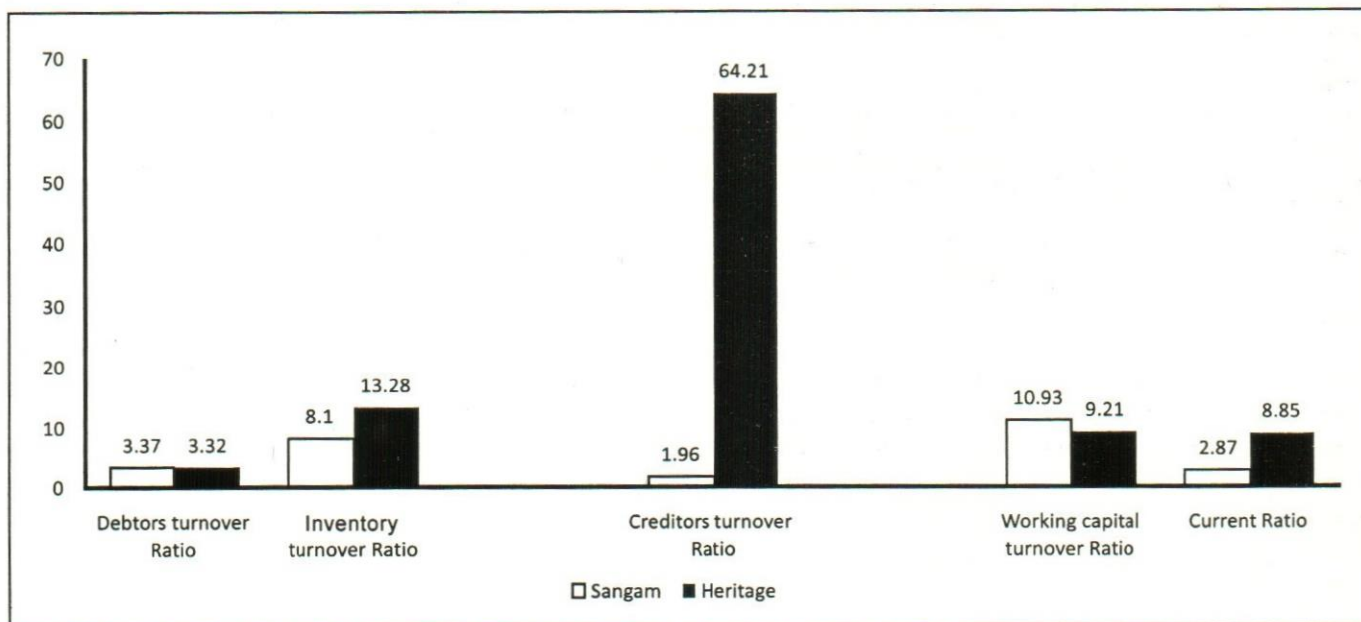


Fig. 1. Debtors Turnover Ratio, Inventory Turnover Ratio, Creditors Turnover Ratio, Working Capital Turnover Ratio and Current Ratio

In the case of Sangam Dairy the Quick ratio was ranging between 0.40:1 and 1.31:1 for the seven years period 2004-05 to 2010-11, averaging 0.83 for seven year period. While in the case of Heritage it was ranging between

0.69:1 and 9.92:1 averaging 3.91:1. This implies that the size of quick assets were satisfactory in both the firms. This is because that the current liabilities of Sangam had an item share capital suspense which is of non-current



nature. The creditors of Heritage are fully secured because its quick ratio is (3.91) is far above the standard (1:1) except in the year 2006-07.

### Findings

- (1) Both the dairies were maintaining large amounts of cash balances as idle asset. Heritage was maintaining much more cash balance when compared to Sangam. This might be because of heavy collection or non-payment of pending bills at the end of the year.
- (2) By observing the relationship between cash to total current assets we can say that Sangam is maintaining less idle cash balance compared to Heritage .
- (3) Looking at the debtors turnover we can say that Sangam is following liberal credit policy than Heritage.  
Sangam—Liberal to stringent credit policy  
Heritage—Stringent to liberal credit policy during the period under study.
- (4) The inventory turnover is more rapid in the case of Heritage than the Sangam.

- (5) Sangam took more advantage in utilising short term borrowings for financing current assets.
- (6) Payments to creditors is earlier in Sangam than in Heritage.
- (7) Sangam dairy is more efficient in using the working capital to improve sales than Heritage.
- (8) The current and Quick liabilities are more secured in Heritage compared to Sangam Dairy.

### Conclusion

The overall working capital management in sangam is better than Heritage Foods (India) Ltd. Besides protecting the interests of the milk producers.

1. Press Note from Hyderabad-Sakshi dated 02.05.2012 Page No. 14.
2. Press Note—Pinipe.Viswaroop hon. Veterinary Minister –Sakshi , Nov.2011.
3. Sakshi 23-12-2011.
4. Kilari Rajan Babu, Chairman, Sangam Dairy.Eenadu, October, 26,1999

*Competition is the keen cutting edge of business, always shaving away at costs.*

*— Henry Ford*



# Productivity Analysis of Meghalaya Rural Bank: Evidence From Indian Rural Banks

J. U. AHMED

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*The productivity is the corner stone of banking growth and economic development. In common parlance, productivity indicates efficiency and effectiveness of services. In order to survive in the present competitive environment, the banks should be strengthened adequately and would attain competitiveness through the use of its existing resources and managing business in effective manner. Therefore, it is imperative to assess the productivity performance of Meghalaya Rural Bank. In the present article, an attempt has been made to study the effectiveness of MRB in the productivity performance keeping in view the trends of rural banks in the national context. The productivity measured in terms of labor, branch, return on assets (ROI), return on investment (ROA), profit as percent of business volume, etc., have been calculated to examine the innovativeness of MRB.*

In economics, productivity is the ratio of output produced by per unit of input (Ahuja, 2006). It may also refer to the technical efficiency of production relative to the allocation of resources of enterprises. If the goal is to increase productivity, enterprises must produce more with the same level of input. The goal can also be achieved by maintaining the same level of output using fewer inputs. The drive to increase productivity can be caused by various factors, but perhaps the most apparent is the aspiration of an enterprise to increase profitability. There are certain factors affecting the productivity of entities. General categories of the factors concerning productivity include the labor force, product, quality, process, capacity, and external influences. The resources are also important to consider in assessment of productivity of an entity.

The increased productivity will directly result in improved profitability for the company that achieves it, but the relationship between productivity and profit is more complicated over the long term. The relationship between productivity and profitability can best be explained with a hypothetical example. Assume a situation where two companies compete in the same regional market with access to the same input factors. Both have similar levels of productivity and profitability. If one company manages to increase its productivity, it will by definition be able to produce the same quantity of goods and services at the same quality level with less input, thereby enjoying a cost advantage. The company then can use the resulting profit for new investments, or it can distribute profit to shareholders as dividends. The company may also choose to offer lower prices in order to gain market share or pay higher wages in order to attract higher skilled labor. A one-time increase in productivity, however, will usually not lead to a sustainable profitability advantage. In order to stay in business, the other company will have to follow



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suit and improve its productivity. Once the two competitors reach the same productivity levels, they will start to compete on price until the original profitability advantage has disappeared.

In the present competitive environment, the most sustainable source of profitability is constant productivity improvement. In other words, profitability is the fleeting reward of productivity improvement. This dynamic also holds true in more complex market situations. Two companies that are located in different regional environment, but which compete directly in a global market may face different input factor costs (i.e., higher wages or cost of capital). In a state of equilibrium, the company that faces higher input factor costs will be able to compensate for this disadvantage through higher productivity. Higher wages, for example, reflect the greater productivity of the labor force in that region. In a competitive environment, where there is a level playing field, an increase in productivity by one company will start the same process as described above, where the company's competitor is forced to make productivity improvements. In fact, this process may eventually lead to a convergence in input factor costs between the two countries (Leade, 2009). The pressure for ever-increasing profits is intense and unrelenting today and accommodating Wall Street, coping with local competitors and thriving in the global economy make bottom-line efficiency an absolute day-to-day business essential (Frei & Mader, 2008).

The productivity analysis may be said as an evaluative activity of the performance of an entity. The purpose of it being employed is to provide the appropriate solution to a problem that hinders the attainment of production goals in the present and future of the company. The findings from productivity analysis being undertaken are indeed of great help in providing an entity the necessary changes to be implemented for the realization of its production goals (Miller, 2010). Profitability analysis is the assessment of the impact of various marketing strategies on the profit contribution that can be expected from a product or product line whereas productivity analyses is the assessment of the sales or market share consequences of a marketing strategy.

### ***Productivity Analysis: The Conceptual Framework***

In the present changing economic scenario, the importance of productivity has assumed a crucial significance for the viability of banks. Productivity is one of the factors affecting the profitability among others such as expansion of bank's operations in areas where the

avenues for profitable deployment of funds are less, increased overdraft, higher overhead expenses, increase in sickness in industrial units faced by the banks, NPAs, etc. Higher the productivity, proportionately lower will be the establishment cost. It also indicates the kind of business a particular bank may be doing. A high productivity indicates that, along smaller transactions, a bank does high volume of transactions too. A lower productivity increases relative operational cost and often becomes the cause of losses as intermediary returns are directly related to the quantum of productivity. Bank, as a business concern, cannot overlook the profitability aspects since profit signifies efficiency. For the long-term survival and growth of banks, profit is imperative. The banks have, of late, demonstrated a remarkable ability to adjust to the new operating environment and acquired a high level of business strength.

### ***Definition and Meaning of Productivity***

Productivity is a universal concept refers to an organization's effectiveness in using all its resources viz., labor, financial resources, fixed assets, and premises. It indicates the relationship between output and input expended in any work situation (Monga, 1992). In this respect, Peter Drucker (1980) articulated "without productivity objectives, a business does not have direction. Without productivity measurement, it does not have control." Productivity is an efficiency index that measures the rate of output per unit of input like man, material, machine, money, and space. It explains the efficiency in the use of factors of production employed by an organization.

Productivity is the corner stone of banking growth and economic development. In simple sense, it means efficiency and effectiveness of services. In fact, productivity is an essential part of our urge for self-improvement and achievement of excellence that is a part of our dynamic society. Optimum productivity is reached when there is a balance between all factors of production that yield maximum output for least effort (Choudhary, 1998). The productivity measures the extend to which the actual input consumption exceeds the minimum input necessary to produce the actual output level (Ahmed, 2003). The minimum input consumption is determined in a manner consistent with other current knowledge of the available production technology (Diwan, 1997) but there are difficulties in measuring productivity in service industries where quality of services assumes greater importance. A bank is described as a financial institution generating a



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stream of financial services in order to sustain a stock of assets and liabilities. The financial services are produced, delivered and consumed instantaneously. In the process, the consumer is exposed to an experiential quality that is part of the service. In case of banks, the distinction between input and output is not clear (Athma & Srinivas, 1997). One aspect of productivity is the measurement of business (deposit + advances) per branch and per employee and the other aspect is cost responsiveness and return on working fund (Angadi, 1984).

The regional rural banks (RRBs) were established to mobilize rural savings and its use especially for the development of the village economy of the nation through agriculture, small industry, etc., and in the process of utilization of village potential resources. Therefore, it is an urge to understand whether the resources accumulated by the RRBs are utilized effectively for achieving overall productivity. With the initiation of financial sector reforms there have been several changes in the working of RRBs because various measures have been undertaken by the government to improve the commercial viability of the RRBs and their level of productivity. The various committees also apprehended that RRBs have always important for changing the ground reality of village economy but necessary is to improve the operational viability of the institution and thereby to bring higher productivity and profitability.

### ***Previous Studies***

In the context of institutional dimension, Nitin and Throat (2004) observed that efforts taken during the reform era have limited impact because the reform process change in institutional dimension has not been given adequate importance. Few efforts were made to redesign the perverse institutional arrangements that gave rise to incompatible incentive structures for key stakeholders, such as political leaders, policy makers, stockholders, bank staff, and clients and suggested to bring change further to increase productivity of the bank. Hosmani (2002) studied on performance of RRBs related to Malaprabha Grameen Bank and observed that the managerial efforts in terms of imparting recent banking know-how, knowledge, and skills helped to improve the business performance of the bank by way of increased deposits, advances, business, recovery, and profitability. Joshua and Nahm (2006) studied on cost and profit efficiency for Australian banks between 1995 and 2002 by using Data Envelopment Analysis (DEA) to construct an efficient frontier for ten banks listed on the Australian Stock Exchange. Empirical results indicate the

major banks have improved their cost and profit efficiency, while the regional banks have experienced little change in cost efficiency, and a decline in profit efficiency.

Banking sector efficiency is considered as a precondition for macro-economic stability, monetary policy execution, and economic growth. In this respect, Qayyum and Khan (2006) investigated empirically the efficiency, scale economies, and technological progress of commercial banks operating in Pakistan. They observed that the domestic banks operating in Pakistan are relatively less efficient than their foreign counterparts. Sathye (2003) measured the productive efficiency of banks in India. He found that the mean efficiency score of Indian banks compares well with the world mean efficiency score and the efficiency of private sector commercial banks as a group is, paradoxically lower than that of public sector banks and foreign banks in India. The study recommended that the existing policy of reducing non-performing assets and rationalization of staff and branches may be continued to obtain efficiency gains and make the Indian banks internationally competitive. Das (2002) analyzed the level of risk and productivity of public sector banks and observed interrelationship of the fact that the productivity, capital base and risk taking tend to be jointly determined and reinforced. Cheema and Agarwal (2002) observed the productivity is a measure for efficient resource use and showed that commercial banks operating in India are below the average level of efficiency. Ahmed (2003) analyzed empirically the bank's productivity performance and inferred that wicked nature of clientele resulted in lower productivity of banks. The factors like lower contribution to priority sector lending, lesser involvement in private sector lending, and profitable activities are mainly responsible for this state of affairs. In the liberalized environment, Pati (2005) has referred financial parameters in almost all the states of NER are far below the national level. He observed that many RRBs in this region are on the verge of financial collapse due to the level of business volume. Reddy (2006) examined total factor productivity technical and scale efficiency changes in regional rural banks by using data from 192 banks for the period 1996 to 2002. It observed that total factor productivity growth of rural banks was higher than the service provision during liberalization. Banks located in economically developed as well as low banking density regions exhibited significantly higher productivity growth. It also observed that parent PSBs have no influence on the efficiency and productivity growth of rural banks.



Khanokoje and Sathye (2008)<sup>1</sup> measured the efficiency of rural banks with the help of non-parametric technique of Data Envelopment Analysis (DEA). Efficiency scores were calculated for the years 1990 to 2002; thereafter these scores were compared for before and after the restructuring year (1993–94). The study found that productive efficiency of RRBs has increased. Ibrahim (2010) observed that performance of rural banks have significantly improved after amalgamation process which has been initiated by the Government of India. Credit–deposit ratio has increased over the years showing a remarkable deployment of credit by these banks in rural areas. It also observed that during the post merger period although the numbers of RRBs have decreased the number of branches and districts covered by the RRBs in the country have increased.

Reddy and Prasad (2011) observed that the banks have penetrated into every corner of the country and have been extending helping hand in the growth of the economy. Despite the RRBs journeyed over three decades, they have achieved performance to the expected level turning towards sound financial management and productivity. Moreover the achieved performance is not uniform though they are working under the approach of same management. Bhaskar (2011) observed that RRBs have to be repositioned and carry out their entrusted responsibility of meeting the credit requirement in rural sector, their various constraining factor such as low credit off take, small ticket business, low recovery rate, and high employee cost. In order to reposition RRBs, loss making RRBs should take step for enhancing productivity by improving the skill and performance of their employees by better and specialized training in the areas of banking and finance, IT, management, etc.

### Productivity of RRBs: The Measuring Techniques.

The productivity ratios of banks are worked out by relating the total deposits, total advances, and the total business (deposit plus advances) of the banks to the total number of branches and also total number of employees. The following are the commonly used ratios measuring productivity of the banks.

#### Labor Productivity

1. Deposit per employee =  $\frac{\text{Total Deposits}}{\text{No. of employees}}$
2. Advance per employee =  $\frac{\text{Total Advances}}{\text{No. of employees}}$
3. Business per employee =  $\frac{\text{Deposits+Advances}}{\text{No. of employees}}$

#### Branch Productivity

1. Deposit per branch =  $\frac{\text{Total Deposits}}{\text{No. of branches}}$
2. Advances per branch =  $\frac{\text{Total Advances}}{\text{No. of branches}}$
3. Business per branch =  $\frac{\text{Deposit+ Advances}}{\text{No. of branches}}$

#### Return on Investment, Return on Assets, and Profit as Percentage of Volume of Business

The productivity of banks can also be measured with return on investment (ROI) and profit as percentage of volume of business. The return on investment enables us to know profitability of the funds used for investment. It shows the productivity of capital employed. Higher the profits as a percentage of volume of business, the better will be the productivity performance of a bank. The return on investment (ROI), profit as percent of assets (ROA), and profit as percentage of volume of business can be calculated with the help of following formulas.

1. Return on investment (ROI) =  $\frac{\text{Net Profit}}{\text{Investment}} \times 100$
2. Profit as percent of assets (ROA) =  $\frac{\text{Net Profit}}{\text{Total assets}} \times 100$
3. Profit as percent of volume of business =  $\frac{\text{Net Profit}}{\text{Volume of Business}} \times 100$

### Productivity Performance of Regional Rural Banks

#### Background

The total numbers of RRBs in all India level were 196 in 2000–01, which reduced to 82 in the year 2010–11. This decrease in number is due to restructuring strategies adopted and amalgamation of various RRBs in the country which started after the implementation of the Narasimham Committee recommendation by the Government of India. Although the numbers of RRBs have decreased over the years, the branch network has increased to 15,658 in 2010–11 from 14,301 branches in 2000–01. During the period of 11 years under consideration, 1,357 branches increased in order to cover more number of districts. This has been confirmed by the fact that the number of districts covered by the RRBs in the country has increased from 484 in 2000–01 to 621 districts in 2010–11. It indicates that an additional 137 districts were covered by setting up of new branches in the various uncovered and under-banked districts of the country. The population served per



branch of RRBs is interestingly high, i.e., roughly 84.6 thousand in 2000–01 which slightly improved and figured at 77.3 thousand populations served per branch in 2010–11. The scenario is extremely terrible while compared with the population per branch of commercial bank as a whole which covered 18 thousand populations by each branch during 2010–11 (IBA, 2011). The number of employee per branch found to be very low, i.e., around 4 to 5 persons throughout the period. In 2000–01, the average number of employees per office was 4.90 which declined to 4.14 during the year 2010–11. This decrease in average number of employees per branch may be due to computerization in certain branches of RRBs. The data relating to the background of RRBs are presented in Table 1.

The resource mobilization is an integral part of banking activity. The government has directed the banks to make all possible efforts to access to new deposits that can only expedite the pace of lending activities. There has been a substantial rise of deposits of RRBs during the period under consideration. The amount of deposit in the year 2000–01 was Rs. 37,027 crore and this figure has gone up to Rs. 1,63,928 crore in 2010–11, recording 4.43 times increase in deposit over the years. Although there has been decrease in the total numbers of RRBs in

the country, the quantum of deposit has increased over the years.

The bank credit is an important input variable in the production functions of agriculture, industry, commerce and allied productive activities for the socio-economic development of the backward region of the country. The loans and advances offered by the RRBs in the country are also increasing over the years in a continuous manner as observed from Table 1. The total amount of loans and advances of RRBs in the country was Rs. 15,794 crore in 2000–01; the amount has gone up to a total of Rs. 98,244 crore. It is clear that the total amount of loans and advances of RRBs in the country has increased by more than 5 times over the period.

The credit deposit of the RRBs in India has been increased over the years. The fact has been delineated in Table 1. In 2000–01, the credit deposit ratio of the RRBs in the country was 41.0 percent which increased to 59.6 percent in 2010–11. The trend of credit deposit ratio of commercial banks is much higher than that of the RRBs; the figure was 45.9 percent in March 2001 which has reached to the level of 73.9 percent in March 2008 (RBI, 2008). Hence the apparent fact remains that the RRBs

**Table 1. Performance of Regional Rural Banks in India**

Year	No. of RRBs	No. of Branches	No. of Employee per branch	No. of Districts Covered	Population Per Branch*	Deposits (Rs. in Crore)	Loans and advances (Rs. in Crore)	Credit-Deposit Ratio (%)
2000–01	196	14,301	4.90	484	84622.99	37,027	15,794	41.0
2001–02	196	14,390	4.86	511	84099.61	43,220	18,629	41.8
2002–03	196	14,433	4.82	516	83849.06	48,346	22,158	44.2
2003–04	196	14,446	4.79	518	83773.60	57,010	26,115	46.3
2004–05	133	14,484	4.76	523	83553.81	62,143	32,871	52.8
2005–06	94	14,494	4.73	525	83496.17	71,329	38,520	55.6
2006–07	90	14,520	4.70	534	83346.65	83,144	47,326	58.3
2007–08	90	14,761	4.60	594	81985.87	99,093	57,568	59.5
2008–09	86	15,181	4.51	616	79717.64	1,20,189	65,609	56.4
2009–10	82	15,475	4.22	619	78203.13	1,45,035	79,157	57.6
2010–11	82	15,658	4.14	621	77289.14	1,63,928	98,244	59.6

Source: Reserve Bank of India, Basic Statistical Return of Scheduled Commercial Banks, Various Issues  
RBI Report on Trend and Progress of Banking in India, Various Issues  
RBI, Statistical Tables Relating to Banks in India 2003

Note: \*population per branch of RRB is calculated with the total population as per 2011 census divided by the number of branches



failed to maintain the C/D ratio of commercial banks of the country during the period. The reason of significantly low C/D ratio of RRBs may be attributed to nature of loans sanctioned, non-recovery of loans, stubborn cheaters, lack of direction of end use of bank credit, lack of implementation of bankable schemes and so on.

### **Productivity of Regional Rural Banks**

The consequence of productivity analysis has assumed a crucial implication for the viability of banks. The high productivity indicates that a bank does high volume of transactions. A lower productivity increases relative operational cost and often becomes the cause of losses as intermediary returns are directly related to the quantum of productivity. The RRBs can not overlook the profitability aspects since profit signifies efficiency. The increase in productivity decreases the costs per unit produced and leads to better profitability. Productivity improvement is one means among others for increasing the profitability of actions. Therefore it is imperative to assess the productivity performance of RRBs. The productivity measured in terms of labor productivity, branch productivity, return on assets

and profit as percent of volume of business etc have been calculated to examine the footing of rural banks for the period 2000–01 to 2010–11.

### **Labor Productivity of RRBs**

The widely used parameters like deposit per employee, advance per employee and business per employee have been used to measure the labor productivity in RRBs as a whole. The accompanying Table 2 exhibits labor productivity and branch productivity of RRBs.

The deposit per employee in 2000–01 was Rs. 0.53 crore which increased to Rs.2.53 crore in 2010–11. In case of advance per employee of the RRBs, it was Rs. 0.23 crore in 2000–01, has increased to Rs. 1.52 crore in 2010–11. Although there has been continuous increase in the level of advance per employee, the average deposit per employee is higher than the average advances per employee throughout the period. Similarly, the business (deposit plus advances) per employee was Rs. 0.75 crore in 2000–01 which increased to 4.04 crore in 2010–11 recording 5.39 fold increases.

**Table 2 Productivity Ratios of Regional Rural Banks in India**

(Amount Rs. in Crore)

Year	Labor Productivity			Branch Productivity		
	Deposit per employee	Advance per employee	Business per employee	Deposit per branch	Advances per branch	Business per branch
2000–01	0.53	0.23	0.75	2.59	1.10	3.69
2001–02	0.62	0.27	0.89	3.00	1.29	4.30
2002–03	0.70	0.32	1.01	3.35	1.54	4.88
2003–04	0.82	0.38	1.20	3.94	1.81	5.75
2004–05	0.90	0.48	1.38	4.29	2.27	6.56
2005–06	1.04	0.56	1.60	4.92	2.66	7.58
2006–07	1.22	0.69	1.91	5.73	3.26	8.99
2007–08	1.46	0.85	2.30	6.71	3.90	10.61
2008–09	1.75	0.96	2.71	7.92	4.32	12.24
2009–10	2.22	1.21	3.43	9.37	5.12	14.49
2010–11	2.53	1.52	4.04	10.47	6.27	16.74
Grand Mean	1.25	0.68	1.93	5.66	3.05	8.71

Source: Self-calculated by the researcher.



### Branch Productivity of RRBs

The parameters like deposit per branch, advances per branch and business per branch are used to measure the branch productivity. It is observed from the table that the average productivity per branch in terms of deposits, advances, and total business has increased considerably. The deposit per branch in 2000–01 was Rs. 2.59 crore which has increased to Rs. 10.47 crore in 2010–11. Over the years there is 4.04 times increase in the deposit per branch of RRBs. In case of advances per branch, it increased from Rs 1.10 crore to Rs. 6.27 crore recording 5.70 times increase. As a result, the business per branch increased from Rs. 3.69 cores to 16.74 crore between the periods 2000–01 and 2010–11 recording 4.54 times increase over the years. It is evident from the table that there has been continuous growth of deposit per branch, advances per branch and the business per branch. The growth of deposits per branch is higher than growth of advances per branch throughout the period under consideration. This is a positive sign for productivity performance of RRBs. However, the RRBs performance in business volume per branch while compared with scheduled commercial banks (SCBs) of the country is not up to the mark. The figure for business per branch for SCBs at the national level was Rs. 88.15 crore in 2009–10 (RBI, 2010–11).

### Relationship between Per Employee Income, Expenditure, and Productivity

To attain higher productivity by the banking institution it needs to be highly competitive in the present market environment. After the reform in 1991, the nature of competition and the mode of operation of the rural banks have changed. The strategy of enhancing volume of business per branch and as well as reducing per employee expenditure of the bank became the need of the hour. In case of RRBs for attaining higher productivity and its healthy growth in the backward economy of the country, it required to have own strategy for their survival. Therefore, an attempt has been made to examine the relationship between income, expenditure, and productivity. For this purpose, per capita employee income, per capita employee expenditure, per employee profits and per branch income, expenditure and profits etc are calculated and presented in Table 3.

It is revealed from the table that the per capita employee income of the RRBs as a whole was Rs. 0.07 crore in 2000–01 which increased to Rs. 0.25 crore in 2010–11. Similarly, the income per bank branch was Rs. 0.33 crore in 2000–01 and it improved to Rs.1.04 crore in 2010–11. In the same way, the per capita employee expenditure increased from Rs. 0.06 crore to Rs. 0.21 crore during the years of study. The expenditure per bank

Table 3. Per Capita and Per Employee Income, Expenditure, and Profits of RRBs

(Amount Rs. In crore)

Year	Per capita employee income	income per bank branch	Per capita employee expenditure	Expenditure per bank branch	Profit Per employee	Profit per bank branch
2000–01	0.07	0.33	0.06	0.29	0.008	0.04
2001–02	0.08	0.39	0.07	0.34	0.009	0.04
2002–03	0.09	0.41	0.08	0.37	0.008	0.04
2003–04	0.09	0.43	0.08	0.38	0.011	0.05
2004–05	0.09	0.42	0.08	0.37	0.011	0.05
2005–06	0.10	0.45	0.09	0.41	0.009	0.04
2006–07	0.11	0.53	0.10	0.48	0.009	0.04
2007–08	0.14	0.64	0.12	0.57	0.015	0.07
2008–09	0.17	0.75	0.15	0.66	0.019	0.09
2009–10	0.21	0.89	0.18	0.77	0.029	0.12
2010–11	0.25	1.04	0.21	0.91	0.031	0.13

Source: Self calculated by the researcher.



**Table 4. Correlation Matrix of the Variables**

Variables	PEI	IPB	PEE	EPB	PPE	PPB
PEI	1					
IPB	0.99	1				
PEE	0.99	0.99	1			
EPB	0.99	0.99	0.99	1		
PEB	0.97	0.97	0.97	0.96	1	
BPB	0.98	0.97	0.97	0.96	0.99	1

Note: Here,  
 PEI= Per Capita Employee Income  
 IPB=Income per Bank Branch  
 PEE=Per Capita Employee Expenditure  
 EPB= Expenditure per Bank Branch  
 PPE=Profit per Employee  
 PPB= Profit per Bank Branch

branch increased from Rs. 0.29 crore to Rs. 0.91 crore. In 2000–01, the profit per employee was Rs. 0.008 crore which increased to Rs. 0.031 crore in 2010–11. The increase in profit per employee is 3.88 times over the years. Lastly, the increase in profit per bank branch is swelled to Rs. 0.13 crore from Rs.0.04 crore during the period 2000–01 to 2010–11.

The correlation matrix analysis has been employed to examine the nature of relationship among the aforesaid variables viz., per capita employee income, per capita employee expenditure, per employee profits, per branch income, per branch expenditure and per branch profits. The results obtained are displayed in Table 4.

The correlation matrix discerned that the “r” values between the variables are highly positive indicating a high degree of relationship exists among the variables. The level of per employee income is associated with the level of per employee business. With the increasing volume of expenditure there will be corresponding increasing increase in volume of business. Thus incentives to employees, automation of branches, facilities to the customers are the prerequisites for the growth of productivity of the employees and the branches of RRBs.

*Return on Assets, Investment and Volume of Business*

The productivity of RRBs may further be examined on the basis of the parameters viz., profit as percent of investment, profit as percent of total assets and profit as percentage of volume of business. Table 5 depicts the aforesaid

productivity ratios. The table reveals that during the year 2000–01 the profit as percent of investment was 7.81 percent which declined to 3.60 percent in 2010–11. Similarly, the profit as percent of volume of business was 1.12 percent in the year 2000–01. In 2010–11 this has decreased to 0.76 percent. The lowest percentage was in

**Table 5. Return on Investment (ROI), Profit as percent of Assets (ROA) and Profit as Percentage of Volume of Business**

Year	Profit as percentage of volume of business	Profit as percentage of Investment	Profit as percentage of total Assets
2000–01	1.12	7.81	1.21
2001–02	0.98	8.98	1.07
2002–03	0.74	4.19	0.83
2003–04	0.93	4.41	1.09
2004–05	0.79	3.23	0.96
2005–06	0.56	2.48	0.69
2006–07	0.48	2.37	0.59
2007–08	0.66	3.40	0.82
2008–09	0.72	3.51	0.89
2009–10	0.84	3.98	1.02
2010–11	0.76	3.60	0.92
Grand Mean	0.78	4.36	0.91

Source: Self calculated by the researcher



the year 2006–07, that is, 0.48 percent. The average of profit as percentage of volume of business of RRBs is 0.78 percent. The profit as percent of total assets has declined with extreme fluctuation, throughout the period. The above ratio indicates that the RRBs productivity performance has been declined leading to an adverse effect on profitability of banks. This may be due to repositioning strategies of RRBs at national level in one hand, and also due to character of rural clients for non repayment of loans and advances they gain, on the other.

### Productivity Performance of RRBs in the North East

Table 6 presents the position of branch and labor productivity of all the RRBs in NER. It is observed that branch productivity (volume of business per branch) of Tripura Gramin Bank (Rs. 2567.42 lakhs) is highest in north east which is followed by Assam Gramin Vikas Bank (Rs. 1427.13 Lakhs), Meghalaya Rural Bank (Rs. 1259.63 lakhs), Mizoram Rural Bank (Rs. 1166.05 lakhs), Arunachal Pradesh Rural Bank (Rs. 963.53 Lakhs), Langpi Dehangi Rural Bank (Rs. 864.90 lakhs), Manipur Rural Bank (Rs. 438.33 lakhs) and Nagaland Rural Bank (Rs. 418.86 lakhs).

In case of labor productivity (business per employee), Tripura Gramin Bank (Rs.437.76 lakhs) is highest in the

**Table 6. Productivity of RRBs of NER as on March, 2010**  
(Amount Rs. In Lakhs)

Name of RRBs	Branch Productivity (Business per branch)	Staff Productivity (Business per employee)
1. Arunachal Pradesh Rural Bank	963.53	298.56
2. Assam Gramin Vikas Bank	1427.13	298.68
3. Langpi Dehangi Rural Bank	864.90	205.23
4. Manipur Rural Bank	438.33	140.89
5. Meghalaya Rural Bank	1259.63	317.80
6. Mizoram Rural Bank	1166.05	333.94
7. Nagaland Rural Bank	418.86	113.20
8. Tripura Gramin Bank	2567.42	437.76
RRBs at NER	1138.23	268.26
RRBs as a Whole	1471.93	330.02

Source: RRB Monitoring, Key Performance Indicators of RRB, Key Statistics 2009–10.

north east region which is followed by Mizoram Rural Bank (Rs. 333.94 lakhs), Meghalaya Rural Bank (Rs. 317.80 lakhs), Assam Gramin Vikas Bank (Rs. 298.68 lakhs), Arunachal Pradesh Rural Bank (Rs. 298.56 lakhs), Langpi Dehangi Rural Bank (Rs. 205.23 lakhs), Manipur Rural Bank (Rs. 140.89 lakhs), and Nagaland Rural Bank (Rs. 113.20 lakhs).

It is clear from the regional level analysis of productivity of RRBs that MRB placed in 3rd rank among the RRBs in NER in terms of both labor and branch productivity. However, average productivity of Meghalaya Rural Bank (MRB) is higher than the productivity of RRBs in NER as on March 2010. With this backdrop, a further analysis on productivity performance of MRB is undertaken on the basis the similar parameters to have in depth study of the problem.

### Productivity of Meghalaya Rural Bank: An Empirical Analysis

The foregoing analyses clearly reveal that efforts are being made to improve the productivity of RRBs in India during the period under consideration as reflected from branch and labor productivity parameters. In the following paragraph, an attempt has been made to analyze the productivity performance of Meghalaya Rural Bank. For this purpose, we have considered all the branches of MRB operating in Meghalaya. To analyze the productivity of bank branches under consideration, we have considered labor productivity, branch productivity, return on assets and profit as percent of volume of business. The data have been collected from the various issues of annual reports of MRB during the period 2000–01 to 2010–11.

#### Performance of MRB: The Backdrop

Meghalaya Rural Bank has an extensive network of 58 branches spread across the 6 out of 7 districts of Meghalaya viz., East Khasi Hills, West Khasi Hills, Jaintia Hills, Ri Bhoi, West Garo Hills, and East Garo Hills. The bank has the distinct record for over 50 percent of the total number of rural bank branches in its area of operation. However, it has not set up any satellite branch or extension counter. It is revealed from the following Table that in 2000–01, there were only 51 branches of MRB functioning in 4 out of 7 districts of the state. In 2010–11, the number of branches of the MRB has increased to 58 in 6 districts of Meghalaya.

The population served per branch of MRB is 58.1 thousand in 2000–01 which slightly improved and figured



Table 7. Performance of MRB

Year	No. of Branches	No. of employee per office	No. of Districts Covered	Population Per Branch*	Deposits (Rs. In thousands)	Loans & advances (Rs. In thousands)	C/D Ratio
2000-01	51	3.6	4	58,118	12,26,293	3,03,392	30.00
2001-02	51	3.5	4	58,118	14,32,184	3,52,205	25.00
2002-03	51	3.6	4	58,118	15,53,924	4,06,167	26.00
2003-04	51	3.6	4	58,118	17,58,127	4,62,522	26.31
2004-05	51	3.6	4	58,118	21,99,196	5,42,438	24.67
2005-06	51	3.5	4	58,118	25,04,085	6,66,700	26.63
2006-07	51	3.5	4	58,118	28,01,385	8,25,357	29.36
2007-08	52	4.1	5	57,000	31,59,848	9,73,316	30.80
2008-09	54	3.8	6	54,889	40,39,445	11,86,477	29.37
2009-10	55	3.9	6	53,891	53,23,070	16,04,869	30.15
2010-11	58	4.4	6	51,104	67,74,188	21,61,545	31.91

Source: Annual Report of Meghalaya Rural Bank, Various issues.

Note: \*population per branch of MRB is calculated with the total population of Meghalaya as per 2011 census divided by the number of branches

at 51.1 thousand populations served per branch in 2010-11. The scenario is relatively better while compared with the population per branch of RRBs as a whole which covered 77.3 thousand populations by each branch during 2010-11. The number of employee per branch found to be very low, i.e., around 3 to 4 persons throughout the period. This may be due to the abolition of clerical cadre over a period of time by converting the staff into multipurpose workers. The staff norms, i.e., 4.2 number of staff per branch as recommended by Agarwal Committee in 2000, has not achieved by MRB till 2009-10. In 2000-01, the average number of employee per office was 3.6 which have risen to 3.9 in 2009-10 and a further increase of 4.4 during the year 2010-11.

The total amount of deposit mobilized by the MRB in 2000-01 was Rs. 12,26,293 thousands and the amount has increased to Rs. 67,74,188 thousand in 2010-11. It indicates, the increase in total deposit mobilization of the MRB is 5.52 fold during 2000-01 to 2010-11. Similarly, the total loans and advances outstanding of the MRB in 2000-01 was Rs. 3,03,392 thousand. In 2010-11 the quantum of total loans and advances outstanding has increased to Rs. 21,61,545 thousand. The credit deposit ratio of the Meghalaya Rural Bank was 30 percent in 2000-01 which increased to 31.91 percent in 2010-11 as

displayed in Table 7. The C/D ratio of MRB is not up to the mark while compared with RRB as a whole. The same for RRBs was 41.0 percent in 2000-01 which augmented to 59.6 percent in 2010-11. The reason of significant low ratio of MRB may be attributed to non recovery of loans, willful defaulters, lack of supervision of end use of bank credit, lack of implementation of bankable schemes. This exhibited poor credit absorption capacity of the entire area along with lack of entrepreneurial zeal to undertake viable projects.

In order to examine the degree of relationship between growth of deposits and growth of advances of MRB, coefficient of correlation analysis has been employed. For this purpose, deposit per office and advance per office have been considered for the period of 11 years from 2000-2001 to 2010-11. The result obtained as under:

$$r = 0.997$$

$$t = 21.06 \text{ (cal.)}$$

$$t_{0.05} (9 \text{ df.}) = 1.833 \text{ (tab)}$$

$$t_{0.01} (9 \text{ df.}) = 2.821 \text{ (tab)}$$

The high correlation ( $r=0.997$ ) value between deposit per office and advances per office are statistically significant at 1 percent and 5 percent level of significance. The



Table 8. Productivity Ratios of Meghalaya Rural Bank

(Amount Rs in thousands)

Year	Labor Productivity			Branch Productivity		
	Deposit per employee	Advance per employee	Business per employee	Deposit per branch	Advances per branch	Business per branch
2000-01	6,701.05	1,657.88	8,358.93	24,044.91	5,948.86	29,993.82
2001-02	7,912.62	1,945.88	9,858.50	28,082.02	6,905.98	34,988.02
2002-03	8,445.24	2,207.43	10,652.67	30,470.00	7,964.06	38,433.16
2003-04	9,555.04	2,513.71	12,068.74	34,473.08	9,069.06	43,542.14
2004-05	12,017.46	2,964.14	14,981.61	43,121.49	10,636.04	53,757.53
2005-06	14,067.89	3,745.51	17,813.40	49,099.71	13,072.55	62,172.25
2006-07	15,916.96	4,689.53	20,606.49	54,929.12	16,183.47	71,112.59
2007-08	14,904.94	4,591.11	19,496.06	61,957.80	19,084.63	79,483.92
2008-09	19,608.96	5,759.60	25,368.55	74,804.54	23,264.26	96,776.33
2009-10	24,417.75	7,361.78	31,779.54	96,783.09	29,179.44	1,25,962.52
2010-11	26,461.67	8,443.54	34,905.21	1,16,796.34	37,268.02	1,54,064.36
Grand Mean	14,546.33	4,170.92	18,717.25	55,869.28	16,234.22	71,844.02

Source: Self-calculated by the researcher

calculated value of "t" is significantly higher than the table value at 5 percent and 1 percent level. It confirms that over the years deposit per office and advance per office of the Meghalaya Rural Bank are increasing in the same proportion. The high correlation coefficient will undoubtedly indicate more savings habit of the people as well as higher volume of credit deployment of MRB in the area.

#### **Labor Productivity of MRB**

We have used deposit per employee, advance per employee and business per employee, widely used parameter to measure the labor productivity. The accompanying Table 8 exhibits the productivity ratio of MRB.

It reveals that deposit per employee in 2000-01 was Rs. 6,701.05 thousand and it increased to Rs. 26,461.67 thousand in 2010-11. Over the years, the increase in deposit is Rs. 3.95 thousand per employee. Similarly in case of advance per employee it was Rs. 1,657.88 thousand in 2000-01 and increased to Rs. 8,443.54 thousand in 2010-11. Over the years it increased by 5.09 times. In the same manner, the business per employee

was Rs. 8,358.93 thousand in 2000-01 which increased to Rs. 34,905.21 thousand in 2010-11 recording 4.18 times lift up. The MRB maintained the similar trend of business growth of per employee with the per employee business growth of RRBs. During 2000-01, the business per employee of RRB was Rs. 7,500 thousand which swelled to Rs. 40,400 thousand in 2010-11.

#### **Branch Productivity of MRB**

The branch productivity of the MRB reveals that the deposit per branch in 2000-01 was Rs. 24,044.91 thousand which increased to Rs. 1,16,796.34 thousand in 2010-11. Over the years, the increase is 4.88 times per branch. The advance per branch in 2000-01 was Rs. 5,948.86 thousand and it has increased to Rs. 37,268.02 in 2010-11. During the period, there has been 6.24 times increase in advance per branch. Lastly, the business per branch was Rs. 29,993.82 thousand in 2000-01 which increased to Rs. 1,54,064.36 thousand in 2010-11 recording 5.14 times increase. The MRB is doing better in terms of volume of business per branch while compared with RRBs a whole. The business per branch of RRB was Rs. 36,900 thousand



in 2000–01, swelled to Rs. 1,67,400 thousand in 2010–11. The better productivity performance of MRB is due to the fact that they are able to mobilize more deposit from the area. This indicates that the MRB is utilizing efficiently the resources that they mobilized.

Further, we have considered correlation analysis for labor and branch productivity between MRB as well as RRB in order to examine the extent of productivity of MRB. The result found is as under:

#### Correlations between MRB and RRB

Labor Productivity	Branch Productivity
0.989	0.991

The high positive “r” values for both the parameters indicate a close relationship between MRB and RRBs in respect of their productivity performance. It is observed that MRB is performing as good as RRBs as a whole particularly for acquiring business per bank branch and business per employee during 2000–01 to 2010–11. It means that the MRB in the state of Meghalaya is performing its volume of business at par with RRB of the country.

#### Per Employee and Per Branch Income, Expenditure, and Productivity of MRB

The data relating to per employee income, expenditure, profits and per branch income, expenditure, profits of MRB have been collected from the annual reports of Meghalaya Rural Bank for the period of 2000–01 to 2010–11. On the basis of collected data, employee income, expenditure and branch productivity ratios are calculated which is shown in Table 9.

The per capita employee income of MRB was Rs. 765.72 thousand in 2000–01 which increased to Rs. 2,236.08 thousand in 2010–11 recording 2.92 times increase. Similarly income per branch was Rs.2,747.57 thousand in 2000–01 which increased to Rs.9,869.59 thousand in 2010–11 recording 3.59 times raise. In the expenditure side, the per capita employee expenditure in 2000–01 was Rs. 622.21 thousand and it increased to Rs. 1,767.65 thousand in 2010–11. During period under consideration, per capita employee expenditure of the MRB has increased roughly 2.84 times. The expenditure per branch was Rs. 2,232.65 thousand in 2000–01, has increased to Rs. 7,802.05 thousand in 2010–11. Similarly the profit per employee in the MRB in 2000–01 was Rs.143.50 thousand which increased to Rs.468.43

Table 9. Per Capita and Per Employee Income, Expenditure and Volume of Business of MRB

(Amount Rs. in thousand)

Year	Per capita employee income	income per bank branch	Per capita employee expenditure	Expenditure per bank branch	Profit Per employee	Profit per branch
2000–01	765.72	2,747.57	622.21	2,232.65	143.50	514.92
2001–02	945.49	3,355.55	731.52	2,596.20	213.96	759.35
2002–03	929.44	3,353.27	760.91	2,745.25	168.53	608.02
2003–04	918.34	3,313.23	798.06	2,879.27	120.28	433.96
2004–05	975.62	3,500.76	893.97	3,207.78	81.65	292.98
2005–06	953.51	3,327.94	844.96	2,949.06	108.56	378.88
2006–07	1,184.97	4,089.31	986.68	3,405.02	198.29	684.29
2007–08	1,269.07	5,173.90	989.75	4,035.12	279.33	1,138.79
2008–09	1,902.65	7,258.24	1,341.88	5,119.02	560.77	2,139.22
2009–10	1,940.25	7,690.44	1,406.48	5,574.76	533.77	2,115.67
2010–11	2,236.08	9,869.59	1,767.65	7,802.05	468.43	2,067.53

Source: Self-calculated by the researcher



**Table 10. Correlation Analysis of the Variables**

Variables	PEI	IPB	PEE	EPB	PPE	PPB
PEI	1					
IPB	0.99	1				
PEE	0.98	0.99	1			
EPB	0.97	0.99	0.99	1		
PPE	0.93	0.90	0.85	0.83	1	
PPB	0.96	0.94	0.89	0.88	0.99	1

Note: Here,  
 PEI= Per Capita Employee Income  
 IPB=Income per Bank Branch  
 PEE=Per Capita Employee Expenditure  
 EPB= Expenditure per Bank Branch  
 PPE=Profit per Employee  
 PPB= Profit per Bank Branch

thousand in 2010–11. Over the period, profit per employee has increased by 3.26 times. Lastly, the profit per branch was Rs.514.92 thousand in 2000–01 and it has increased to Rs.2067.53 thousand in 2010–11.

**Relationship among Income, Expenditure and Profits of MRB:**

The above table of the MRB showed that income and expenditure for both per employee and per branch have increased over the years. However, to assess the interrelationship between the variables, correlation has been calculated considering a period of 11 years from 2000–01 to 2010–11. The results obtained are presented in Table 10.

The correlation matrix discerned that the “r” values between the variables are highly positive and statistically significant. Thus, it can be argued that –

- Low level of expenditure per branch is associated with the low level profit per branch. With the increase in volume of expenditure, there will be corresponding increase in profitability.
- Low level of correlation exists between per capita employee expenditure and profit per employee. This indicates that employee productivity of MRB can increase only by controlling the unnecessary expenditure.
- A high positive association between per capita employee income and per branch income indicates that MRB is doing a tremendous job of increasing their productivity.

**Return on Investment and Profit as Percentage of Volume of Business of MRB**

The productivity of MRB has also been assessed with the return on investment (ROI) and profit as percentage of volume of business and the calculated figures are presented in Table 11. The table reveals that during the year 2000–01 the return on investment was 2.48 percent which increased to 4.11 percent in 2010–11. The return on investment in 2002–03 was only 0.22 percent indicated

**Table 11. ROI and Profit as percent of Volume of Business of MRB**

Year	Return on Investment	Profit as percentage of Volume of Business
2000–01	2.48	1.72
2001–02	3.07	2.17
2002–03	0.22	1.58
2003–04	1.56	0.99
2004–05	0.91	0.55
2005–06	1.09	0.61
2006–07	1.68	0.96
2007–08	2.53	1.43
2008–09	3.01	2.21
2009–10	3.58	1.68
2010–11	4.11	1.34
Average	2.20	1.39

Source: Calculated by the researchers



a wide variation in MRBs productivity. The average return on investment is 2.20 percent throughout the period. Similarly, the profit as percent of volume of business in 2000–01 was 1.72 percent. In 2010–11, this has decreased to 1.34 percent. The highest percentage was in the year 2008–09 which is 2.21 percent. The lowest was in the year 2004–05 which is 0.55 percent. The average profit as percentage of business volume of MRB (1.39 percent) is better than the RRBs as a whole (i.e., 0.78 percent). This is a positive sign for the MRB operating in rural Meghalaya.

### Concluding Note

The article concluded with an idea that the better productivity performance of MRB is due to the fact that they are able to mobilize more deposit from the area. This further indicates that the MRB is utilizing efficiently the resources that they mobilized. The analysis indicates that although MRB has been doing relatively better than that of the RRBs, there has been a wide variations in the productivity, as per the indicators identified, which might have adverse effect on profitability of the said bank. This variation may be due to lesser involvement of banks in profitable activities, wicked nature of rural clients for non repayment of loans and advances they gain.

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*It takes 20 years to build a reputation and five minutes to ruin it. If you think about that, you will do things differently.*

— Warren Buffett



# Problems and Prospects of Agriculture in Punjab

M. S. SIDHU AND VARINDER PAL SINGH

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*The Punjab agriculture which was growing fast earlier has now reached a sort of plateau in terms of productivity and production. In the wake of a declining land man ratio, it is not able to generate gainful employment and sufficient income for the growing population. Farm profitability has witnessed a decline in the recent years due to cost price squeeze. There is almost stagnation in farm income. Farming alone is not able to generate sufficient income for small and marginal farmers. Due to economic distress, 2116 farmers had committed suicides during the last 15 years in the State. At present, the rural indebtedness is to the extent of about Rs 35000 crore which work out to be about Rs 3.50 lakh per household. The Punjab farmers are in deep economic crisis. For sustainable agricultural development, non-farm employment opportunities for rural youth may be created in the rural areas of the state. It is need of the hour in the overall interest of Punjab and the country.*

Punjab witnessed a major breakthrough in the farm production starting in the late 1960s. The increase in wheat and paddy production improved the economic status of the peasantry bringing about an all round change. A number of factors have made this possible. These include the introduction of high yielding varieties (HYVs) particularly of wheat and paddy, assured price policy and supporting infrastructure for supply of different inputs and dissemination of the technical know how. However, the prime movers in this growth process were the farmers themselves who were quick enough to exploit the new production possibilities. The result is that the state with 1.53 percent of the geographical area of the country accounted for about 40–50 percent of wheat and about 30–35 percent of rice procured for the central pool of foodgrains during the last 45 years or so.

The Punjab agriculture which was growing fast earlier has now reached a sort of plateau in terms of productivity and production. In the wake of a declining land-man ratio, it is not able to generate gainful employment and sufficient income for the growing population. Farm profitability has witnessed a decline in the recent years due to cost price squeeze. There is almost stagnation in farm income. Farming alone is not able to generate sufficient income for small and marginal farmers. Due to economic distress, 2116 farmers had committed suicides during the last 15 years in Punjab (Nibber, 2004). However, some other organizations claim that actual figure is staggering, somewhere between 10000 and 13000 (HT Correspondent, 2006). At present, the rural indebtedness is to the extent of about Rs 35000 crore which work out to be about Rs 3.50 lakh per farming household. The Punjab farmers are in deep economic crisis. Keeping in view all this, the present study has been undertaken to examine various problems faced by the farm sector in the state and its prospects in future.

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Table 1: No. of operational holdings, area operated and average size of operational holdings in Punjab

Farm category	1980-81			1990-91			1995-96			2000-01			2005-06		
	No (Thous- and ha)	Area operated (Thous- and ha)	Av. Size of operational holdings (ha)	No (Thous- and ha)	Area operated (Thous- and ha)	Av. Size of operational holdings (ha)	No (Thous- and ha)	Area operated (Thous- and ha)	Av. Size of operational holdings (ha)	No (Thous- and ha)	Area operated (Thous- and ha)	Av. Size of operational holdings (ha)	No (Thous- and ha)	Area operated (Thous- and ha)	Av. Size of operational holdings (ha)
Marginal (Below 1 hect.)	197.32 (19.21)	118.33 (3.04)	0.60	295.67 (26.47)	164.13 (4.07)	0.56	203.88 (18.55)	122.00 (2.94)	0.60	123.00 (12.34)	77.00 (1.91)	0.63	134.00 (13.36)	83.00 (2.09)	0.62
Small (1-2 hect.)	199.37 (19.41)	281.04 (7.22)	1.41	203.84 (18.25)	328.26 (8.14)	1.61	183.45 (16.78)	240.00 (5.79)	1.31	173.00 (17.35)	242.00 (6.02)	1.40	183.00 (18.25)	258.00 (6.51)	1.41
Semi-medium (2-4 hect.)	287.42 (27.99)	790.95 (20.32)	2.75	288.78 (25.86)	841.62 (20.87)	2.91	320.34 (29.31)	833.00 (20.09)	2.60	328.00 (32.90)	876.00 (21.78)	2.67	319.00 (31.80)	855.00 (21.57)	2.68
Medium (4-10 hect.)	269.07 (26.20)	1565.55 (40.22)	5.82	261.48 (23.41)	1621.95 (40.22)	6.20	305.79 (27.98)	1754.00 (42.30)	5.74	301.00 (30.19)	1731.00 (43.04)	5.75	296.00 (29.51)	170.10 (42.91)	5.81
Large (10 hect. & above)	73.94 (7.19)	1136.60 (29.20)	15.37	67.17 (6.01)	1076.73 (26.70)	16.03	79.61 (7.28)	1198.00 (28.88)	15.05	72.00 (7.22)	1096.00 (27.25)	15.22	71.00 (7.08)	106.70 (26.92)	14.93
All holdings	1027.13 (100.00)	3892.46 (100.00)	3.79	1116.95 (100.00)	4032.69 (100.00)	3.61	1093.07 (100.00)	4147.00 (100.00)	3.79	997.00 (100.00)	4022.00 (100.00)	4.03	1003.00 (100)	396.40 (100)	3.95

Note: Figures in parentheses indicate percentages to the total



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## Data base

The secondary data used in this paper has been mainly taken from the published sources. Notable among these are Statistical Abstract of Punjab, Agricultural Statistics At a Glance, etc. The data published in reputed English newspapers have also been used. The information has also been taken from Department of Economics & Sociology, PAU, Ludhiana.

## Results and Discussion

### Number of operational holdings

The information about number of operational holdings in Punjab is given in Table 1. There were 10.27 lakh operational holdings in 1980–81. Their number increased to 11.17 lakh in 1990–91 but marginally declined to 10.93 lakh in 1995–96 but in the year 2000–01, this number sharply declined to 9.97 lakh but marginally increased to 10.03 lakh in 2005–06. The maximum decline was observed in case of marginal and small farmers. Their number was 3.86 lakh in 1995–96 which plummeted to 3.17 lakh in 2005–06. These figures reveal that agriculture is becoming un-remunerative particularly for marginal and small farmers, therefore, they were forced to lease out their tiny holdings. In many cases, they also sold their land to clear their debts and to meet other social obligations.

Another phenomenon about the operational holdings in the state is regarding the number of large farmers. Although their number was just six to 7 percent during the last two decades but they operated about 27 to 29 percent of the area during this period. Therefore, we can say that modern farming is more favourable to the large farmers as compared to their fellow marginal and small farmers. The average size of operational holding was 3.79, 3.61, 3.79, 4.03 and 3.95 hectares during the years 1980–81, 1990–91, 1995–96, 2000–01 and 2005–06, respectively. At the national level, it is just 1.32 hectares. Therefore, the Punjab scenario is better than other states.

It is worthwhile to mention here that in the pre-green revolution period in the state, the bachelor farmer used to donate their share of land to their nephews (*bhatijas*). This prevented the land from being further divided. It was known as the Draupati system after the wife shared by the Pandava princes in the Mahabharata and there was no stigma attached to it (Mishra, 1999). Due to spread of education and awareness among the

farmers, this practice has almost disappeared from the rural Punjab during the post-revolution period.

### Increase in the number of workers

The information regarding the number of agricultural workers as cultivators and agricultural workers is given in Table 2. The number of cultivators has increased from about 16 lakh in 1961 to about 21 lakh in 2001 whereas the number of agricultural workers jumped from 3.35 lakh to 14.90 lakh in the corresponding period. The trend of sub-division of land holdings is reflected more evidently in the land operated per cultivator and agricultural worker (taken together) which has declined gradually from 1.94 hectares of net area sown in 1961 to 1.20 hectares in 2001. In terms of gross cropped area, this figure has declined from 2.44 hectares to 2.23 hectares during the same period. The facts given above are not mere statistical figures but rather have wider social, economic and political implications for the state as well as the country.

A perusal of Table 2 further revealed that net area sown per cultivator has declined from 2.34 hectares in 1961 to 2.06 hectares in 2001. This figure for the agricultural worker was 11.23 hectares and 2.85 hectares in the corresponding period. Due to increase in cropping intensity, the gross cropped area per cultivator has increased from 2.95 hectares in 1961 to 3.85 hectares in 2001. During the last one decade, i.e. 1991 to 2001, the gross cropped area per cultivator has declined from 3.91 hectares in 1991 to 3.85 hectares in 2001. As already discussed, there has been fast increase in the number of agricultural workers during the last four decades i.e. from 1961 to 2001. Their number was 3.35 lakh in 1961 which increased to 14.90 lakh in 2001. It had adverse impact on the gross cropped area available to each agricultural worker. The gross cropped area per agricultural worker declined from 14.14 hectares in 1961 to 5.33 hectares in 2001. The fast mechanism of agriculture in this state has also narrowed down the employment opportunities for the agricultural labourers. A recent study has shown that use of each harvest combine eroded an estimated 24000 person days of work in a year (Mander, 2004): Moreover, the increased use of weedicides for control of weeds in the major crops i.e. wheat and paddy, has obviated the need for human labour for inter-culture operations. The excessive use of weedicides has not only replaced the human labour but has adversely affected the soil health too.



**Table 2: Net and gross cropped area available to the cultivators and agricultural workers in Punjab, 1961 to 2001**

Year	As cultivators (No.)	As agri. workers (No)	Net sown area per cultivator (hect.)	Net area sown per agri. worker (hect.)	Gross cropped area sown per cultivator (hect.)	Gross cropped area sown per agri. worker (hect.)
1961	1602666	334610	2.34	11.23	2.95	14.14
1971	1665153	786705	2.43	5.15	3.41	7.22
1981	1767286	1092225	2.37	3.84	3.82	6.19
1991	1917210	1452828	2.20	2.90	3.91	5.16
2001	2065067	1489861	2.06	2.85	3.85	5.33
Year	Net area sown per cultivator and agri. worker (hect.)			Gross cropped area per cultivator and agri. worker (hect.)		
1961	1.94			2.44		
1971	1.65			2.32		
1981	1.47			2.36		
1991	1.25			2.23		
2001	1.20			2.23		

Source: Statistical Abstract of Punjab, various issues

### Land use pattern

The information about land use pattern shows that the net area sown in the state was 4158 thousand hectares during the year 2010–11 out of a total reporting area of 5033 thousand hectares which means that about 83 percent of the reporting area was already under cultivation which was the highest in the country. There was only negligible area available under current fallows and other uncultivated land. The net area sown increased from 3870 thousand hectares in 1966–67 to 4158 thousand hectares in 2010–11 which means on average increase of about 7,000 hectares per annum. On the other hand, the total cropped area increased by 2890 thousand hectares during this period which gives an average increase of about 62 thousand hectares per year. It may be mentioned here that net area sown increased from 3870 thousand hectares in 1966–67 to about 4200 thousand hectares in 1980–81. After that, there has been no significant increase in net area sown in the state. It happened mainly because of the fact that size of the land is fixed and increase in area came mainly from increase in the total cropped area. Due to increase in the cropping intensity, the total cropped area increased from 5171 thousand hectares in 1966–67 to 7945 thousand hectares in 1998–99. After that, it has almost become constant because there is limit to increase the cropping intensity also. Therefore, there is little scope to increase cropping intensity in near future and the total cropped area

will remain constant around 79 thousand hectares. On the other hand, there is possibility of decline in net area sown in the state due to use of land for non-agricultural purposes. This will have adverse effect on the total cropped area also.

### Shifts in cropping pattern

The cropping pattern in the state is shown in Table 3. The figures show that during the year 2010–11, about 82.5 percent of the total cropped area was under food grains, 8.54 percent under cash crops, i.e. cotton, sugarcane, oilseeds and potatoes. It may be stated here that about nine percent of the total cropped area was under rabi and kharif fodder crops and about two percent under fruits and vegetables. Wheat is the principal crop of Punjab which alone had 44.53 percent of the cropped area followed by rice which had 35.85 percent area. In this way, these two crops taken together occupied about 80 percent of the area.

Rice is not a traditional crop of Punjab. The area under rice was just 227 thousand hectares in 1960–61 which increased to 390 thousand hectares in 1970–71, 567 thousand hectares in 1980–81, 1183 thousand hectares in 1985–86 and 2015 thousand hectares in 1990–91. It reached to the level of 2612 thousand hectares in 2000–01 which further increased to 2826 thousand



Table 3: Shifts in cropping pattern in Punjab, 1960–61 to 2002–03

(Area 000'hect.)

Years/ crop	Wheat	Rice	Maize	Total cereals	Total pulses	Rapeseed & mustard	Total oilseeds	Cotton	Sugarcane	Potato
1960–61	1400 (29.58)	227 (4.80)	327 (6.91)	2160 (45.65)	903 (19.08)	107 (2.26)	185 (3.91)	447 (9.45)	133 (2.81)	9 (0.19)
1970–71	2299 (40.48)	390 (6.87)	555 (9.77)	3514 (61.89)	414 (7.29)	103 (1.81)	295 (5.19)	397 (6.99)	128 (2.25)	17 (0.29)
1975–76	2439 (38.99)	567 (9.06)	577 (9.22)	3891 (62.21)	441 (7.05)	122 (1.95)	315 (5.03)	580 (9.27)	114 (1.82)	27 (0.43)
1980–81	2812 (41.58)	1183 (17.49)	382 (5.65)	4513 (66.73)	341 (5.04)	136 (2.01)	238 (3.52)	649 (9.59)	71 (1.05)	40 (0.59)
1985–86	3112 (43.47)	1714 (23.95)	260 (3.63)	5169 (72.21)	225 (3.14)	151 (2.11)	211 (2.95)	559 (7.81)	78 (1.09)	43 (0.60)
1990–91	3273 (43.63)	2015 (26.86)	188 (2.51)	5525 (73.65)	143 (1.91)	69 (0.92)	104 (1.39)	701 (9.34)	101 (1.35)	23 (0.31)
1995–96	3221 (41.77)	2185 (28.33)	171 (2.22)	5625 (72.94)	95 (1.23)	101 (1.31)	237 (3.07)	742 (9.62)	136 (1.76)	39 (0.51)
2000–01	3408 (42.95)	2612 (32.92)	164 (2.07)	6222 (78.41)	55 (0.69)	55 (0.69)	86 (1.08)	473 (5.96)	121 (1.52)	64 (0.81)
2005–06	3464 (44.03)	2647 (33.64)	149 (1.89)	6290 (79.94)	29 (0.37)	47 (0.60)	80 (1.02)	557 (7.08)	85 (1.08)	71 (0.90)
2006–07	3467 (44.10)	2621 (33.34)	154 (1.96)	6268 (79.74)	29 (0.37)	41 (0.52)	70 (0.89)	607 (7.72)	99 (1.26)	76 (0.97)
2007–08	3487 (44.31)	2609 (33.15)	154 (1.96)	6271 (79.68)	27 (0.34)	30 (0.38)	60 (0.76)	605 (7.69)	108 (1.37)	90 (1.14)
2008–09	3526 (44.57)	2735 (34.57)	151 (1.91)	6433 (81.31)	22 (0.28)	29 (0.37)	60 (0.76)	527 (6.66)	81 (1.02)	82 (1.04)
2009–10	3522 (44.72)	2802 (35.58)	139 (1.76)	6480 (82.28)	18 (0.23)	31 (0.39)	62 (0.79)	501 (6.36)	60 (0.76)	74 (0.94)
2010–11	3510 (44.53)	2826 (35.85)	133 (1.69)	6484 (82.26)	20 (0.25)	32 (0.41)	56 (0.71)	483 (6.13)	70 (0.89)	64 (0.81)

Note: Figures in parentheses indicate percentages to the total cropped area.

hectares in 2010–11. The major factors responsible for increase in its area are high and stable yield as compared to other kharif crops, assured price and public procurement. We can say that net returns to the farmers from paddy crop are high vis-à-vis other competing kharif crops. Paddy has replaced kharif pulses and oilseeds on a large scale in the last three decades. The area under wheat was 1400 thousand hectares in 1960–61 which increased to about 2300 thousand hectares in 1970–71, 2812 thousand hectares in 1980–81, 3273 thousand hectares in 1990–91, 3408 thousand hectares in 2000–01 which further increased to 3510 thousand hectares in 2010–11. Wheat crop has also replaced rabi pulses particularly gram and oilseed crops. This crop has also high and stable yield as compared to other rabi crops. Moreover, it is procured by

the public procurement agencies at the minimum support price (MSP). It is also a staple food of the Punjabis. Wheat bhusa, the by-product of wheat is also used on a very large scale by the farmers to feed dairy animals. Therefore, we can say that wheat is a natural crop of Punjab. Moreover, its irrigation requirements are not high as in case of paddy.

Maize was an important crop of the state in the pre-green revolution period. The area under maize was 327 thousand hectares in 1960–61 which declined to 188 thousand hectares in 1990–91, 164 thousand hectares in 2000–01. Further, it plummeted to 133 thousand hectares in 2010–11. In percentage terms, the maize area declined from about 7 percent of the cropped area in 1960–61 to



less than two in 2010–11. As already discussed, with the fast increase in paddy area, the maize area declined significantly. Although MSP is announced for maize crop every year but there is no effective public procurement. Therefore, to avoid price risk, the Punjab farmers particularly in the central zone has shifted from maize to paddy on a large scale in the kharif season.

The area under potato crop has also increased during the last three decades. Its area was 17 thousand hectares in 1970–71 which increased to 90 thousand hectares in 2006–07 but due to price fluctuation, its area has also declined to 64 thousand hectares in 2010–11. Price of potato is a major factor for the increase or decrease of potato area. Generally, its market price is fixed according to the forces of demand and supply. This crop is also not covered effectively under the public procurement programme.

All this reveals that cereals particularly wheat and paddy have come to dominate the cropping pattern in the state in the wake of new farm technology and axe has fallen mainly on pulses and oilseeds. As already discussed, this outcome is the consequence of higher profitability of wheat and paddy cropping system. There is another dimension of this problem. Pulses and oilseeds are legumes and their cultivation was an important natural source of restoring the soil fertility. The decline in their area has resulted in reduced availability of natural sources of fertilization of soils.

There is also concern over the long range effect of cereals dominated cropping pattern particularly the rice cultivation and also overall exploitative agriculture which could have deleterious effect on the soil health. The indiscriminate and uncontrolled use of underground water may not also be desirable in several areas of the state from the long-run point of view of sustained use of this scarce and precious resource.

### Over-exploitation of ground water

In the post-green revolution period, the number of tube-wells for irrigation purpose has increased very fast. There were only 1973 tube-wells in the state in 1950–51. This number increased to about 12000 in 1960–61, 1.92 lakh in 1970–71, 6.00 lakh in 1980–81, 7.73 lakh in 1990–91, 10.73 lakh in 2000–01 and 11.68 lakh in 2004–05. At present, about 75 percent of the irrigation is through tube-wells and the rest about 25 percent by canals. This phenomenon resulted in over-exploitation of ground water. Paddy is a water intensive crop. The over-exploitation of ground water is also linked mainly with the paddy crop. During the year 1984, there were only about 45 percent over developed blocks in the state (Table 4). This number increased to about 76 percent during the year 2004. The number of white blocks was about 31 percent in 1984 which declined to about 12 percent in 2004. Similarly, the share of grey blocks declined from about 19 percent in 1984 to about six percent in 2004.

Table 4: Groundwater exploitation in Punjab, 1984 to 2004

Water blocks/ year	1984	1989	1991	1997	2004
Overdeveloped	53 (44.92)	62 (52.54)	62 (52.54)	73 (52.90)	104 (75.91)
Developed	7 (5.93)	7 (5.93)	8 (6.78)	11 (7.97)	9 (6.57)
Grey	22 (18.64)	20 (16.95)	15 (12.71)	16 (11.59)	8 (5.84)
White	36 (30.51)	29 (24.58)	33 (27.97)	38 (27.54)	16 (11.68)
Total number of water blocks	118 (100.00)	118 (100.00)	118 (100.00)	138 (100.00)	137 (100.00)

Source: Water Resources Directorate, Punjab, Chandigarh

Note: i) Figures in parentheses indicate percentages to the total number of water blocks

- ii) Overdeveloped blocks are those where withdrawal of groundwater was more than 100 percent of the recharge of water. In dark blocks, the withdrawal of groundwater was between 85 percent and 100 percent of the recharge of water. In grey block, the withdrawal of Groundwater was between 60 percent and 85 percent of recharge of water. In whole blocks, the withdrawal of groundwater was less than 60 percent of the recharge of water.



Already due to decline in water table, more than one lakh tube-wells have been replaced with submersible pumps and around 3.9 lakh centrifugal pumps will have to be replaced by submersible pumps in the next few years, costing crores of rupees and increasing the energy requirements three-fold to pump out the same quantity of water (Aulakh, 2004). The PAU experts always advise the farmers not to transplant paddy before 15<sup>th</sup> June because transplantation of paddy before PAU recommendation results in fall of water table. It may be stated here that paddy transplanted on May 1 result in 70 cms decline in water table, 60 cms in case of May 10, 50 cms on May 20, 28 cms on May 30 and 10 cms on June 10. For the last two decades, the PAU advice to the farmers did not have significant impact in this regard. According to the

press reports, some farmers of Moonak block (Sangrur district) transplanted paddy as early as on April 20, 2006 (Sharma, 2006). In the central Punjab, the water table is declining very fast which would have wide implications in the years to come. From the years 1982–87, the water table in the central Punjab declined by 18 cms per year. This figure increased to 25 cms in the years 1992–97, 42 cms in 1997–2002, 69 cms in 2003–04 and 74 cms in 2004–05 (Govt. of Punjab, 2006). Keeping in view these facts, the State Government has put a ban on transplantation of paddy before 10<sup>th</sup> June every year.

The district-wise categorization of water table in Punjab for the year 2004 is given in Table 5. The cent percent blocks of Amritsar, Faridkot, Fatehgarh Sahib,

Table 5: District-wise categorization of water blocks in Punjab 2004

District	Overdeveloped (OD)	Dark (D)	Grey (G)	White (W)	Total number of water blocks
Amritsar	16 (100.00)	–	–	–	16 (100.00)
Bathinda	4 (57.14)	–	1 (14.29)	2 (28.57)	7 (100.00)
Faridkot	2 (100.00)	–	–	–	2 (100.00)
Fatehgarh Sahib	5 (100.00)	–	–	–	5 (100.00)
Ferozepur	7 (70.00)	1 (10.00)	–	2 (20.00)	10 (100.00)
Gurdaspur	8 (57.14)	2 (14.29)	2 (14.29)	2 (14.28)	14 (100.00)
Hoshiarpur	2 (20.00)	2 (20.00)	3 (30.00)	3 (30.00)	10 (100.00)
Jalandhar	10 (100.00)	–	–	–	10 (100.00)
Kapurthala	5 (100.00)	–	–	–	5 (100.00)
Ludhiana	10 (90.91)	1 (9.09)	–	–	11 (100.00)
Mansa	5 (100.00)	–	–	–	5 (100.00)
Moga	5 (100.00)	–	–	–	5 (100.00)
Muktsar	–	–	1 (25.00)	3 (75.00)	4 (100.00)
Nawan Shahr	3 (60.00)	–	–	2 (40.00)	5 (100.00)
Patiala	8 (88.89)	–	1 (11.11)	–	9 (100.00)
Ropar	2 (28.57)	(42.86)	–	3 (28.57)	2 7 (100.00)
Sangrur	12 (100.00)	–	–	–	12 (100.00)
Punjab	104 (75.91)	9 (6.57)	8 (5.84)	16 (11.68)	137 (100.00)

Source: Water Resources Directorate, Punjab, Chandigarh

Note: Figures in parentheses indicate percentages to the total number of water blocks



Jalandhar, Kapurthala, Mansa, Moga and Sangrur were over developed where the withdrawal of ground water was more than 100 percent of the recharge. This figure was about 91 percent for Ludhiana district, 89 percent for Patiala district, 70 percent for Ferozepur district, 57 percent each for Bathinda and Gurdaspur districts, 29 percent for Ropar district and 20 percent for Hoshiarpur district. As far as the state as a whole was concerned, about 76 percent of the water blocks were over developed. The share of dark blocks was about seven percent, grey blocks about six percent and white blocks about 12 percent.

Keeping in view the problem of declining water table and other related issues, the Punjab Government constituted the Committee under the Chairmanship of Dr S.S.Johl an eminent agricultural economist to suggest various measures for the diversification of agriculture in Punjab. The Committee suggested that one million hectares area each under paddy and wheat may be replaced with other crops particularly oilseeds and pulses. According to the existing water resources of the state, we can sustain paddy in about 16 lakh hectares only. But due to various reasons, the recommendations of this Committee have not been implemented as such by the Government of India. The severe drought in the year 2002–03 resulted in fall of foodgrain production by about 38 million tonnes in a year. The buffer stocks also declined considerably. Rather, India has been forced to import about seven million tonnes of wheat in the year 2006 to 2008. Since food security of the country is in the hands of the Punjab farmers, therefore, shifting of 10 lakh hectares of paddy area to other crops in near future will be a very difficult task. The policy framework and market infrastructure are in favour of wheat and paddy crops.

#### Compound growth rates of area, production and yield

The compound growth rates of area, production and yield for important crops of the state are shown in Table 6. A perusal of the figures shows that rice production recorded the higher growth, i.e. 18.41 percent per annum from the years 1966–67 to 1980–81. The contribution of area and yield was 11.00 percent and 6.67 percent respectively. Among the cereals, wheat was the next crop to record a high production growth rate (6.48 percent per annum) during this period. The contribution of area in this was 3.34 percent and yield contributed 3.05 percent. Potato and American cotton also recorded significant production growth rates of 13.30 percent and 8.09 percent respectively in this period. In case of potatoes, the contribution of area

Table 6: Compound growth rate of area, production and yield of important crops in Punjab  
(percent per annum)

Sr. No.	Crop	Area	Production	Yield
1966–67 to 1980–81				
1	Rice	11.00***	18.41***	6.67***
2	Wheat	3.34***	6.48***	3.05***
3	Maize	-1.33*	-0.90NS	0.42NS
4	Barley	-4.44*	-0.30NS	4.21***
5	Bajra	-7.92***	-7.27***	0.71NS
6	Pulses	-3.36***	-4.05***	-0.72NS
7	Oilseeds	-2.91***	-2.91***	-0.0009NS
8	Sugarcane	-4.15***	0.23NS	4.55***
9	Potato	9.38***	13.30***	3.66***
10	Cotton (A)	7.37***	8.09***	-0.11NS
11	Cotton (D)	-1.77*	-2.91**	-1.65***
1981–82 to 1990–91				
1	Rice	4.85***	5.61***	0.72NS
2	Wheat	0.97***	3.70***	2.70***
3	Maize	-5.72***	-7.08***	-1.40NS
4	Barley	-8.79***	-3.32NS	6.08***
5	Bajra	-18.46***	-19.66***	-1.63NS
6	Pulses	-7.15***	-4.39*	2.97*
7	Oilseeds	-6.01***	-4.16NS	2.21*
8	Sugarcane	0.95NS	0.77NS	-0.80NS
9	Potato	-2.77NS	-2.01NS	-0.08NS
10	Cotton (A)	2.79NS	11.16***	8.15**
11	Cotton (D)	-9.07***	-3.52NS	6.09*
1991–92 to 2000–01				
1	Rice	2.72***	2.86***	0.12NS
2	Wheat	0.36*	2.48***	2.13***
3	Maize	8.23 NS	1.54NS	3.42**
4	Barley	-4.60***	-2.36*	2.48***
5	Bajra	-7.92**	-5.80NS	-2.80*
6	Pulses	-5.62***	-7.97***	-2.50**
7	Oilseeds	-7.41**	-9.64***	-2.40***
8	Sugarcane	2.29 NS	2.07NS	0.23NS
9	Potato	14.59***	14.56***	0.18NS
10	Cotton (A)	-5.21***	-13.29***	-8.53**
11	Cotton (D)	6.23 NS	5.57NS	-0.62NS



Sr. No.	Crop	Area	Production	Yield
<b>2001-02 to 2010-11</b>				
1	Rice	1.24***	2.54***	1.28***
2	Wheat	0.40***	0.99**	0.60 NS
3	Maize	-01.24**	3.16**	4.84**
4	Barley	-7.58***	-6.90***	0.69**
5	Bajra	-9.66***	-7.95***	2.49 NS
6	Pulses	-10.42***	-8.08***	2.27**
7	Oilseeds	-5.86***	-2.40**	3.90**
8	Sugarcane	-8.26***	-6.09***	-0.04 NS
9	Potato	2.29 NS	4.83***	3.00*
10	Cotton (A)	2.18 NS	7.84**	5.54**
11	Cotton (D)	-21.55***	-17.34***	5.47**
<b>1966-67 to 2010-11</b>				
1	Rice	5.29***	7.48***	2.08***
2	Wheat	1.32***	3.46***	2.11***
3	Maize	-3.34***	-1.75***	1.97***
4	Barley	-4.09***	-0.64 NS	3.60***
5	Bajra	-9.92***	-10.05***	-0.07 NS
6	Pulses	-7.49***	-7.45***	0.07 NS
7	Oilseeds	-3.92***	-2.72***	1.18***
8	Sugarcane	-0.57**	0.39 NS	0.93***
9	Potato	3.50***	4.55***	0.95***
10	Cotton (A)	1.67***	2.92***	1.19***
11	Cotton (D)	-4.69***	-3.50***	1.17***

Note: NS, \*\*\*, \*\*, \* indicate non-significant and significant at 1 percent, 5 percent and 10 percent respectively.

was 9.38 percent and that of yield 3.66 percent. In case of cotton (A), the increase in production mainly occurred as a result of increase in area (7.37 percent) and contribution of yield was (-) 0.11 percent. Sugarcane witnessed a negligible growth rate of 0.23 percent. The other crops like maize, barley, bajra, pulses, oilseeds and cotton (D) had negative growth rates for production during this period. This happened primarily on account of decrease in area. Area released from maize crop in kharif season was largely replaced by the paddy crop and that from pulses and oilseeds to wheat in the rabi season. The area under cotton (D) has mainly been replaced by cotton (A).

The compound growth rates of area, production and

yield of important crops in the state for the period 1981-82 to 1990-91 revealed that rice crop again recorded the highest production growth rate. It was 5.61 percent per annum. The contribution of area was 4.85 percent and that of yield 0.72 percent. Among the cereals, wheat was the next crop to record 3.70 per cent per annum production growth rate. The contribution of area was 0.97 percent and that of yield 2.70 percent. The cotton (A) recorded 11.16 percent production growth rate. In this, the contribution of area and yield was 2.79 percent and 8.15 percent respectively. The sugarcane also did not show a high growth rate in this period. The crops like maize, barley, bajra, pulses, oilseeds, potato and cotton (A) showed the negative production growth rates. It happened mainly due to decrease in area under these crops.

During the period 1991-92 to 2000-01, the production growth rates of rice and wheat were low as compared to the earlier periods, i.e. 1966-67 to 1980-81 and 1981-82 to 1990-91. Among the cereals crops, the production growth rate of rice was 2.86 percent per annum from the years 1991-92 to 2000-01. The increase in production was mainly due to increase in area, i.e. 2.72 percent per annum. The contribution of yield was non-significant, i.e. 0.12 percent per annum. The major reason for increase in rice area during this period was replacement of cotton (A) by the farmers with rice. Due to attack of American bollworm on the cotton (A) crop on a large scale during this period, the farmers had no option but to shift to paddy crop in the kharif season. In the cotton belt, the ground water is brackish and unfit for water intensive crop like paddy. But economic hardships faced by the farmers due to failure of cotton (A) crop forced them to shift to rice cultivation.

Wheat crop recorded the production growth rate of 2.48 percent per annum during the period 1991-92 to 2000-01. The contribution of area and yield was 0.36 percent and 2.13 percent respectively. Potato crop witnessed significant production growth rate, i.e. 14.56 percent per annum during this period. The contribution of area and yield was 14.59 percent and 0.18 percent respectively. Sugarcane production also witnessed the growth rate of 2.07 percent per annum but it was not significant. The cotton (D) showed 5.57 percent production growth rate which was not found to be significant whereas cotton (A) production declined by 13.29 percent per annum. The other crops like barley, bajra, pulses and oilseeds showed negative production growth rates. Maize crop witnessed non-significant 1.54 percent production growth rate.



During the period 2001–02 to 2010–11, among the cereals crops, the production growth rate of rice was 2.54 percent per annum. The increase in production was due to increase in area, i.e. 1.24 percent per annum and yield i.e. 1.28 percent per annum. Wheat crop recorded the production growth rate of 0.99 percent per annum during the period 2001–02 to 2010–11. The contribution of area and yield was 0.40 percent and 0.60 percent respectively. Maize crop witnessed 3.16 percent production growth rate which was mainly due to increase in yield i.e. 4.84 percent per annum. Potato crop witnessed significant production growth rate, i.e. 4.83 percent per annum during this period. The contribution of area and yield was 2.29 percent and 3.00 percent respectively. The cotton (A) showed 7.84 percent production growth rate whereas cotton (D) production declined by 17.34 percent per annum. The other crops like barley, bajra, pulses, oilseeds and sugarcane showed negative production growth rates.

The overall growth rate of area, production and yield of important crops for the period 1966–67 to 2010–11 indicated that rice crop was at number one having the highest production growth rate, i.e. 7.48 percent per annum. The contribution of area and yield was 5.29 percent and 2.08 percent respectively for the increase in rice production. Among the cereal crops, wheat was next important crop having 3.46 percent growth rate in production. The contribution of area was 1.32 percent and yield 2.11 percent. The growth rate of production of cotton (A) was 2.92. The contribution of area was 1.67 percent and that of yield was 1.19 percent. Potato was another important crop which showed the growth rate of production, i.e. 4.55 percent per annum. The contribution of area and yield was 3.50 percent and 0.95 percent respectively. Sugarcane recorded the production growth rate of 0.39 percent per annum. This increase was mainly due to increase in productivity. The other crops like maize, bajra, pulses, oilseeds and cotton (D) recorded negative growth rates in production.

The overall comparison of growth rates of different periods show that Punjab agriculture is facing the problem of stagnation in production particularly in the last one decade. The slow down in the growth rates of different crops had negative impact on the income and employment of the farmers as well as agricultural labourers. The area under different crops has almost reached to the maximum possible level. Any increase in area of particular crop will result in decline of another crop. In this way, the overall picture of Punjab agriculture may not change significantly.

## **Trends in production and productivity**

The rice and wheat crops have shown remarkable increase in production in the state during the last 44 years. But during the last few years, the production of wheat has declined from 159 lakh tones in 1999–2000 to about 142 lakh tones in 2002–03. The production of wheat crop is almost stagnant since 2000–01. It was 155.51 lakh tonnes in 2000–01 and increased to 164.72 lakh tonnes during 2010–11. Similarly, the rice production has declined from about 92 lakh tones in 2000–01 to about 89 lakh tones in 2002–03 and increased to 108.19 lakh tones in 2010–11. It may be mentioned here that weather also played an important role in production of various crops. Sometimes, it is favourable to the crops. On the other hand, it is unfavourable also in many years. The floods in Punjab during the month of September, 1988 damaged the rice crop on a large scale and consequently, the rice production declined to about 49 lakh tones during 1988–89 compared to about 54 lakh tones in 1987–88 and about 59 lakh tones in 1986–87. The severe drought condition in 1987–88 also adversely affected the rice production of the state. As already discussed, the production of cotton (A) has declined during the last ten years due to attack of American bollworm. The production of other crops except sugarcane and potato has declined through time.

## **Productivity**

The yield per unit of area is a good indication of the efficiency in production. The yield figures for important crops show that in case of wheat, the productivity after showing an increase during the initial years (during the period 1966–67 through 1971–72) showed no improvement during the period, i.e. 1972–73 to 1976–77 and stagnated around 24 quintals per hectare. In the later years, however, there was an improvement in productivity although it was marked by inter-year fluctuation. In the recent years, the maximum yield of wheat was 4696 kgs per hectare in 1999–2000. After that peak yield, it had started declining and increased remarkably during 2010–11 to 4693 kgs per hectare. As already discussed, the weather also played an important role in this regard.

In case of rice, the productivity increased from 1185 kgs per hectare in 1966–67 to 3507 kgs per hectare in 1993–94. This meant about three times increase in productivity during the period. After that, the yield witnessed decline up to the year 1999–2000 but again showed increase in 2000–01. It was 3506 kgs per hectare in this year. It went to the level of 3545 kgs per hectare in 2001–



02 but marginally declined to 3510 kgs per hectare in 2002–03 and increased to 3828 kgs in 2010–11. There were inter-year fluctuations in yield. This happened due to floods, drought, and diseases to the crops, etc. There is need for technological breakthrough in case of rice particularly hybrids.

The productivity of cotton (A) increased from 335 kgs per hectare in 1966–67 to 636 kgs in 1992–93. During this period also, there were inter-year fluctuations in productivity due to various factors. After 1992–93, the yield of cotton (A) started declining due to attack of American bollworm and it reached to the lowest level of 179 kgs per hectare in 1998–99. In the subsequent years, it picked up. The yield of cotton (A) was 646 kgs per hectare in 2010–11.

The productivity analysis of other crops reveal that yield of maize, sugarcane, potato, oilseeds and barley crops has increased overtime although there were inter-year fluctuations due to various reasons. The productivity of pulses and cotton (D) did not show any remarkable improvement. To increase the production of various crops, there is need for technological breakthrough in productivity.

#### A case of stagnation

The productivity analysis reveals that breakthrough in productivity has been achieved mainly in few crops like rice, wheat, sugarcane, potato, maize and barley. Except wheat and rice, the area under other crops is not quite large. There are marketing constraints for other crops because public procurement is effective only in case of wheat and paddy. In case of pulses, desi cotton and bajra, the productivity has almost stagnated. Overall also, the Punjab agriculture is facing the problem of stagnation in production and productivity.

#### Extent of exploitation of potential yield

Table 7 shows the information regarding the extent of exploitation of potential yield of various kharif and rabi crops. A perusal of the table reveals that among the kharif crops, the extent of the exploitation of potential yield was highest in Bt cotton i.e. 84.95 percent followed by paddy (83.21 percent), moong (79.77 percent), basmati (75.00 percent), desi cotton (71.22 percent), sugarcane (71.08 percent), maize (68.85 percent) etc. The lowest exploitation of the potential yield is in the case of bajra (30.42 percent) followed by groundnut (42.00 percent), mash (49.75 percent), soyabean (60.83 percent) etc.

Table 7: Extent of exploitation of potential yield

Sr. No.	Crop	Potential yield (q)	State average yield (q)	% potential exploited
<b>Kharif crops</b>				
1	Paddy	29	24.13	83.21
2	Bt cotton	10.5	8.92	84.95
3	Moong	4.5	3.59	79.77
4	Basmati	14	10.50	75.00
5	Desi cotton	9	6.41	71.22
6	Sugarcane	325	231	71.08
7	Maize	20	13.77	68.85
8	Arhar	6	3.92	65.33
9	Sesamum	2.1	1.36	64.76
10	Soybean	6	3.65	60.83
11	Mash	4	1.99	49.75
12	Groundnut	9	3.78	42.00
13	Bajra	14	4.26	30.42
<b>Rabi Crops</b>				
1	Wheat	20	18.06	90.30
2	Sunflower	7.8	7.09	90.90
3	Barley	15.8	13.94	88.23
7	Gobhi Sarson	7	4.87	69.57
4	Gram	7	4.71	67.28
6	Field Pea	7.5	4.77	63.60
5	Lentil	4.8	2.62	54.58
8	Toria	5	–	–
9	Linseed	4.7	–	–
10	Winter maize	28	–	–

Source: Deptt. of Economics & Sociology, PAU, Ludhiana

In case of the rabi crops, the extent of the exploitation of potential yield was highest in sunflower i.e. 90.90 percent followed by wheat (90.30 percent), barley (88.23 percent), gobhi sarson (69.57 percent) etc. The lowest exploitation of the potential yield is in the case of lentil (54.58 percent) followed by field pea (63.60 percent), gram (67.28 percent), etc. Hence there is an ample scope of further exploitation of potential yield of the crops where the exploitation is less which calls for the need of adequate extension services and providing the technical knowhow to the farmers. There are sizeable productivity differentials among districts which are otherwise more or less homogenous with respect to availability of irrigation facilities and soil type. It should be possible to increase the productivity



levels in these districts by giving due attention to the limiting factors in these districts.

### Comparative economics of different crops

The information regarding economics of various rabi and kharif crops is shown in Table 8. A perusal of the table reveals that among the kharif crops, gross returns were highest from the sugarcane planted crop (Rs 76125)

Table 8: Comparative economics of different crops, 2011-12  
(Based on PAU Recommendations)

(Rs/acre)				
Sr. No.	Crop	GR	TVC	ROVC
<b>Kharif crops</b>				
1	Paddy	32190	10960	21230
2	Basmati	25760	12625	13135
3	Maize	21100	14060	7040
4	Bt cotton	36150	16658	19492
5	Cotton (Desi)	28150	13483	14667
6	Sugarcane planted	76125	44169	31956
	Sugarcane Ratoon	64675	26636	38039
7	Mash	14000	7689	6311
8	Moong	15900	7721	8168
9	Arhar	21475	8316	13159
10	Bajra	15970	8872	7098
11	Groundnut	25100	13349	11751
12	Soybean	11100	9374	1726
<b>Rabi crops</b>				
1	Wheat	29500	11880	17620
2	Barley	19590	7897	11693
3	Winter maize	34550	13496	20604
4	Gram	20720	10123	10597
5	Lentil	16795	7961	8834
6	Field Pea	19500	9503	9997
7	Gobhi Sarson	20195	9112	11083
8	Toria	12925	8088	4837
9	Linseed	14610	9936	4674
10	Sunflower	28860	10366	18494
11	Summer moong	21020	8135	12885
12	Summer mash	19375	8686	10689

GR= Gross returns, TVC= Total variable costs, ROVC= Returns over variable costs

Source: Deptt. of Economics & Sociology, PAU, Ludhiana

followed by sugarcane ratoon (Rs 64675), Bt cotton (Rs 36150), paddy (Rs 32190), cotton desi (Rs 28150) and basmati (Rs 25760). The respective variable costs of these crops were Rs 44169, Rs 26636, Rs 16658, Rs 10960, Rs 13483 and Rs 12625 per acre. The returns over variable cost were the maximum (Rs 38039) for sugarcane ratoon followed by sugarcane planted (Rs 31956), paddy (Rs 21230), Bt cotton (Rs 19492) and cotton desi (Rs 14667). Although the returns over variable cost were the highest in sugarcane ratoon and sugarcane planted but being an annual crop, the actual returns were lower in comparison to the lesser duration crops like paddy, cotton etc.

In case of the rabi crops, gross returns were the highest from the winter maize (Rs 34550) followed by wheat (Rs 29500), sunflower (Rs 28860), summer moong (Rs 21020) and gram (Rs 20720). The respective variable costs of these crops were Rs 13496, Rs 11880, Rs 10366, Rs 8135, and Rs 10123 per acre. The returns over variable cost were the maximum (Rs 20604) for winter maize followed by sunflower (Rs 18494), wheat (Rs 17620), summer moong (Rs 12885) and barely (Rs 11693).

### Future possibilities

It is often talked that Punjab may not be able to add much to its agricultural production since it is already near the saturation point so far as exploitation of new areas is concerned. Besides water is going to become the most limiting resource in further intensification of agriculture. We are of the view that unless the states make rational use of its irrigation resource, it would be difficult to maintain even the present type of cropping pattern in the long run. Already the state is facing the problem of depleting water table over vast areas in the central Punjab. This is coupled with water logging problem in some parts of south western districts where underground water is brackish. This does not, however, mean that there is no scope to increase agricultural production. Even with the known level of technology, it is possible to enhance agricultural production by bridging the adoption gaps.

There are sizeable productivity differentials among districts which are otherwise more or less homogenous with respect to availability of irrigation facilities and soil type. It should be possible to increase the productivity levels in these districts by giving due attention to the limiting factors in these districts. As far as diversification of crops is concerned, we are of the view that alternative crops should provide net returns almost equal to wheat



and paddy crops. Only then, the farmers will shift to those crops. In this regard, production technology and marketing will have to play a crucial role. At present, the farmers face problems related with these issues.

### Summary and conclusions

Wheat is the principal crop of Punjab which has about 45 percent of the cropped area followed by rice which has about 36 percent area. In this way, these two crops taken together occupy more than 80 percent of the area. Rice is not a traditional crop of Punjab. The area under rice was just 227 thousand hectares in 1960–61 which increased to 390 thousand hectares in 1970–71, 567 thousand hectares in 1980–81, 1183 thousand hectares in 1985–86 and 2015 thousand hectares in 1990–91. It reached to the level of 2612 thousand hectares in 2000–01 which further increased to 2826 thousand hectares in 2010–11. In the post-green revolution period, the number of tube-wells for irrigation purpose has increased very fast. There were only 1973 tube-wells in the state in 1950–51. This number increased to about 12000 in 1960–61, 1.92 lakh in 1970–71, 6.00 lakh in 1980–81, 7.73 lakh in 1990–91, 10.73 lakh in 2000–01 and 13.82 lakh in 2010–11. At present, about 73 percent of the irrigation is through tube-wells and the rest about 27 percent by canals. This phenomenon resulted in over-exploitation of ground water.

The overall comparison of growth rates of different periods show that Punjab agriculture is facing the problem of stagnation in production particularly in the last one decade or so. The slowdown in the growth rates of different crops has negative impact on the employment and income of the farmers as well as agricultural labourers. The area under different crops has almost reached to the maximum possible level. Any increase in area of particular crop will result in decline of another crop. In this way, the overall picture of Punjab agriculture may not change significantly. The productivity analysis reveals that breakthrough in productivity has been achieved mainly in few crops like rice, wheat, sugarcane, potato, maize and barley. Except wheat and rice, the area under other crops is not quite large. There are marketing constraints for other crops because public procurement is effective only in case of wheat and paddy. In case of pulses, desi cotton and bajra, the productivity has almost stagnated. Overall, the Punjab agriculture is facing the problem of stagnation in production and productivity. It may be stated that actual yield in the state is already more than 80 percent of the potential yield in case of principal crops like wheat, paddy, Bt cotton,

sunflower, etc. This means that there is little scope to increase the yield of these crops at the farm level. For other crops where there is potential to increase the yield, the farmers are not willing to bring more area under those crops due to various reasons. The returns over variable cost were the maximum for sugarcane ratoon (Rs 38039) followed by sugarcane planted (Rs 31956), paddy (Rs 21230), Bt cotton (Rs 19492), wheat (Rs 14874), winter maize (Rs 14759) and cotton desi (Rs 14269). Although the returns over variable cost were the highest in sugarcane ratoon and sugarcane planted, being an annual crop, the farmers have preference for wheat and paddy crops due to its high and stable yield and effective public procurement at the MSP. The returns over variable cost were the maximum (Rs 20604) for winter maize followed by sunflower (Rs 18494), wheat (Rs 17620), summer moong (Rs 12885) and barely (Rs 11693).

The Punjab agriculture which was growing fast earlier has now reached a sort of plateau in terms of productivity and production. In the wake of a declining land man ratio, it is not able to generate gainful employment and sufficient income for the growing population. Farm profitability has witnessed a decline in the recent years due to cost price squeeze. There is almost stagnation in farm income. Farming alone is not able to generate sufficient income for small and marginal farmers. Due to economic distress, 2116 farmers had committed suicides during the last 15 years in the State. At present, the rural indebtedness is to the extent of about Rs 35000 crore which work out to be about Rs 3.50 lakh per household. The Punjab farmers are in deep economic crisis. For sustainable agricultural development, non-farm employment opportunities for rural youth may be created in the rural areas of the state. It is need of the hour in the overall interest of Punjab and the country.

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*If you are not making mistakes, you're not taking risks and that means you're not going anywhere. The key is to make mistakes faster than the competition so you have more changes to learn and win.*

*– John W. Holt, Jr.*



# Growth, Employment and Productivity in the Manufacturing Sector: A District-Level Analysis of Tamil Nadu: 2001-06

A. BALU

*Using district-wise data on industrial production for the organised manufacturing sector (OMS) and unorganised manufacturing sector (UMS) in Tamil Nadu the article shows that the relationship between employment and output growth has weakened during 2001–06 in the UMS compared to the OMS. In addition, there are districts where positive output growth has been found to be associated with zero or negative employment growth in both sectors, thus pointing to situations of jobless growth in a literal sense. For a number of districts for which estimates of elasticity of employment with respect to output growth in manufacturing could be found for the study period, the figures for the UMS were found to be lower, thus indicating a decline in the employment intensity of growth in the sector.*

The unorganized manufacturing sector has always been an important contributor to total manufacturing employment in India. This sector has contributed about 70 percent of total manufacturing employment in the first quinquennium of new millennium, i.e., 2001–06 in the state of Tamil Nadu. The organized manufacturing sector had a clear policy bias but due to its capital intensive technology, this sector was never able to absorb ever growing labor force of Indian economy. But increasing employment in an insecure sector (unorganized sector) will mean exposure of increasing masses to uncertainties, insecurities and low standard of living, only those people get themselves adjusted to the unorganized sector who could not find a place in the organized sector.

## Jobless growth

It is very difficult to say how and when the term “jobless growth” came into use in the literature on growth and development. The phenomenon was particularly noticeable in the formal sectors of the economies. However, it seems that the term “jobless recovery” was being used in USA in the early 1990s to describe the situation where the economy was emerging from recovery and yet the labor market was not responding by creating sufficient number of new jobs. Rifkin (1996) pointed to the situation where human labor is being systematically eliminated from the economic process.

The term jobless growth can be interpreted in other ways as well, for example, by comparing employment growth with that of labor force growth, and by looking at the overall employment/ unemployment situation of a country in relation to its economic growth rate. Using this approach, Borat and Oosthuizen (2006) suggested three different “tests” of jobless growth: (i) positive economic



growth associated with zero or negative employment growth; (ii) positive economic growth associated with employment growth lagging behind labor force growth and hence rising unemployment; and (iii) positive output growth associated with employment growth below a "satisfactory level."

### **Employment, productivity and growth: theoretical approaches and empirical evidence**

There is inverse relationship between employment and labor productivity which implies the possibility of a trade-off between employment growth and labor productivity. However, this trade-off does not have to be very serious. In an accounting framework, both the quantity of labor input and labor productivity contribute to output growth. Depending on the policies pursued, a country may be able to achieve a balanced contribution of both these elements towards output growth.

Okun's law (1962) is concerned with the short-term cyclical relationship between output, employment/unemployment and productivity growth. Kaldor law describes the long-term relationships between growth of productivity, output and employment, and should, therefore, be considered at a cross-sectional level. A time series, or a panel data exercise, will not be helpful from an economics point of view as that would constitute perhaps more of a test of Okun's law than of Kaldor's law.

Using the data from the ASI and NAS, Kathuria et al (2010) analysed the productivity performance of both the organized and unorganized segments using unit level data for selected Indian states for the period 1994–95 to 2005–06. They found that the growth in GVA was mostly productivity driven, not input driven, in both sectors. In the OMS T.N. contributed heavily to capital formation for the period 1994–2005. Labor productivity in the OMS is nearly 10 times that of the UMS. In 2005–06, T.N. ranked first in capital share in OMS and third in UMS. A turnaround in TFPG (3.25) was in the OMS during the period 2001–05. In 1994–2001 the TFP was –3.11.

### **Data Base and Methodological Issues**

The period of study is confined to the first quinquennium of new millennium i.e. 2001–06 which corresponds to the results of two surveys conducted by NSSO in the years 2001 and 2006. At district level, data for UMS is available only for two time points viz. 2001 and 2006. The data for 2001 is available for 29 districts while that for 2006 for 31 districts, the latter as a result of bifurcation of two districts:

Perambalur and Dharmapuri. In order to make the datasets for the two time points comparable, data for the bifurcated districts are merged. This would also make it possible to draw a comparative profile of the structural shift in the relative shares of the OMS and UMS units. In order to compare with the trends in the organized sector, data for OMS for period 2001 to 2006 is drawn from the state's BES (Bureau of Economics & Statistics) which collects them for the Annual Survey of Industries (ASI) of CSO. Data on two variables viz. employment, and gross value added (GVA) are considered. To facilitate temporal analysis, the value based variable (GVA) is deflated (to base 1993–94) by applying the wholesale price index (WPI). The growth rates have been calculated by using the trend method for OMS and compound annual growth rates (CAGR) for UMS. The trends in employment growth have been studied by the computation of employment elasticity (EE) taken as the ratio of growth rate in employment to that in GVA. As the computation of employment elasticity by this approach is sensitive to the signs (+/–) of two respective growth rates, and a suitable framework to distinguish the growth profiles of different districts is needed, a classification based on the observed signs in the growth rates of these two variables is adopted.

In this, the districts are distinguished for their growth path in terms of the following four scenarios:

1. a situation of positive EE by virtue of both growth rates being positive characterised as "productive employment creating growth" ( $E > 0$ ;  $GVA > 0$ );
2. a situation of employment growth being positive but negative growth in GVA as "employment creating but not productive" ( $E > 0$ ;  $GVA < 0$ );
3. a situation of employment growth being negative with positive GVA growth characterised as "job displacing growth" ( $E < 0$ ;  $GVA > 0$ ); and
4. a situation of both employment and GVA growth being negative as "stagnating growth" ( $E < 0$ ;  $GVA < 0$ ).

From the point of achieving full employment, it would be important to simultaneously achieve high rates of economic as well as employment growth. The first and third scenarios represent high levels of output growth, second and fourth scenarios represent low/negative rates of output growth. Scenario 1 represents situations where high growth of employment goes together with high growth of output. This naturally would be the desirable outcome of economic growth in situations where growth is expected to be the means for achieving the goals of full employment.



Table 1: Performance of Districts by Growth in Employment and Gross Value-added in the OMS: 2001-06

Growth in Employment and GVA	Districts (figures within brackets are growth rate in Employment)	No. of Districts
Negative Growth in both Employment and GVA	Tiruvannamalai, Nilgiris, Tiruvarur, Virudhnagar, Tuticorin, Kanyakumari	6
Negative Growth in Employment but Positive Growth in GVA	Namakkal, Cuddalore, Nagapattinam	3
Positive Growth in Employment but Negative Growth in GVA	Dindigul (1.0), Theni (3.0), Thanjavur (13.0), Ramnad (15.2)	4
Positive Growth in both Employment and GVA	Chennai (0.1), Salem (0.5), Trichy (1.2), Perambalur/Ariyalur (2.0), Kancheepuram (3.5), Vellore (3.5), Madurai (4.9), Villupuram (5.7), Tiruvallur (6.3), Erode (7.7), Sivagangai (8.2), Coimbatore (9.8), Pudukkottai (9.9), Dharmapuri (11.2), Karur (14.2), Tirunelveli (19.5)	16
	Total	29
	State's Growth Rate in Employment: 4.6	
	State's Growth Rate in GVA : 8.8	

A conclusive characterisation of industries as 'better performing' has been made by analysing the following "models of growth."

1. extensive (high employment growth  $n$ , and low labor productivity growth,  $q$ );
2. intensive (high  $q$  and low  $n$ , even negative in some districts);

3. stagnant (low  $q$  and low  $n$ ); and
4. virtuous (high  $q$  and high  $n$ ).

#### Employment & GVA Growth

According to the neoclassical theory, output growth is supposed to lead to employment growth. Employment growth without output growth amounts to 'output-less'

Table 2: Performance of Districts by Growth in Employment and Gross Value-added in the UMS: 2001-06

Growth in Employment and GVA	Districts (figures within brackets are growth rate in Employment)	No. of Districts
Negative Growth in both Employment and GVA	Chennai, Kancheepuram, Villupuram, Dindugul, Karur, Perambalur/Ariyalur, Tiruvarur, Ramnad, Kanyakumari.	9
Negative Growth in Employment but Positive Growth in GVA	Tirunelveli (-1.7), Theni (-2.2), Erode (-3.1), Cuddalore (-4.0), Tuticorin (-4.7), Coimbatore (-4.8), Nilgiris (-5.5), Dharmapuri (-10.5), Madurai (-11.0), Sivagangai (-13.5)	10
Positive Growth in Employment but Negative Growth in GVA		0
Positive Growth in both Employment and GVA	Vellore (0.9), Salem (1.1), Trichy (2.5), Thanjavur(3.6), Nagapattinam (7.7), Virudhunagar (9.4), Pudukkottai (9.5), Tiruvallur (13.1), Namakkal (15.2), Tiruvannamalai (26.3).	10
	Total	29
	State's Growth Rate in Employment (-1.3)	
	State's Growth Rate in GVA (3.1)	



growth (Prakash, B.S & Balu, 2011). Table 1 presents the performance of districts by growth in employment and output in the OMS. About 16 districts have registered positive growth rates in both employment and GVA. Further, as many as 9 of these 16 districts have registered higher than the State's average growth rate in employment of 4.6 percent. Evidently, these are the districts which have performed in a manner that is worthy of emulation for best practices. Particular policy focus on industrial performance, however, needs to centre on 6 districts of the State which have registered negative growth rates both in employment and GVA.

Employment in the OMS has increased while UMS employment has decreased during the period 2001 to 2006 (Table 2). One can say that quality of employment in the manufacturing sector has been increasing in the state. Ten districts (viz. Tirunelveli, Theni, Erode, Cuddalore, Tuticorin, Coimbatore, Nilgiris, Dharmapuri, Madurai, Sivagangai) which have registered positive growth in value added but with negative growth in employment come under jobless growth districts in the UMS. Only three districts (viz. Namakkal, Cuddalore, Nagapattinam) in the OMS were under this category (Table 1). Nine districts (viz. Chennai, Kancheepuram, Villupuram, Dindugul, Karur, Perambalur/Ariyalur, Tiruvarur, Ramnad, Kanyakumari) have registered negative growth rate in both employment and GVA. Only 10 districts have registered positive growth rate in both employment and value added (i.e. growth in employment goes together with high growth of output).

### Employment Elasticity

It is clear that the pursuit of higher output growth rates is essential, but equally important is the question of how to squeeze more employment out at each rate of growth in output. Table 3 presents the employment elasticity for the districts in the OMS classified into four groups based on the sign or direction of growth in employment and GVA. 16 districts<sup>1</sup> registered vary from a low of 0.06 to a high of 3.76, are classified for their employment creating growth characteristic. This naturally would be the desirable outcome of output growth in situations where growth is expected to be the means for achieving the goals of full employment. Hence, from a policy point of view, the goal would have to be to move a state towards this phase. It is conceivable to find districts where despite low or even negative output growth, employment growth may be high if employment is driven by a supply push and people find jobs in low productivity activities of a residual nature. Such a situation would reflect distress and employment of last resort where the alternative is unemployment and starvation. Four districts which have registered negative output growth with positive employment growth rates are Dindigul, Theni, Thanjavur and Ramnad. About six districts have evidenced stagnating characteristics, having registered negative growth rates in both employment and GVA, the State as a whole has nevertheless registered an aggregate employment elasticity of 0.52 in the OMS. On the basis of these indicators, therefore, the conclusion that there exists enough empirical evidence to non-acceptance the hypothesis of jobless growth for the OMS in general.

**Table 3: Employment Elasticity with respect to GVA for Districts Classified for their "Employment Creating/Displacing" and "Other" Characteristics in the OMS**

Type of Employment Gain/Loss (A, B, C & D)	Sign (+/-) of Employment (E) and GVA Growth Rates	Districts with EE (within brackets) for Type of Employment Gain/Loss (i.e. Types A, B, C & D)	No. of Districts
A. Employment creating and productive	$E > 0; GVA > 0$	Salem (0.06), Chennai (0.15), Perambalur/ Ariyalur (0.19), Kancheepuram (0.30), Pudukkottai (0.41), Coimbatore (0.48), Madurai (0.54), Vellore (0.56), Trichy (0.58), Dharmapuri (0.64), Sivagangai (0.65), Karur (0.79), Tiruvallur (0.99), Erode (1.23), Villupuram (3.18), Tirunelveli (3.76)	16
B. Employment creating but not productive	$E > 0; GVA < 0$	Dindigul (-0.25), Theni (-1.28), Thanjavur (-0.38), Ramnad (-1.63)	4
C Job Displacing	$E < 0; GVA > 0$	Namakkal (-0.08), Cuddalore (-0.24), Nagapattinam (-1.14)	3
D Stagnating	$E < 0; GVA < 0$	Tiruvannamalai (0.11), Nilgiris (0.05), Tiruvarur (4.42), Virudhnagar (2.74), Tuticorin (0.48), Kanyakumari (0.02)	6
<b>EE with respect to GVA for the State is: <math>4.56/8.76 = 0.52</math></b>			<b>29</b>

<sup>1</sup>Among 16 districts, 3 districts (viz. Erode, Villupuram and Tirunelveli) have registered employment elasticity is above unity.



**Table 4: Employment Elasticity with respect to GVA for Districts Classified for their "Employment Creating/Displacing" and "Other" Characteristics in the UMS**

Type of Employment Gain/Loss A, B, C & D	Sign (+/-) of Employment (E) and GVA Growth Rates	Districts with EE (within brackets) for Type of Employment Gain/Loss (i.e. Types A, B, C & D)	No. of Districts
A Employment creating and productive	$E > 0$ ; $GVA > 0$	Thanjavur (0.24), Pudukkottai (0.38), Nagapattinam (0.40), Salem (0.48), Vellore (0.56), Tiruvallur (0.75), Tiruvannamalai (0.92), Namakkal (0.94), Virudhunagar (1.4), Trichy (1.56)	10
B Employment creating but not productive	$E > 0$ ; $GVA < 0$		0
C Job Displacing	$E < 0$ ; $GVA > 0$	Nilgiris (-0.28), Theni (-0.61), Erode (-0.74), Coimbatore (-1.02), Dharmapuri (-1.27), Tuticorin (-1.47), Cuddalore (-1.9), Tirunelveli (-3.4), Sivagangai (-13.5), Madurai (-27.5)	10
D Stagnating	$E < 0$ ; $GVA < 0$	Chennai (1.35), Kancheepuram (1.04), Villupuram (1.07), Dindugul (0.85), Karur (0.98), Perambalur/Ariyalur (5.46), Tiruvarur (8.62), Ramnad (1.36), Kanyakumari (1.79).	9
		EE with respect to GVA for the State is: $-1.3/3.1 = -0.42$	29

The employment elasticity for the UMS is  $-0.42$  (Table 4). This negative employment elasticity reflects an inadequate reabsorption capacity of the labor supply excess. The rate of job creation has been higher in the OMS compare with UMS during 2001–06. Ten districts have registered EE values marked for productive employment growth. On the other hand, ten districts have contributed to "job displacement" while remaining nine are "stagnating." Nearly two-third of the districts in the State falling under the "job displacing" and "stagnating" districts, require focused research/policy attention to improve the industrial development in the state in the UMS. The conclusion that there exists enough empirical evidence to support the hypothesis of jobless growth for the UMS in the state.

### Models of growth

The present article points out that it is important to go beyond estimates of employment elasticity and look at the performance of employment growth with labor productivity. This section aims at discerning the different Models of Growth followed by OMS, compared to UMS.

From a policy perspective, employment depends on both economic growth and the labor-absorption capacity of the economy. Policy must target both of these. If the

economy is growing as fast as the labor force, then, by definition, jobless growth generally arises when labor productivity increases faster than economic growth. Table 5 reports trends in LP for individual districts in the organized and unorganized sectors, shows that LP grew steadily in most districts in the unorganized sector. It grew at an annual rate of 4.5 during 2001–06. The growth was lower in the same period in the organized sector (4.0). Positive growth in LP is registered by as many as 18 districts in the OMS and 25 districts in the UMS. Labor saving factor affected adversely the employment in the UMS. A low employment rate indicates that only the most productive workers are involved in the production process, because of their skill level or their age; as the employment level rises, less productive workers are hired (Belorgey et al., 2006).

*Extensive* model followed by 9 districts are in the OMS, in the UMS only 3 districts were under this category. These were the districts registered high employment growth with low LP.

*Intensive* model had been adopted by thirteen districts in the UMS affected the employment growth in that sector during 2001 to 2006. Contrasts with this only 5 districts in the OMS in this model, i.e., high labor productivity growth accompanied by low/negative



Table 5: Performance of Districts in terms of Growth in Employment and Labor Productivity (LP) in the OMS and UMS: 2001-06

Growth in Employment and LP	Districts (figures within brackets are growth rate in LP in OMS)	No. of Districts	Districts (figures within brackets are growth rate in LP in UMS)	No. of Districts
<b>Extensive</b> (high employment growth and low labor productivity growth)	Tiruvallur (0.1), Vellore (2.7), Perambalur/Ariyalur (8.1), Erode (-1.4), Villupuram (-5.4), Theni (-5.2), Tirunelveli (-12.0), Ramnad (-34.1), Thanjavur (-41.8)	9	Namakkal (0.8), Tiruvannamalai (1.8), Virudhnagar (-2.5).	3
<b>Intensive</b> (high labor productivity growth and low employment, even negative in some districts)	Namakkal (5.2), Nagapattinam (15.5), Cuddalore (11.9), Tiruvarur (6.4), Salem (12.2)	5	Nilgiris (27.0), Dharmapuri (21.0), Tiruvarur (19.6), Sivagangai (17.9), Madurai (12.8), Perambalur/Ariyalur (12.2), Coimbatore (9.9), Tuticorin (8.2), Erode (7.5), Kanyakumari (6.6), Cuddalore (6.3), Theni (5.9), Ramnad (3.8).	13
<b>Stagnant</b> (low LP growth and low employment growth)	Dindigul (-4.6), Chennai (0.6), Nilgiris (-4.1), Tuticorin (-0.5), Kanyakumari (-12.1), Tiruvannamalai (-21.5), Trichy (0.8), Virudhnagar (1.8).	8	Karur (-0.1), Trichy (-0.9), Dindigul (-1.5), Kancheepuram (0.5), Villupuram (0.5), Vellore (0.8), Salem (1.1), Chennai (2.0), Tirunelveli (2.3).	9
<b>Virtuous</b> (high LP and high employment growth)	Karur (3.3), Madurai (3.9), Sivagangai (4.1), Dharmapuri (5.6), Kancheepuram (7.9), Coimbatore (9.8), Pudukkottai (12.7).	7	Tiruvallur (3.8), Nagapattinam (10.7), Thanjavur (10.9), Pudukkottai (14.0).	4
	<b>Total</b>	29		29
<b>State's Growth Rate in LP in the OMS (4.0)</b>				
<b>State's Growth Rate in LP in the UMS (4.5)</b>				

employment growth. Two districts (Cuddalore, Tiruvarur) registered high labor productivity growth with negative employment rates in both OMS and UMS.

*Stagnant* model: 8 districts in the OMS and 9 districts in the UMS were characterised as stagnant. Three districts, namely, Trichy, Dindigul and Chennai registered low LP growth and low employment growth. These three districts and remaining 11 districts under this model, require focused policy attention to improve the industrial development in the state.

*Virtuous* model was followed by 4 districts (Tiruvallur, Nagapattinam, Thanjavur, Pudukkottai) in the UMS: high LP accompanied by high employment rates. In Pudukkottai high labor productivity growth was associated with high employment growth rate in both OMS and UMS. Pudukkottai district has performed well during the study period in both the sectors.

### Labor Productivity

Labor productivity in the OMS was, on an average, 9.4 times higher than that in the UMS over the period 2001-06. (row 30, Table 6). In the OMS labor productivity levels are highest in the districts of Thanjavur, Dharmapuri, Cuddalore, Perambalur/Ariyalur and Kancheepuram while Tiruvarur and Kanyakumari reported the lowest level of labor productivity. Nilgiris, Chennai and Coimbatore are the districts with highest labor productivity in the UMS. Tirunelveli, Vellore, Tiruvannamalai and Tuticorin have lowest levels of labor productivity in the UMS. Surprisingly, in Tiruvarur, labor productivity in UMS is higher than OMS and in Kanyakumari the productivity levels are more or less similar in both sectors. Thanjavur, Dharmapuri and Perambalur are the districts registered wide difference between the two sectors.



Table 6: District-wise Labor Productivity Levels in the Organized and Unorganized Sectors

Sl. No.	Districts	Organized Sector (1)	Unorganized Sector (2)	Ratio of Labor Productivity (1)/(2)
1	Chennai	1,27,491	26,112	4.9
2	Tiruvallur	1,82,988	22,230	8.2
3	Kancheepuram	2,29,233	16,583	14.0
4	Vellore	1,17,900	9,663	12.0
5	Dharmapuri	3,44,693	15,467	22.0
6	Tiruvannamalai	1,37,749	9,745	14.0
7	Villupuram	35,100	14,100	2.5
8	Salem	99,231	14,022	7.1
9	Namakkal	1,02,335	14,242	7.2
10	Erode	1,24,207	14,092	8.8
11	Nilgiris	43399.5	31,117	1.4
12	Coimbatore	1,02,176	22,452	4.6
13	Dindigul	1,26,785	12,877	9.8
14	Karur	1,58,117	11,774	13.0
15	Tiruchy	1,88,520	13,021	14.0
16	Perambalur/Ariyalur	2,42,842	11,850	20.0
17	Cuddalore	2,70,653	16,117	17.0
18	Nagapattinam	29,766	16,244	1.8
19	Tiruvarur	4,163	15,528	0.3
20	Thanjavur	5,25,134	11,781	45.0
21	Pudukkottai	1,05,346	13,580	7.8
22	Sivagangai	77,894	17,842	4.4
23	Madurai	87,547	14,709	6.0
24	Theni	64,259	10,701	6.0
25	Ramnad	1,96,839	13,542	15.0
26	Virudhunagar	46,723	10,536	4.4
27	Tuticorin	1,27,924	9,851	13.0
28	Tirunelveli	1,30,035	8,160	16.0
29	Kanyakumari	15,305	11,764	1.3
	State	1,39,460	14,817	9.4



## Share of OMS and UMS in the TMS

The share of UMS employment in total manufacturing was 74 percent in 2001 and 69 percent in 2006 (Table 7). The share of employment in OMS rose from 26 percent in 2001 to 31 percent in 2006. In OMS, 19 districts have increased their employment share during the study period. The remaining 10 districts have experienced increase in employment share in 2006. Pudukkottai has performed well in the manufacturing (OMS and UMS) sector of the state. It has registered high growth rates in all key variables in the two sectors.

## Data Problems

*Wide Year-to-Year Fluctuations:* Due to many reasons year-to-year variations in data collected and published by the government agencies generally prevail. It appears that while they are controlled after due checking for more aggregate level data like national/states, at district level it perhaps is done less meticulously. One is therefore left with the option of either using the data published as it is or make such adjustments as techniques of research methodology may permit sometimes. We point out five such instances of severe data trough for GVA and two for number of persons

Table 7: Employment share of OMS and UMS in TMS

Sl. No.	Districts	OMS share in TMS		UMS share in TMS	
		2001	2006	2001	2006
1	Chennai	0.31	0.35	0.69	0.65
2	Tiruvallur	0.69	0.62	0.31	0.38
3	Kancheepuram	0.36	0.54	0.64	0.46
4	Vellore	0.18	0.20	0.82	0.80
5	Dharmapuri	0.26	0.50	0.74	0.50
6	Tiruvannamalai	0.05	0.02	0.95	0.98
7	Villupuram	0.13	0.23	0.87	0.77
8	Salem	0.17	0.15	0.83	0.85
9	Namakkal	0.24	0.12	0.76	0.88
10	Erode	0.14	0.23	0.86	0.77
11	Nilgiris	0.69	0.67	0.31	0.33
12	Coimbatore	0.31	0.45	0.69	0.55
13	Dindigul	0.37	0.46	0.63	0.54
14	Karur	0.20	0.45	0.80	0.55
15	Trichy	0.27	0.26	0.73	0.74
16	Perambalur/Ariyalur	0.08	0.15	0.92	0.85
17	Cuddalore	0.21	0.23	0.79	0.77
18	Nagapattinam	0.08	0.05	0.92	0.95
19	Tiruvarur	0.10	0.03	0.90	0.97
20	Thanjavur	0.02	0.05	0.98	0.95
21	Pudukkottai	0.33	0.32	0.67	0.68
22	Sivagangai	0.20	0.50	0.80	0.50
23	Madurai	0.16	0.30	0.84	0.70
24	Theni	0.30	0.33	0.70	0.67
25	Ramnad	0.07	0.27	0.93	0.73
26	Virudhunagar	0.48	0.33	0.52	0.67
27	Tuticorin	0.24	0.29	0.76	0.71
28	Tirunelveli	0.06	0.19	0.94	0.81
29	Kanyakumari	0.34	0.53	0.66	0.47
	State	0.26	0.31	0.74	0.69



engaged in the ASI database used for the study<sup>2</sup>. We have proceeded to skirt around the problem by leaving out the negative values. But why such data problems arise do and what can be done about it is relevant for us to consider here. One factor is the major under-reporting by data furnishing establishments to the official survey like ASI. Another reason, as Sastry (2003) terms it, is due to 'agency bias'. Better training to persons engaged in collecting data in the BES particularly on substituting non-responding units would help in this respect.

## Conclusion

The term employment intensive growth does not imply employment creation without output growth. Indeed, this term is used to describe a situation where high output growth is associated with high employment growth. By using district-wise data on manufacturing (both OMS and UMS) in T.N., the paper shows that the relationship between employment and output growth has weakened during 2001-06 in the UMS compared to the OMS. In addition, there are districts where positive output growth has been found to be associated with zero or negative employment growth in both sectors, thus pointing to situations of jobless growth in a literal sense. For a number of districts for which estimates of elasticity of employment with respect to output growth in manufacturing could be found for the study period, the figures for the UMS were found to be lower, thus indicating a decline in the employment intensity of growth in the sector. Interestingly, those are the districts where surplus labor continues to exist. However, the informal manufacturing sector has because of its relatively larger size and inefficient activities needs to grow at fast rate to realize productivity gains that percolate to the workers. Moreover, since the informal manufacturing sector is a major employer, policies need to be devised to tap the dynamism in this sector so that it leads to both growth of employment and growth of productivity. Thus, notwithstanding, the jobless growth in unorganized manufacturing in T.N. in the first quinquennium

of new millennium i.e. 2001-06 indicates the importance of growth of formal and informal manufacturing and its linkages with all other sectors of the economy. The part of the paper also points out that in an industrialized state, there should be room for growth of both employment and labor productivity, and that it should be possible to avoid a trade-off between the two.

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<sup>2</sup>Data for Villupuram on GVA, expressed in lakhs of rupees, was 10013, 11077, -29846, 9888, 13166 and 13033 for the 6 years during 2001-06. Likewise, for Salem it was -7684, 63749, 86574, 76813, 93581 and 120483; for Tiruvarur it was -368, 307, 390, 573, -347 and 280; for Nagapatinam it was 1889, 1751, 454, 1192, 3556 and -3098; and for Kanyakumari it was 14850, 14442, 14280, -10230, 11398 and 9585. Data for Tiruvarur on number of persons engaged was 7929, 9310, 9847, 5949, 8696 and 824 and for Tirunelveli it was 21078, 20320, 22551, 21223, 22000 and 70976.

*Basically we get confused a bit about what retail is. It is really just buying things, putting them on a floor and selling them.*

*– Gerry Harvey*



# Impact of Strategic HRD Initiatives on Individual Performance

AJIT KUMAR SAHOO AND CHANDAN KUMAR SAHOO

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*The present trend of globalization, liberalization, technological advancement, and effective knowledge economy has created an emerging emphasis on human resources (HR) and their contribution towards organizational competitiveness and performance. Strategic HR development basically requires identification of suitable Human Resource Development (HRD) activities and programs and aligns those to the employees' performance, so that organizations can understand how strategic selection of HRD activities can rationalize HRD expenses and also benefit the organization, achieving its strategic intents. Strategic Human Resource Development (SHRD) activities when aligned with the individual employees' development and growth needs can also motivate them to perform and deliver the best results. SHRD practices also support the organizational initiatives to face the real challenges of globalization and competition, as they can continue to sustain their competitive advantage through development of requisite competencies of their HR.*

The rising thought of Human Resource Development (HRD) puts people at the center of development because development is not only by the people it is also for the people. In the present dynamic business world, those are the successful organizations, which are in the forefront of competitions and are continuously maintaining sustainable competitive growth. The success behind these organizations shows that it is not the technology but the HR which makes the organization different and gives it a competitive advantage. Other sources, such as product, process, and technology, can also provide competitive leverage to an organization but its HR is more vital for its sustainability. To successfully face the increasing uncertainty and cut-throat competition, what is required today is performing employees to build performing organizations.

The present trend of globalization, liberalization, technological advancement, and effective knowledge economy has created an emerging emphasis on HR and its contribution towards organizational competitiveness and performance. HR is increasingly considered to have the potential to provide sustainable competitive advantage (Barney & Write, 1998; Harrison & Kessels, 2004). As organizations seek to grow and compete in the knowledge-based economy, HRD is expected to play a more strategic role in organizations (Garavan, 2007; Holland et al., 2007).

Strategic Human Resource Development (SHRD) has received an increasing research attention on account of liberalization, privatization, and globalization (Garavan, 1991; Horwitz, 1999; Garavan et al., 1995; Gilley and Maycunich, 2000; Grieses, 2003; McCracken and Wallace, 2000; Walton, 1999; Yorks, 2005). SHRD practices are increasingly getting importance in developing and executing successful strategies in a global, complex, and challenging external environment. Despite widespread research in HRM perspective in a discipline like HRD,

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there has been lack of focus on the strategic role of HRD in managing organizational performance.

SHRD is a system of tactful development and utilization of the HR working in the organization to cope with environmental changes in business efficiently and competently managing the business challenges to gain competitive advantage. In a nutshell, it is a concept of aligning HRD with business strategy to become accustomed with the changes in the business environment of an organization and considering HRD as a strategic tool to gain competitive advantage. It is an important task to modernize the HR in responding the changes in business environments and also maintaining a reserve of skilled HR to muddle through the future changes in business.

### Emergence of SHRD Perspective

There are many critical factors which organizations must consider as they face the future. Technology is advancing at a frenetic pace, especially in relation to the transfer and accessibility of information and the increasing ease of establishing communication networking facilities. The continuing removal of trade barriers and tariffs, the consequent globalization of markets, the volatility of consumer demand within existing markets, currency fluctuations, and political upheaval are by now familiar characteristics of an environment where "all is flux." The capability of people to cope and manage within such an environment is a vital element in the success of any business and ultimately a determinant in national economic performance. The new business context is prompting top management to take a greater interest in the development of their organizations' HR. Some specific triggers can be identified which have helped to generate this interest:

- difficulties in recruiting skilled, competent managers;
- the need to develop a more flexible and adaptable skill base;
- a demand for leadership and team-building skills at all operational and administrative levels;
- a requirement for all organizational functions to adopt a strategic focus;
- the need to integrate the potential of all employees with business objectives;
- a greater emphasis on performance evaluation and management;

- the increasing necessity for HR and succession planning.

### Strategic HRM and HRD

SHRM is the planned pattern of HR deployment and activities intended to enable the organization to meet organizational goals and objectives (Noe et al., 2007). Miles and Snow (1984) viewed SHRM as "a system tailored to the demands of business strategy." Wright et al. (1994) consider it as "the pattern of planned human resource activities intended to enable an organization to achieve its goals."

Garavan et al. (1995) noted that SHRD is used in many contexts and for a variety of activities. It promotes practices that enhance the strategic performance of employees and organizations. It also emphasizes proactive change in management which enables organizations to survive in an increasingly complex, unstable, competitive, and global environment (Grieves, 2003). Garavan (1991, 2007) argued that to be effective, SHRD needs to integrate learning interventions into business planning. This is a critical component that when combined with the active participation and support of top management, SHRD will flourish. SHRD will also be strong where there is continuous knowledge of the external environment in terms of opportunities and threats facing the business. It is argued that a strategic approach to HRD is imperative in the globalization era. A strategic perspective involves designing and implementing HRD policies and practices to ensure that a firm's human capital contributes to the achievement of business objectives (Davenport et al., 2003; Garavan, 2007; Rainbird, 1994; Zula & Chermack, 2007).

There is also no basic difference between HRD and SHRD; the only difference is the area and the type of application. HRD has a broad perception of human development in macro and micro economic level. SHRD is the strategic implementation of HRD to respond the environmental changes in the organization. It develops a bridge between business policy/ management and HR department to cope with the business changes and to achieve the strategic intent of the business. It is about to grow potential competitive advantage by developing the HR on the basis of strategic necessity of an organization.

As an emerging strategic perspective, HRM/HRD has significant impact upon strategic responses for adjusting the environmental changes. It is widely acknowledged that integration of HR strategy with the business strategy is



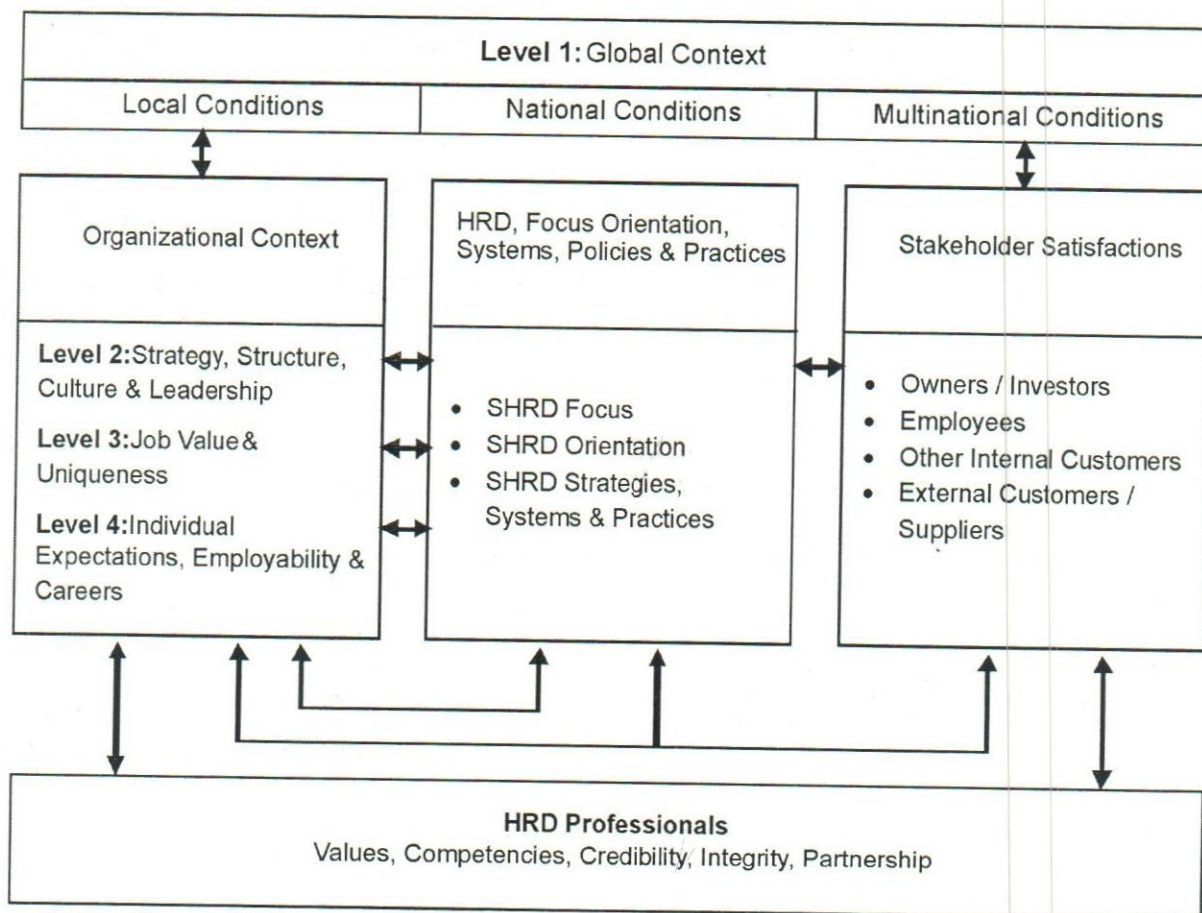
vital for organizational success. A strong link between HRD and business strategy of an organization can efficiently attain the objectives by giving thrust on optimum utilization of key resources. Efficient and effective SHRD practices act as a key mechanism in long-term organizational success.

### Role of SHRD

The previous researchers in this field have defined the major role of SHRD. Behavioral role theory, pioneered by Katz and Khan (1978), and Jackson and Schuler (1995), considers employee behaviors as the key to successful SHRD implementation. By aligning HRD policies and practices with organization-wide strategy, employees can fulfill their role expectations within the organization. Resource-based theory of Barney (1991), Prahalad, and Hamel (1990) suggests that HR has the sustainable competitive advantage for the organization. This is because HR is usually rare, inimitable, and non-substitutable source for achieving competitive advantage. Other resources do

not have such characteristic features. Human capital theory of Becker (1964) suggests strategic importance to HR like other economic assets as knowledge, skills, and abilities of the people have also economic values. This concept later developed the human resource accounting by Flamholtz and Lacey (1981) and others. Transaction cost theory of Williamson (1981) suggests strategic HRD approach can ensure cost minimization as this will enhance periodic monitoring and governance. Agency theory of Eisenhardt (1989) suggests strategic approach to HR aligns employees' and employers' interests and thereby ensures streamlining of employment relations and systems within the organization. All the above theories justify alignment of HR with organization-wide strategy.

The scope and nature of the activities that come within the remit of SHRD is focused and result driven (McCracken & Wallace, 2000; Garavan, 2007; Yorks, 2005). Hu (2007) specified five key SHRD activities: (a) talent development, (b) training and development, (c) organization development, (d) performance development,



Source: Garavan (2007).

Figure 1: Contextual Framework of SHRD



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and (e) leadership development. Garavan (2007) highlighted three sets of HRD strategies: (a) organization performance, (b) organizational learning, and (c) organizational change. However, most management thinkers agreed that SHRD involves systematic and formal processes that are aligned with the needs of the organization.

SHRD encompass those areas which are instrumental for successes of an organization were enlisted below:

- Recruitment and Selection
- Human Resource Planning (HRP)
- Performance Appraisal
- Competency Mapping
- Training and Development
- Career Planning and Development
- Compensation Designing

Thus, it is evident that SHRD can significantly benefit an organization and also its employees. SHRD, therefore, can mutually fulfill the objectives of both the organization and its employees.

Garavan (2007) developed a framework for SHRD, which includes three major constructs: (a) the context, (b) the HRD function, and (c) the stakeholder. According to Garavan, four levels of context shape the SHRD activities: (a) the global context, (b) the organizational context, including strategy, structure, culture, and leadership, (c) the job value and uniqueness, and (d) the individual. The model also outlines three characteristics of SHRD—focus, orientation, and strategies. Furthermore, the model acknowledges the importance of multiple stakeholders that have emerged in the design, development, and implementation of SHRD, both internal and external to the organization (e.g., owners, investors, employers, employees, suppliers, and customers). The model emphasizes horizontal and vertical linkages throughout and suggests various stakeholder-focused outcomes. These stakeholders react to and evaluate outcomes, as well as provide input into the SHRD process (Figure 1).

### SHRD Approach

HRD can ensure to gain corporate competitive advantage by developing a mix of competencies, e.g., knowledge, capability, and attitudes through effective human capital

formation. For this purpose, HRD needs to increase its strategic orientation in the activities within and outside the organization. To achieve this end, HRD needs to identify, recruit, reward and retain team members who will fill these roles while representing their organizations in these initiatives, identifying opportunities and threats, managing relationships, and embedding insights and learning back into the organization (Ansett, 2005).

An SHRD approach can guide explorative learning by identifying and assessing future learning and performance needs, preparing and developing individuals, aligning systems and processes, and facilitating organizational and individual adaptation to changing conditions that affect shareholder values. The orientation of SHRD highlights the extent to which HRD professionals are strategic partners, act as an organizational change agents, and facilitate linking. Strategic partner models' envision that HRD professionals will be key players at the executive table and adopt a multiple stakeholder approach to the management of HRD (Armstrong, 2005; Casio, 2005).

*Organizational change focused SHRD strategies* emphasize feedback processes, creating competitive culture, and development of change management processes including education activities. SHRD calls for HRD practitioners to play an active role in educating senior management and other organizational members on the meaning and importance of having strategically aligned policies and systems within organizations. SHRD initiatives can be mixed with HRM activities such as reward systems, benefits, employee assistance programs, flexible leave options, emergency compensation for displaced employees, the implementation of health and safety standards, layoffs, and reduced work hours (Barron et al., 2005; Kondrasuk, 2004; Lockwood, 2005; Pasek, 2002). This horizontal integration is fundamentally important to maximize the impact of SHRD.

*Organizational performance-focused SHRD strategies* emphasize skills training, job and competency analysis, and management and leadership development. A key role for SHRD is to identify performance needs and thereby developing core competencies to meet the demands of organizations.

### SHRD System

Strategic HRD system consists of comprehensive and integrated set of arrangements, which are called as SHRD



practices and SHRD facilitators which are interdependent and changes affect each other.

**SHRD Practices**

This will include development of fundamental elements of SHRD such as compensation, working environment, welfare and departmental functions of HRD which have to be strong enough to ensure congenial atmosphere in an organization for implementation of SHRD initiatives like training, performance appraisal, job enrichment, career planning, communication, involvement and empowerment.

**SHRD Facilitators**

The concerns of top management, trade unions, frontline officers/supervisors, and individual workers regarding development issues, industrial relations scenario, labor statues, trainability, employment externalization, and downsizing are believed to play a vital role in facilitating and inhabiting strategic HRD practices in the organization (Kandula, 2007). The awareness and adequate devotion of the above factors help an organization to grow smoothly and respond the business changes promptly.

SHRD will be an effective practice in proper utilization of opportunities and countering threats. At the organizational level, it is essentially required to adjust or tune the HRM to SHRD in order to make strategic development of the HR to overcome the global business challenges. The limited natural resources as compared to the abundant HR create a delicate situation, in terms of

skills and productivity, for which HR-based operational development would obviously be a competitive edge for the companies. So, companies are in ardent need to judiciously identify the business changes to utilize SHRD system tuning with organizational business policy.

In order to achieve organizational performance and growth, it is inevitable to enhance the employees' knowledge, skills, and attitudes. Furthermore is the aim to develop the intellectual capital to increase its performance capacity and capability through improving their knowledge, skills, and competencies (Gilley & Maycunich, 2000). According to Walton (1999), SHRD involves introducing, eliminating, modifying, directing and guiding processes and responsibilities in such a way that all individuals and teams are equipped with the skills, knowledge, and competences they require to undertake current and future tasks required by the organization. It needs to be seen as part of the strategy management process of a given organization, since the organization is dependent on effectively utilizing and enhancing all of its resources to cope with current and future contingencies. Thus, SHRD means ensuring a sustained competitive advantage when HRD activities are aligned with organizational goals such as generating firm-specific knowledge and skills.

Here it has been shown in Figure 2 that, SHRD's aim is to develop individual employees and teams to improve performance, career progression and work

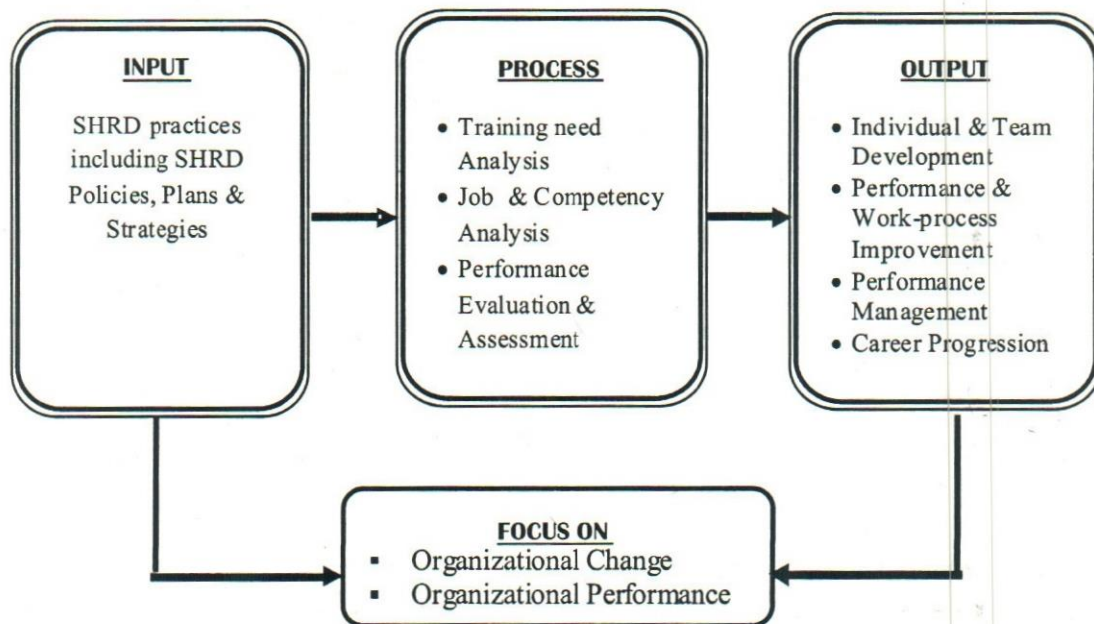


Figure 2: System Approach of HRD



processes. It is important to focus on organizational change and performance through the systematic processes of SHRD like, training need analysis, job & competency analysis, and performance evaluation & assessment in order to encourage behavioral change and increase productivity. In order to make the process effective, the important factors are the involvement of the line managers and full support and commitment of the top level managers. Without the support of the top management and the line managers in the SHRD process, the needs analysis and evaluation will remain neglected in SHRD process.

### Role of HR Professionals

Due to globalization, innovation in production and information technology, the pace of change has been amazing. HR professionals have an important role to play in making people accept the change. HR is becoming a "strategic partner" within many businesses (Ulrich, 1998) and senior managers are asking HR professionals to define overall organizational architecture in terms of organizational culture, competencies, rewards, governance, work process, and leadership. However, Truss

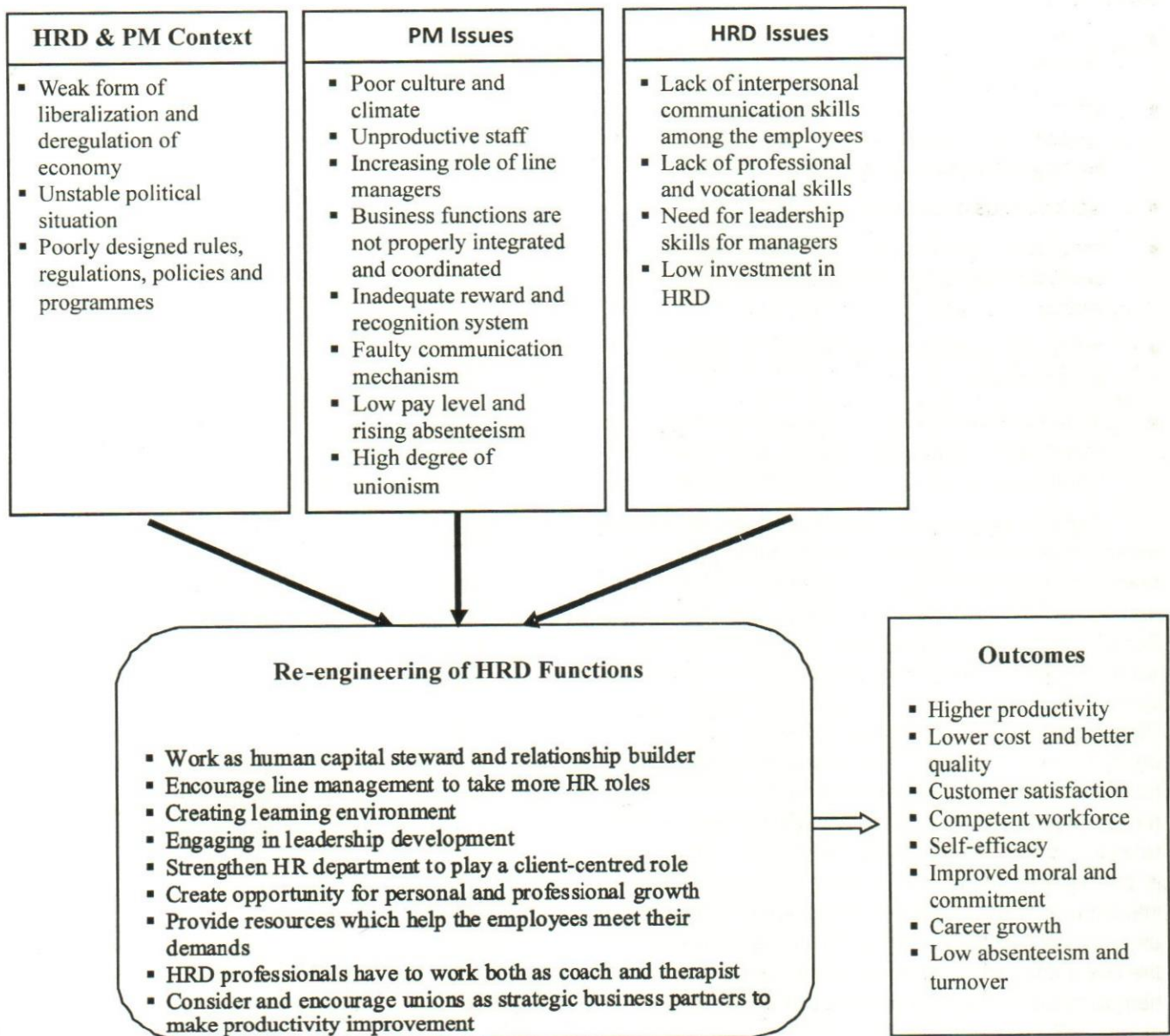


Figure 3: Re-engineering of HRD Functions and Outcomes



et al. (2002) have argued that success depends on the ability of an HR department to perform such a role effectively and the ability to influence others to accept this changed role for HR. In such cases, HRD is responsible for creating a corporate learning environment. They have to create high-performing teams, reduce the cycle time for innovation, and ensure that new technology is properly deployed.

The main role of HR professionals is to ensure that employees are engaged and they feel committed to the organization and contribute fully. The key roles to be played by them for optimum utilization of human competency are as follows:

- involved in providing training for line managers in order to achieve high employee morale;
- offer opportunity for personal and professional growth and provide resources, which help the employees meet their demands;
- work both as coach and therapist;
- emphasis on individual employee's learning and development is becoming more important than status;
- increase professionalism of employees in organizations;
- at the enterprise level, it can take help from employee representatives to implement HRD initiatives and thus to increase productivity.

Organizations with HRD and performance management (PM) related issues should form an HRD team comprising of the HR department head, line managers, HR professionals, union representatives. Support from top management is essential for this to work effectively. The team will work for improving the current HRD issues. HRD helps not only to improve the PM process but also improves individual behavior and organizational outcomes. The role of HR professionals has also been changing. Some of the major changes in professional roles are: working as human capital steward, relationship builder, supporting line managers to take part in strategic decisions and making HR function able to influence in organizations, create environment for learning as reflected in Figure 3. HR professionals have to train the line managers to implement the best practices that help to raise strategic capabilities of employees. In all cases, HR professionals have to play a major role in raising team capability to deliver—and this must be “beyond routine functions.”

## Managerial Implications

The following implications will be useful for line managers and HR professionals for acquiring adequate knowledge, building competence, fostering self-efficacy in general and gaining competitive advantage in particular.

- Defining sound business policy to strengthen SHRD.
- Initiating changes in skills and competences are required to support improved job performance in specific individuals.
- Development of SHRD practices through continuous investment.
- Particular deficiencies in performance that need to be addressed.
- Any changes in technology, production processes, and organization culture are dependent on employees' learning something new.
- Appropriate opportunities are provided to help individuals acquire new skills.
- Sense of responsibility and accountability in the organization for ensuring that appropriate learning opportunities are provided.
- Managers and employees are persuaded to see that continuing training and development is the form rather than the exception.
- Significant changes in the general behavior of individuals would improve their job performance or that of others.
- Specific learning from the previous experiences with training and development.
- Learning from specific mistakes that have been made.
- Fostering a culture of nurturing individual capability towards creativity and innovation.
- Maintaining systematic and technology based HRD in order to enhance productivity.

## Conclusion

Traditional organizations perceived HRD activities as a cost factor and minimizing it can add to their revenues. However, modern approach to HRD negates this perception and in fact it argues that rate of return would be higher if HRD activities are strategically designed as it can enhance performance and productivity. Increased retention of good



performers again provides sustainable competitive advantage to the organization. SHRD basically requires identification of suitable HRD activities and programs and align those to the employees' performance, so that organizations can understand how strategic selection of HRD activities can rationalize HRD expenses and also benefit the organization, achieving its strategic intents. SHRD activities when aligned with the individual employees' development and growth needs, it can also motivate them to perform and deliver the best results. SHRD practices also support the organizational initiatives to face the real challenges of globalization and competition, as they can continue to sustain their competitive advantage through development of requisite competencies of their human resources. SHRD also require reinforcing various HRD sub-systems, such as performance management, career planning and development, training and development, organizational development, etc. Thus it requires re-look into the existing processes and sub-systems of HRD and redesigns those in line with the strategic intents of the organization, so that SHRD can play its appropriate role in strengthening the organizations, even in the situation of uncertainty, to sustain and grow.

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