Chapter – 6

The conceptualization of strategies for energizing the supply chain management in food processing industries
Conceptualization of the strategies for energizing the supply chain management in food processing industries

This section is divided into two parts. The first part of this section presents food value delivery chain analysis and a framework for understanding the dynamics associated with it. For a food system, the inputs are agricultural produce; and the outputs are consumer-ready cooking items. The conversion process usually involves at least three organizations—producer, processor, and retailer. The primary objective of value analysis is to assess the opportunities and possible approaches to making significant improvements in the efficiency and competitiveness of food value chains. The second part of this section presents a model to build the rural information infrastructure which provides marketing intelligence to farmers and a medium to connect rural and urban India and an avenue to the corporates for rural supply chain development.

Value analysis across the supply chain for food processing industries

Developing the value delivery chain map

Here we set out to map the value delivery chain for food processing industry across the supply chain and create a framework that will allow us to establish a vision of the future-state for this value chain, which is hopefully radical in conception. Value chain mapping involves reviewing the pattern of the industry to sensitize the researcher to the forces that drive and inhibit the value chain performance within the industry and to establish the root causes rather than symptoms of the problems confronting the industry. This will enable key stakeholders to make informed and holistic policy decisions that are free from myopic single interest perspectives and is expected to make a significant contribution to knowledge.

Methodology

The world of production and exchange which we are observing is complex and heterogeneous. Not only do value chains differ (both within and between sectors), but so, too, do national and local contexts. So there is no mechanistic way of applying value chain methodology. Each chain will have particular characteristics, whose distinctiveness and wider relevance can only be effectively captured and analyzed though an understanding of the broader issues which are involved.
Table No. 6.1.1  Value analysis across existing supply chain in food processing industry in India - An overview

<table>
<thead>
<tr>
<th>SI.No</th>
<th>Major components of Supply chain</th>
<th>Constituents of Supply chain</th>
<th>Value added</th>
<th>Costs</th>
<th>Value loss</th>
<th>Scope for value gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Procurement</td>
<td>-Farmers</td>
<td>Grows the agricultural produce</td>
<td>Raw material cost</td>
<td>-Post Harvest loss</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Traders</td>
<td>Information gathering, Searching, expert buying, stocking, pricing, delivering, transporting, financing, risk bearing and so on, the commodities for both producer as well as buyers.</td>
<td>-Sourcing</td>
<td>-High procurement cost</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Brokers</td>
<td></td>
<td>-Procurement</td>
<td>-Heterogeneous produce</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Stockists</td>
<td></td>
<td>-Inventory</td>
<td>-Wastages</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Commission Agents</td>
<td></td>
<td>-Warehousing</td>
<td>-Poor capacity utilization of transportation because of smaller quantity</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Primary market wholesalers</td>
<td></td>
<td>-Transportation</td>
<td>-Higher transaction cost because of more no. of transactions.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Urban market wholesalers</td>
<td></td>
<td>-Marketing</td>
<td>-Warehousing,</td>
<td></td>
</tr>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td>-Higher transaction cost because of more no. of transactions.</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-Poor capacity utilization of transportation because of smaller quantity</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-Higher transaction cost because of more no. of transactions.</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Production</td>
<td>Primary processing</td>
<td>Manufactures add value to consumers by convert the raw material into the finished goods by meeting the changing needs for type, size, quality, appearance, etc. They facilitate the product reach the consumers through various intermediaries.</td>
<td>Procurement</td>
<td>-Wastages</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Wheat based food product manufacturers) - Bakers, Biscuit manufactures, etc.</td>
<td></td>
<td>Inventory</td>
<td>-Poor capacity utilization of vehicles</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Production</td>
<td>-Higher transaction cost because of more no. of transactions.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Warehousing</td>
<td>-Poor capacity utilization of transportation because of smaller quantity</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Transportation</td>
<td>-Higher transaction cost because of more no. of transactions.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-Marketing</td>
<td>-Warehousing,</td>
<td></td>
</tr>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td>-Higher transaction cost because of more no. of transactions.</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-Poor capacity utilization of transportation because of smaller quantity</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-Higher transaction cost because of more no. of transactions.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Distribution</td>
<td>C &amp; F Agents</td>
<td>Buying, selling, bulk breaking, transport, storage, finance, delivering, risk bearing, providing market information to the manufacturer as well as retailers, etc.</td>
<td>-Inventory</td>
<td>-Wastages</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Redistributors</td>
<td></td>
<td>-Transportation</td>
<td>-Poor capacity utilization of vehicles</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Stockists</td>
<td></td>
<td>-Storage</td>
<td>-Higher transaction cost because of more no. of transactions.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wholesalers</td>
<td></td>
<td>-Distribution</td>
<td>-Poor capacity utilization of vehicles</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-Higher transaction cost because of more no. of transactions.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Retailers</td>
<td>Value added: buying, selling, bulk breaking, transport, storage, finance, delivering, risk bearing, providing market information to the manufacturer as well as retailers, etc.</td>
<td>-Inventory carrying cost</td>
<td>-Damaged items</td>
<td></td>
</tr>
</tbody>
</table>

293
The food value chain mapping embraces the use of methodological pluralism, whereby multiple and mixed research strategies and data collection instruments are used to generate complementary data about a phenomena under investigation.

Value chain analysis provides a framework for the use of a variety of interview, observational, and documentary instruments to collect the information necessary to gain a detailed understanding of the focal value chain. The methodology used in the analysis of this objective involved reviewing extensive literature related to the problem from research papers, dissertations, and electronic data bases, financial and general press. Finally, these insights have been complemented with exploratory insights of a qualitative nature gained from interactions with the subject experts, industry experts and also through observation from field visits during the course of this research. The good and bad practices were documented and analyzed.

Frame work for food value delivery chain analysis

Step 1: Mapping the value delivery chain across the supply chain for food processing industries

The value delivery chain map provides a 'skeleton' of the current-state of the focal chain by identifying the agents (producers, intermediaries, processors, etc.) within value chains and challenges facing these agents

Step 2: Reviewing the existing of value generation activities across supply chain in food processing industry in India,

i) Value creation in Indian food-processing

a. ITC's E-Choupal

E-Choupal is a value creation initiative started by one of the India's leading private companies – the India Tobacco Company (ITC). The ITC's Agri-Business segment created its e-Choupal network in early 2000, basically to closely integrate its rural suppliers for the agricultural raw material for its domestic Fast Moving Consumer Goods (FMCG) business. The company had launched aquachoupal.com in Andhra Pradesh for shrimp farmers, Soya Choupal.com for soya farmers in Madhya Pradesh and Plantersnet.com for the coffee farmers in Karnataka state. Today, after having approximately 5950 e-Choupals in 8 Indian States, serving more than 34,000 villages and 3.5 million farmers, it has demonstrated that a sustained business model, as envisaged
Figure No.6.1.1 Mapping the value delivery chain across the supply chain for food industries

Value Chain Governance - Executive Governance - Judicial Governance - Legislative Governance

Value Management - Planning - Organizing - Directing - Control

Value Generation Activities - Value Creation - Value Addition - Value Protection

Value chain Upgrading - Process upgrading - Product upgrading - Functional upgrading

F-Farmers, P.I.-Procurement Intermediaries* (Eliminating of P.I. from the existing Supply chain), PLP-Primary Level Processors, SLP-Secondary Level Processors, D.I.-Distribution Intermediaries, R-Retailers
in government-planned Common Services Centers can have both value creation for the stakeholders and also can yield substantial societal return. The initiative of e-Choupal recognized the fact that in spite of the excellent resources of Indian Agriculture sector and Indian farmers' legendary resourcefulness, they remain poor for various reasons—small land holding, lack of real time information, variance in agro-ecological conditions, weak infrastructure, and very limited access to markets. The middleman spins an exploitative cycle of dependency by making most of the profit: but unfortunately he is an indispensable link in the value chain. The business model of e-Choupal therefore seeks to provide an end-to-end solution to this situation, by providing real time and customized market information, other agri-information (weather, soil nutrition, pesticide, etc.), broadband connectivity, direct supply and marketing channel for both farm inputs and farm produce, thus empowering the farmer to take appropriate decisions. Such a robust business model of e-Choupal is significantly useful for ITC also because it provides a better supply chain for ITC's food and agri-business, access to under-served rural markets and new IT-enabled services business opportunities in health, education, entertainment, and e-governance. e-Choupal empowers the community through real-time information and customized knowledge; its innovative value capture system increases farmers' risk-taking and competitive attitude and provides the community the freedom of choice and local management.

b. TARAhaat

TARAhaat Information and Marketing Services Limited (TARAhaat), promoted by Development Alternative Group, (an alliance between Hughes Escorts Communication, Hewlett Packard, Oracle, KLG systel, Jaldi.com, Global Development Gateway (sponsored by World Bank and Gates Foundation), Excelsior Ventures Management, LLC and James Martin one of the world’s leading NGOs) is an organization that focuses on rural India for taking the benefits of the technology to the rural population.

www.TARAhaat.com, an internet portal was launched by this organization on June 1, 2000, in Bundelkhand near Jhansi in Madhya Pradesh, which aims to connect rural India to the external world. Since then it has expanded into Uttar Pradesh, Punjab, and Haryana and had 38 centres by the end of 2005. It is a comprehensive portal providing a wide range of services.
The portal is supported by the franchise network of cyber cafes or TARAkendras providing the wide gamut of services ranging from entertainment, information, and commercial needs. Each TARAkendras services villages within 5 Km radius, which comes to about 4 villages. The next TARAkiosks also called TARAdhabas, which operate in the same manner as local PCO booths providing education and entertainment services. It has e-mail service TARAdak which supports 11 languages, thus making it relevant and easy to use for the consumers who are only familiar with vernacular languages. It has an integrated delivery system called TARAvans (TARAraths), or vans which are franchised to local people to deliver the goods ordered by the villagers at their door step. TARAcards have been provided to the regular users enabling them to make the transaction without paying the money in advance. Rural producers are also able to connect to the global market and sell their products to distant clients through a sister portal called TARAbazar. Farmers can do trading, and food processing companies can buy directly from the farmer using this portal. Therefore, this comprehensive and integrated platform not only addresses the problems of rural people in offering the solutions, but is also in a position to provide betterment to socio-economic life in rural areas. The portal earns its revenue from the payment received from different services, commission on sales, advertising fee, royalties, etc. TARAhaat and TARAkendras both earn 5% commission each on all the sales made through the network, both by the organizations in the rural market and also on the sales made by the rural craftsmen in urban and export markets through TARAbazar.com.

c. EID Parry’s Indiaagriline

EID Parry and Nagarjuna Fertilizers have launched a portal, www.indiaagriline.com an experiment with information technology for rural markets in Tamil Nadu in 2001. In 2004, the Parry’s Indiaagriline had franchised access centres or kiosks known as Parry’s corners, in operation. These Parry corners were franchised to local villagers who owned and operated them in their own homes. These kiosks are equipped with PC, printer, telephone, furniture, and a power source with back up. The farmers could log on to www.indiaagriline.com through the kiosks located in the village itself and be informed with regard to the farming activities in the area.

This platform provides information on six crops namely banana, sugarcane, cashew, tapioca, and groundnut, and focuses on 271 villages around its Nellikuppam factory near Cuddalore. This information helps the farmers to increase their yield on one hand and provide a better quality product to the organization on the other. It also enables the
organizations to market its agri-inputs in the market better than it would have been possible otherwise.

d. Kandhamal Apex Spices Association for Marketing (KASAM)

KASAM is a registered Apex Society formed by the 61 Spices Development Societies (SDS) of Kandhamal district, most of which are self-help groups for women, situated in a small town of Bandhgarh in Orissa. This co-operative was set-up to trade fairly with as well as to help the Kuttia Kondh in tribe in 1998. This co-operative is vital to the welfare of more than 12,000 subsistence tribal farmers in a region where the average family plot is only around one third of a hectare. The Kandhamal region of Orissa, is the poorest region of the second poorest state of India (after Bihar).

Orissa’s Kandhamal district produces organic turmeric, which is grown without using any chemical fertilizers or pesticides. 70% of the population lives below the poverty line and the literacy rate is only 32%. The tribals practice traditional, primitive methods of cultivation. Organic turmeric is good for health and skin care and does not pose any health hazards and it has a characteristic aroma which can be stored for more than 2 years.

This organic turmeric has a huge demand in Europe, America, and Australia, but neither the state administration nor the farmers in the Kandhamal district had the resource to tell the world where to come for it. The farmers sell their produce to local merchants at a nominal price of Rs.8-10 per kg and there are no linkages to the market and the farmers by themselves, could not access the highly profitable market. The path breaking success in employment of the internet based technologies in marketing has transformed the socio-economic life of the tribal farmers of Kandhamal district. The impact of this initiative is that, it is able to sell the organic turmeric at $12 per kg in the US market. KASAM has also developed the infrastructure for production and supply of value added spices. It has started exporting the organic spices from the year 2000 onwards. KASAM is now preparing to sell some of its production in the domestic market directly to branded spices companies and institutional buyers. It has entered into a marketing tie-up with Orissa State Co-operative Milk Producers’ Federation (OMFED), whose website www.omfed.com prominently features Kandhamal turmeric powder. OMFED has established its processing unit at Phulbani, the district head quarters of Kandhamal to do the value addition to the natural produce. With quality certifications from the international certification agencies, KASAM has been able to export its produce to countries such as USA, UK, Egypt,
Netherlands, South Africa, Bangladesh, and Sri Lanka through exporters and under the active guidance of spices board of India (Balram, 2008b).

ii) Value addition in Indian food processing

The value-adding processes range from simple preservation such as drying, grading, and storage to production of high-value products through capital intensive modern methods. Developing countries have long promoted value-added processing of primary products as a path to industrialization. This trend has been sustained by a number of factors. First, in general, increasing human population continues to give a boost to the demand for processed agricultural products. As incomes increase and the pace of urbanization picks up, they further induce disproportionate rapid growth of the demand for highly processed and packaged goods, since an increasing proportion of the population becomes more health conscious and opt for a greater variety in diet. Second, the growing volume of commercialized production leads to scale economies in processing and distribution which, in turn, induces increasing profitability and entry of new enterprises into the industry.

Processed food products naturally have a greater domestic input content and hence a greater domestic value-added compared to these products. Finally, the expansion of these exports is a powerful vehicle for linking the rural economy in a positive way with the ongoing process of economic globalization.

India is continuing as a producer of raw materials and value-addition was low. Value addition should be the mantra to boost Indian processed foods. Value addition is a must, to leverage our own resources. The food processing industry is estimated to grow at 9-12 per cent, on the basis of an estimated GDP growth rate of 6-8 per cent, during the tenth five-year plan period. The level of Value addition was an abysmal 8% (during the tenth five year plan period) that could be doubled to 14% by the end of the 11th plan. Processed foods will soon become a necessity with increasing economic growth. A viable strategy for this sector was to expand the processed food market, to reduce waste, and extend the shelf life of agricultural products as well as ensuring food safety. At the consumer end, the acceptance of processed food represented the biggest challenge. There is a need to systematically build awareness of the advantages of processed food. Affordability is a key factor in the acceptance of processed foods.

The Ministry of Food Processing estimates the size of the Food Processing Industry at Rs.3,150bn (US$70bn), including Rs.990bn (US$22bn) of value added products. The
Table No. 6.1.2 The existing value addition system across supply chain in food processing industry – a review

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Major components of Supply chain</th>
<th>Constituents Of Supply chain</th>
<th>Role</th>
<th>Value added</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Farmers</td>
<td>Producer</td>
<td>Grows the agricultural produce</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Traders, Brokers, Stockists, Commission Agents</td>
<td>- In each primary and central market, individuals, firms or even companies buy the agricultural produce for the manufacturer. They are buying agents or commission agents. Commission merchants who buy the commodities on their own account and at their own risk. Brokers - They may be individuals, partners or even companies who act as agents/middlemen for both sellers and buyers. Dealers acts as the principals, buying commodities on their own account at their own risk merely for a chance of profit. They also act as the warehouse keepers for the market. They absorb both market and credit risks.</td>
<td>Information gathering, Searching, expert buying, stocking, pricing, delivering, transporting, financing, risk bearing and so on, the commodities for both producer as well as buyers.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Primary processing</td>
<td>Primary Processing: The primary processing would encompass cleaning, grading, powdering and refining of the agricultural produce as in the case of wheat-to-wheat flour. Example: ITC, Nandi flour manufacturers, Godrej, etc, Products &amp; Services: Atta, Rice Floor, Dhal, etc.,</td>
<td>Manufactures add value to consumers by converting the raw material into the finished goods by meeting the changing needs for type, size, quality, appearance, etc. They facilitate the product reach the consumers through various intermediaries.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wheat roller flour mills, Secondary processing, (Wheat based food product manufacturers) – Bakers, Biscuit manufacturers, etc.</td>
<td>Secondary Processing: The secondary processing would include the modification of the basic product to a stage where it requires value addition and ready for consumption. Example: High value added branded food products like Biscuits, Bread and other Bakery items in which wheat is one of the ingredients. Example: Food products of ITC, Britannia, HLL, Nilgiris, etc.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>C &amp; F Agents, Redistributors, Stockists, Wholesalers</td>
<td>Wholesalers: They are individuals or business firms who will sell the products primarily for resale to the retailers.</td>
<td>Buying, selling, bulk breaking, transport, storage, finance, delivering, risk bearing, providing market information to the manufacturer as well as retailers, etc.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Retailers</td>
<td>Retailers: They are individuals or business firms who will sell the products to the ultimate consumer.</td>
<td>Buying, selling, bulk breaking, transport, storage, finance, delivering, risk bearing, providing market information to the manufacturer as well as retailers, etc.</td>
</tr>
</tbody>
</table>
Food Processing Industry is estimated to grow at 9-12%, on the basis of an estimated GDP growth rate of 6-8%, during the tenth plan period. Value addition of food products is expected to increase from the current 8% to 35% by the end of 2025. Fruit & vegetable processing which is currently around 2% of total production will increase to 10% by 2010 and to 25% by 2025.

The domain of farming is enlarging from grain production to food processing. The final stages of food processing appear to be labour-intensive. There is a pressing need for a large pool of trained manpower in this sector. This implies that the expansion of the processed food sector can have a strong positive effect on employment generation in the typical ‘labour-surplus’ developing economy. Processed food products naturally have a greater domestic input content and hence a greater domestic value-added compared to these products. Finally, the expansion of these exports is a powerful vehicle for linking the rural economy in a positive way with the ongoing process of economic globalization.

iii) Value protection

The issue of Value protection is important in the context of the number of imitation products in the larger part of the Indian market especially rural. Imitation or Look-alike products are the products which look like original products but are priced cheaper and inferior in quality. These products piggy-back on the established brands of popular consumable items and the names of some such original and imitation products are presented below.

**Table No. 6.1.3 Names of original and imitation or look-alike products**

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Original Products</th>
<th>Imitation Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ponds</td>
<td>Polons</td>
</tr>
<tr>
<td>2</td>
<td>Rin</td>
<td>Run</td>
</tr>
<tr>
<td>3</td>
<td>501 Bar</td>
<td>509 Bar</td>
</tr>
<tr>
<td>4</td>
<td>Cadburys Eclairs</td>
<td>Choudharys Eclairs</td>
</tr>
<tr>
<td>5</td>
<td>Brook Bond Paisa packs of Tea</td>
<td>Benson Brand Paisa packs of Tea</td>
</tr>
<tr>
<td>6</td>
<td>Nirma</td>
<td>Nilima, Narima</td>
</tr>
<tr>
<td>7</td>
<td>Lifebuoy</td>
<td>Lifejoy, Liteboy</td>
</tr>
<tr>
<td>8</td>
<td>Colgate Toothpaste</td>
<td>College Toothpaste</td>
</tr>
<tr>
<td>9</td>
<td>Fair and Lovely Fairness cream</td>
<td>Friends and Lovely Fairness Cream</td>
</tr>
</tbody>
</table>

The piggyback products are the look-alikes of the original products, i.e. the packaging and printing (the background colour, size, and shape of the printing brand names) are exactly replicated. This may even deceive the eyes of a sophisticated, educated urban buyer if he does not take a closer look at the carton or packing. These imitation products or piggyback
products are priced much lower than the original product, sometimes even 50 percent lower than the original product price. This is important as there are quality and safety issues of the society to be considered. Marketing assumes a significant role in the brand building process of the industry players. This helps in reaching out to a large consumer base and fight imitation or look-alike products.

**Step 3: Value chain upgrading across supply chain in food processing industry.**

**Step 4: Value chain governance in India**

Governance is the act of governing or controlling the inter-firm relationships between various segments of members within value chains. (John Humphrey and Hubert Schmitz, 2001). The Indian food value chain is a buyer-driven value chain. “Buyer-driven commodity chains refer to those industries in which large retailers, marketers, and branded manufacturers play the pivotal roles in setting up decentralized production networks. This pattern of trade-led industrialization has become common in labor-intensive, consumer goods industries such as food, garments, footwear, toys, house-wares, consumer electronics, and a variety of handicrafts (Gereffi, 1999b).

i) The lead firm or the value chain leader

Governance helps to transform the value chain from a heuristic to an analytical concept in that the various activities in the chain – within firms and in the division of labour between firms – are subject to what Gereffi has usefully termed ‘governance’ (Gereffi, 1994).

This necessitates the requirement of a lead firm. The lead firm "undertake the functional integration and coordination of dispersed activities" (Gereffi 1999). Monitoring and enforcing compliance with process standards is altogether more complicated. Process standards relate to characteristics of the process itself which may not be evident in the product itself Reardon et al. (2001).

Clearly, governance in value chains has something to do with the exercise of control along the chain.

ii) Brand leader as the value chain leader in Indian food supply chain

The global food markets structures are either converging into a USA manufacturer- led model or a UK retailer- led model where retailers dominate or possibly a hybrid of both. India is exceptional as far as food market structures are concerned. In India it is brand leader –lead model and the following discussion makes an attempt to justify the point.
Table No. 6.1.4 Value chain upgrading across supply chain in food processing industry

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Major components of Supply chain</th>
<th>Constituents of Supply chain</th>
<th>Product upgrading</th>
<th>Process upgrading</th>
<th>Functional upgrading</th>
<th>Implications</th>
</tr>
</thead>
</table>
| 1     | Procurement                      | Farmers                     | Employment of modern practices such as corporate farming, contract farming through which homogeneity in agri-produce can be obtained. | -Better irrigation systems | -Possibility of employment of mechanized farming, employment of better post harvest techniques and technologies in case of corporate farming or contract farming because of the scale of operation increases. | -Market oriented Farming  
- Minimized or elimination of marketing cost  
- Elimination of marketing intermediaries in case of contract farming or corporate farming.  
- Minimized post harvest loss because of better post harvest techniques and technologies |
| 2     | Production                       | Primary processing           | Because of the product upgrading at the previous stage  
- PROCUREMENT OF BETTER QUALITY AGRI-PRODUCE  
- HOMOGENEOUS PRODUCE  
- BETTER FINISHED PRODUCTS THROUGH MORE VALUE ADDITION  
- BETTER PACKAGING  
- IMPROVED QUALITY THROUGH THE APPLICATION OF GLOBAL STANDARDS, QUALITY POLICIES, QUALITY CONTROL PROGRAMMES AND SAFETY PROGRAMMES LIKE HACCP. | -Better procurement practices  
- Simple grading and certifying process because of standardized raw material  
- Better process and production technology  
- Better operations management  
- Improved process through the application of international standards such as ISO9000 (on quality), ISO14000 (on environment), SA8000 (labour standards) and other industry-specific standards such as hygiene-sanitary and HACCP (hazard analysis and critical control point) | Employment of modern management practices and information and communication technologies  
- Better internal integration  
- Better external integration  
- Better demand management  
- Brand building through better marketing practices | - Minimized procurement cost  
- Better quality raw materials  
- Consistent supply of raw materials  
- Minimized value loss |
| 3     | Distribution                      | C & F Agents  
Redistributors  
Stockists | Service upgrading through employment of modern management practices. | Better sales and operation management, Demand management through the | Employment of modern management practices and information and | - Better customer relationship management  
- Quick response |
| Wholesalers | Improvement in order fill rate, product fill rate, line fill rate, etc. | application of modern management practices and information and communication technologies | communication technologies -Better internal integration -Better external integration Better -Better demand management -Brand building through better marketing practices | -Reduced lead times -Improved demand management. Efficient distribution -Minimized value loss |
iii) Indian agriculture

Indian agriculture is dominated by marginal and small farmers. According to 'Agricultural Statistics at a Glance' (GOI, 1999b), out of the total holdings of 11,99,31,000, the number of holdings of small and marginal farmers, that is holdings up to 2 hectares, amounts to 98,103,000, which works out to be 81.8 percent of the total holdings of India. The average size of the marginal farmers is around 0.40 hectares and small farmers are around 1.42 hectares. Therefore, 81.8 percent of the total holdings in India have less than one hectare and it is 0.91 hectares. The average size of the land holding is less than 1.33 hectares with very few farms of commercially viable size.

iv) Indian intermediaries in procurement, distribution, and retailing

The Intermediaries in both procurement as well as distribution side is dominated by Micro and Small enterprises. The characteristics of Micro, Small, enterprises are predominantly family-owned and operated. The majority of the firms are one-person activities, which are least efficient size firms because no specialization of labour is possible. The entrepreneur is a key figure in small business operations. The Indian retailing is thoroughly unorganized. Of the 98% 'Traditional retailing' in India, most of the business is handled by local Kirana stores. Family run stores comprise majority of the selling outlets. One of the principal reasons behind the explosion of the retail outlets and its fragmented nature is that retailing is probably the primary form of the disguised unemployment/underemployment. The overcrowded agriculture, stagnating manufacturing sector, the hard nature of the jobs, and low wages in both, virtually force many Indians to the service sector. So, it is almost a natural decision to open a small shop or store depending on the available means and capital due to the lack of opportunities. This phenomenon explains the millions of Kirana shops and small stores in India.

v) Indian food processing industry

The food processing in India is dominated by the unorganized small sector. There are around 820 large flourmills in the country that convert about 10.5 million tonnes of wheat into wheat products, and there are over 3 lakh small units operating in the unorganized sector. A huge number of entrepreneurs in this industry are small in terms of their production and operations, and are largely concentrated in the unorganized segment. This segment accounts for more than 70% of the output in terms of volume and 50% in terms of value. Though the organized sector seems comparatively small, it is growing at a much
faster pace. The majority of the primary level processors namely the wheat roller flour mills are family owned, fragmented, widely dispersed, and are mainly operating at the regional or local level without much brand equity and have no influence on the market.

**vi) Domination of branding in Indian food marketing**

Brands play an increasingly important role in enterprise strategy, particularly in consumer products. The enormous investment required to create (or maintain) brands is increasingly made by companies which have no (or only limited) production facilities of their own. Creating strong brands is important for FMCG companies and they devote considerable money and effort in developing bands. Their most valuable assets are brands (Vedpuriswar, 2001). With differentiation on functional attributes being difficult to achieve in this competitive market, branding results in consumer loyalty and sales growth. Many companies are also ploughing back a larger proportion of their sales into brand-building activities (Aarati Krishnan, 2005). Brands stand for high quality or well-defined images, they need to define and enforce product and process parameters. Branding and chain governance thus tend to go together.

The Indian FMCG industry is a low-margin business. Volumes hold the key to success in this industry. That is why the industry players put so much emphasis on marketing and distribution. Brand perception influence purchase decisions here, so building that perception is critical. Hence brands are the key determinants of success in the market place. This makes the brand leader a dominant firm in the Indian food value chain in both primary and secondary level processing in their respective value chains and hence the Value chain leader. In India, HUL, Godrej, ITC, in the primary level processing; HUL, ITC, Britannia, Parle-G, in secondary level processing are the value chain leaders in their respective value chains. These brand leaders have their own manufacturing facilities in some cases and sometimes outsource through unorganized manufacturing firms with a strategy of focusing on their core competence in marketing. The factors that made them value chain leaders are the level of investment, sales turnover, marketing capability, well established distribution network across the country, Brand equity, etc.
Table No. 6.1.5 Setting the parameters for value chain governance

<table>
<thead>
<tr>
<th>SL.No</th>
<th>Major components of Supply chain</th>
<th>Constituents of Supply chain</th>
<th>Value chain governance parameters</th>
</tr>
</thead>
</table>
| 1     | Procurement                     | Farmers                     | What is to be produced? (Type of wheat to be produced)  
How it is to be produced? (Farming methods, use of specific seeds, chemicals fertilizers, post harvest techniques, storage, transportation, Technology)  
Compliant with the general and buyer specific standards, Physical characteristics and design in conformance with the requirements, quality standards, safety standards, hygiene standards-Hygienic food preparation system designed to produce safe food. Process standards, manufacturing standards, setting standards for suppliers in relation to on-time deliveries, frequency of deliveries and quality Environmental standards, Child labour standards. More recently, the “rules” of participation have increasingly come to include conformance to international standards such as ISO9000 (on quality), ISO14000 (on environment), SA8000 (labour standards) and other industry-specific standards such as phyto-sanitary and HACCP (hazard analysis and critical control point) in the food processing industry. The definition of these various sets of rules as defining the basis of participation in value chains can be termed ‘legislative governance’, i.e. setting the parameters governing the value chain.  
Standards may also set by the non-Iegal standards, (code of conduct) by a variety of unofficial agencies, such as NGOs, which pressure for compliance with labour and environmental standards.  
Transmit best practices, Cost reduction measures, raising quality, increasing speed of physical flow & information flow, hands - on advice on how to improve the layout, production flows, raise skills, Ethical practices, etc. |
<p>| 2     | Production                      | Primary processing: Wheat roller flour mills | Same as above |
|       |                                 | Secondary processing: Wheat based food product manufacturers – Bakers, Biscuit |</p>
<table>
<thead>
<tr>
<th>3</th>
<th>Distribution</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>C &amp; F Agents</td>
<td>Transmit best practices, Cost reduction measures better inventory management, increasing speed of physical flow &amp; information flow, hands-on advice on how to improve the marketing activities, Sales force automation, raise skill levels, ethical practices, effective use of information and communication technology, better demand management, Standardization of operational procedures and practices across the supply chain, etc. reducing the stock-out situation, improved coordination, cooperation, collaborative demand forecasting across the supply chain. Improvement in Order fill rate, product fill rate, line fill rate, etc. Better product management. Efficient distribution through better internal and external integration, better customer relationship management through Quick response, Reduced lead times, Minimized no stock-out situations, Minimized value loss, More variety of products, Minimized inventory cost. Increased inventory turnover.</td>
</tr>
<tr>
<td>Redistributors</td>
<td></td>
</tr>
<tr>
<td>Stockists</td>
<td></td>
</tr>
<tr>
<td>Wholesalers</td>
<td></td>
</tr>
<tr>
<td>Retailers</td>
<td></td>
</tr>
</tbody>
</table>
Figure No. 6.1.2 Mapping the strategy for maximizing value in supply chain of food processing industries

- Value generation
- Value addition
- Value protection

Value Management Activities:
- Planning
- Organizing
- Directing
- Controlling

Executive Governance - Judicial Governance - Legislative Governance

Value Chain Governance

Value Creation - Value Delivery Chain - Value Generation Activities - Process Upgrading - Functional Upgrading - Product Upgrading

Maximum Value Gain
The proposed model of supply chain to connect the farmers and the consumers through Corporate-SHG network linkage

Introduction

If India is to become an economic power, it requires a bi-faceted change – a change from national to global on one side and urban to rural on the other. One is to globalize and the other is to ruralise. Though the change requirement is common, the objectivity is peculiar and paradoxical.

India and the rural-urban divide

In India, 74.6% of one billion population live in over 6,00,000 villages, speaking in 500 dialects and about 36.5% of the people in rural areas live below the poverty line. Of the total estimated gross income generated in the household sector, the share of rural income accounted for 55.6% with 74.6% of the country’s population. It was 66.8% with 79.1% of the country’s population, in 1975-76. The rural income seems to have gone down during the last two decades resulting in wider disparities in income distribution between rural and urban India. Indian villages face a unique and challenging situation with respect to sustainable development. Demographics vary widely between villages, but often feature small, isolated population centres. Markets are very thin, difficult to serve, and without significant economies of scale. Most rural population is without access to electricity, but access varies widely and comprises of a wide range of ecosystems, predominantly influenced by poverty that makes infrastructure development difficult. There is limited scope for market reforms considering the variation in size and density of markets; therefore, appropriate alternatives vary between places. Rural India has limited institutional capacity to respond to these challenges. In addition to these challenges, people are poorly represented in rural policy, planning, and development. If we take a closer look at rural areas, it reveals a bleak picture of rural poverty, lack of income generating activities and absence of formal employment opportunities to absorb rural people into formal jobs. There are several constraints like illiteracy, poor communication facilities, infrastructure inadequacies, etc. These are huge challenges to policy makers and policy implementers. There is a necessity for regional organizations to coordinate with development partners in area development. These regional organizations should provide guidelines for adaptation to the development of their policies and strategic action plans.
However, one should not forget that the success of these types of models or concepts would largely depend on the culture and motivation of the people involved.

Though a number of initiatives have been taken to improve the quality of life in rural areas, there exist rural-urban disparities. Despite the efforts made over the past few decades, the rural poverty in India continues to cause grave concern. Various governments have come out with wonderful poverty alleviation and rural development programmes. But they have not achieved the desirable result because of the lack of people's participation and the inability of the government machinery to make them understand the practical benefits of these programmes. These problems and issues in socio-economic development are many and are still a challenge to Indian management thinkers. These pose serious challenges to Indian marketers in the rural supply chain. The great Indian rural dream is still proving to be a pie in the sky for most marketers. When these problems are Indian specific, the solution for these ought to be Indian and cannot be imported. There comes a necessity to evolve a model with process and practices, which can fit our situation. The model should have a mass customized approach and should be able to create a competitive advantage through people participation and partnerships.

**Bridging the urban and rural divide through digitalization**

The governments have realized that their economic success now depends on the wise promotion and deployment of information and communication technologies (ICT). Most state governments are committed to using these technologies to enhance their competitiveness in the new economy and to improve the internal operations of public agencies. However, effective implementations of the economic development policies that integrate economic, social, and technological strategies require creativity and it is essential to compete effectively in the globalized economy of the twenty-first century. The revolutionary ideas in business processes through electronic network have resulted in the emergence of a new economy, which we call as e-economy. The e-economy will dismantle the geographical barriers, enhances the information flows, widen the geographical spread, and bridge the urban-rural divide.

It should be recognized that, if it is required to empower rural India, it should be connected to the world to become a part of global economy. But there is also a digital divide. The digital divide between the rural and urban India is not because of lack of opportunity, but it is about lack of imagination. Telecommunications is one of the prime
support services needed for rapid growth and for bridging the urban-rural divide. The electronic network should be considered as a strategic necessity. The networking and communication infrastructure of India is still at an embryonic stage and needs to grow to become dependable. It has become especially important in recent years because of the enormous growth of Information Technology (IT) and its significant impact on the economy. But there are issues and challenges in reaching rural India.

**Bridging the digital divide for rural development**

For market mechanisms to work efficiently, marketing information is essential for farmers, traders, processors, and consumers. Timely information to farmers, traders, policy planners, and other market users will enable them to arrive at proper decision-making and also provide dynamism and efficiency into the marketing system. The rural development can be strikingly observed through enlightening the rural mass by providing them, social intelligence and marketing intelligence. Intelligence is nothing but timely information required by farmers, consumers, traders, government organizations, etc. for appropriate decision making. It should be recognized that people require information for self-development, basic needs, economic needs, educational needs, and recreational needs. If we focus on economic needs, the information required is how to produce better crops, where to sell the produce, how to transport, how to store, how to procure the raw materials, get labour, etc. Consumers needs market information to understand the market forces for making purchases in a rational manner, traders require information for competitive sales, purchases, and efficient commercial operations, and governments need information for proper formulation of plans and policies and also for the effective implementation of their programmes as, information leads to knowledge, knowledge leads to awareness and enlightenment. Providing mass information to the people is to provide power and this leads to empowerment. The channel and mechanism that carry, store, process and supply information are traditionally weak and non-existent at the village level (Richardson, 1999). Access to information about market prices and services provided by various institutions, development programs and allocations of resources that effect the daily lives of the citizens are very important for isolated rural communities. Access to knowledge may improve their productivity; enhance awareness about innovative farm practices, employment, and education. There is a famous Chinese proverb, - Teach a man how to catch the fish instead of providing him with plenty. Hence, the objective has been set to develop a model to connect urban and rural India through a network.
Connecting the rural and urban India digitally

The E-readiness Rankings the EIU has published an annual E-readiness ranking of the world’s largest economies since 2000. E-readiness is defined as an indication of how amenable a national market is to Internet-based opportunities. The ranking evaluates the technological, economic, political, and social assets of 68 countries and their cumulative impact on respective information economies. The rankings are based on nearly 100 quantitative and qualitative criteria, organized in six distinct categories: Connectivity and Technology Infrastructure, Business Environment, Consumer and Business Adoption, Legal and Policy Environment, Social and Cultural Environment, and Supporting e-services. Studies conducted over the past half-decade by the Economist Intelligence Unit (EIU), in collaboration with the IBM Institute for Business Value, have led to the E-readiness rankings. Analysis of the results of the EIU’s annual E-readiness rankings, published from 2001 through 2006, demonstrate a number of patterns of practices around the world. The countries are divided into three categories namely Established leaders, Rapid adopters, and Late entrants. India comes in the Late entrants’ category and is ranked at the 53rd position in the global rankings. Hence, connecting the rural and urban India totally digital is still a long way to go.

The alternative choice

One of the other alternative that can be thought of in connecting rural India with urban India is connecting them electronically upto the level where it is possible and then connecting the next level or the next link through a means of human network where electronic network, which at present, is not possible. This means connectivity through the use of both electronic and human network. This electronic-human network will serve as the rural information infrastructure in connecting rural India to the outside world and will also help to strengthen the weaker links of the agricultural / food supply chain which is explained in the latter part of this section. The proposed model conceived not only brings empowerment to the rural India, but also offers innovative ways of creating value in a sustainable way, in organizing their activities to conduct their business in a profitable way. The fundamental principle in this vision is to strive for an information society based on an egalitarian foundation and modelled on a socialistic pattern with strong emphasis on self-efficiency and still remains protectionist to the core.
Electronic – Human network - The concept

The electronic-human network requires information and service centres at all the villages, at all the taluk head quarters and at the district head quarters. This means that the network consists of information and service centres at village level, taluk level, and district level. The term 'information and service' means that these centres provide information as well as service. Any one who may require either information or a service or both can approach these centres either at village, taluk or district level. The information and service centre at every village collects and maintains the socio-economic data relating to the villages under mandals such as, population, products, vocation, agricultural crops, fruit crops, financial institutions, health care, educational institution, people, their addresses, their skills, people's representatives, voluntary organizations, government institutions, local markets, local marketers, various business service providers, etc. Information and service centres of each and every village are connected to taluk centres and these taluk centres are connected to the district centre. The taluk centre maintains the data base of all the above said information of the villages in its taluk in electronic form (in computer) and in the same way a district centre maintains the data base of all the taluks. All these centres are networked and information is shared between them. When the data base is shared, all the information and service centres of every village will have the database of all the villages of a taluk / district. The whole network works as a single unit. It is illustrated in Figure No.6.2.1.

The uniqueness and innovativeness of this model is the use of both electronic and human network in connectivity. The connectivity within the village is the human network. The connectivity between all the villages and between village and taluk may be the human network and / or tele-network (depending on the availability of the tele-network service). The connectivity between taluk and district may be through electronic network (Telephone / Internet). When these databases containing information of the village resources are put on the net (website), all the information of the available resources of every village of every taluk and district will get an exposure to the outside world. Anyone who requires any information of any resource can contact these centres personally or electronically and get the information in minimum time.
How does it work? Some illustrations

Agriculturist point of view-I

Agriculturist/planter/landlords who may require information about labourers, agricultural equipment's, agricultural product, buyers, co-operatives, financial institutions, etc. can visit the information and service centre located in his place and get the information from the data base. Suppose an agriculturist requires the labourers, the centre looks for the availability of the required labourers in its database in its village, it connects him to the agriculturist. If the required labourer is not available in its village, then it looks for them in the neighbourhood of other villages and contacts the labourers in other villages through its connection with the other centre. It is illustrated in Figure No.6.2.2
Labour point of view

A labourer or any skilled person who is in the data base is exposed to the taluk, whose identity might not have been known, to the outside world. This information and service network brings life to his existence. This creates an opportunity and demand for his skill.

Agriculturist's point of view-II

Through the information and service centres, the agriculturist/farmer will get an exposure of his produce to various business people and/or industries. This makes it possible to get the right price for his product at his doorstep.

The illustrations presented above are just the tip of the ice-berg. Hundreds of opportunities can be explored through this network. The government, the corporate or any institution can obtain and sell whatever they want to through this network, efficiently and effectively. The data base externally resembles a telephone directory or yellow pages which contain information about the people, their skills, and their businesses. But the premise of the model is that, the whole network should work as a system.

Business / Industry point of view

When an industry or business requires any agricultural products for its use, it may get information of all the agricultural products (for ex: areca nut, coconut, rubber, vanilla, etc.) from the agriculturists through these information centres. This process of getting
information from these centres reduces/ eliminates the tedious process of approaching all the agriculturists either directly or through intermediaries like agents or middlemen's or brokers. This is not only cost saving but also time saving. It is illustrated in Figure No.6.2.3.

Figure No.6.2.3 Business/Industry point of view

The genesis of the concept and its practice

Informal institutions develop to spread risk and to raise relative returns from market transactions. They do this by improving information flows. Well established informal mechanisms for information sharing have been used all over the world. American traders in the 17th & 18th centuries and Chinese immigrant trading communities until recently shared valuable trading information among themselves to ease their transactions. Less sophisticated devises are used by members of small business and trading groups all over the world, from vendors in Peru to Mutual Aid Groups in Benin, to wealthier members of clubs and business associations. In each case, an informal network communicates information about business opportunities, barriers, and potential partners to fellow members.

The information networks in these groups can lower the risk of their transactions, as members gain information about the quality of their partners and the business environment. In developing countries, for example, formal alternatives such as credit
rating agencies or chambers of commerce – do not exist or do not serve the small trader. Without informal knowledge channels, the cost of conducting business would be prohibitive. Informal networks lower these costs and enable smaller businesses to enter the market.

The Centre On Rural Documentation (CORD) of the National Institute of Rural Development (NIRD), Hyderabad conducted a national workshop on “Rural libraries and information centres under panchayath” in Sept. 1998. The workshop came out with a set of recommendations and one of them relates to the establishment of the community information centres as out-reach centres by NIRD on an experimental basis. A basic willingness to do what is necessary to serve the unserved is what out-reach is all about.

Accordingly, in 1999 at NIRD, the Public Information Kiosks (PIKS) were designed as information and communication centres with Pentium III computers, printers, scanners, UPS, fax and photo copying machines. An information infrastructure was created at two mandal headquarters in the zilla granthalaya sansthas. An attendant, software, including Telugu software was made available. Agricultural, health, education, and socio-economic profiles besides, local information about who is who, what are the development programmes implemented, etc., were collected for information dissemination.

Similar kind of information centres were started in the Sullia taluk of Dakshina Kannada district of Karnataka with 47 centres working in 44 villages of Sullia taluk. The concept inspite of its usefulness has not been popular. In the former case it is because of the lack of initiation in marketing and developing the concept. The bureaucratic work structure and culture did not enthuse the masses. In the latter case, it was the lack of transparency in the process. The concept views its process to be transparent and it should reduce/eliminate the intermediaries. In face of this, the centre can act as a super broker, thus deviating from its social objective of serving the society to a commercial one.

Identifying the vehicle and the drivers for the model

The ability to create and manage network-driven environment, is crucial for business competency. At the same time the basic motive of the vehicle identified should match the social objective of the rural development or rural empowerment. The vehicle should not only provide economic benefits but also, moral benefits, social benefits, and educative benefits. Cooperation provides all these benefits. Cooperation involves all the basic aspects of capitalism and similarities of socialism. It combines the advantages and avoids
the disadvantages of both capitalism and socialism (Acharya and Agarwal, 2005). Hence it is suggested in this model to use the vehicle of co-operation with Self-help-groups as its drivers to run the network. The cooperatives are the economic organizations where its members are owners; operators, and contributors of commodities handled and are the direct beneficiaries of the savings that may accrue. Co-operatives have the ability to transform the socio-economic conditions of crores of under-privileged population. Self-help groups are also considered as informal co-operatives, as they possess the distinctive natures of grass root level co-operatives. There is a strong need to inculcate the spirit of entrepreneurship culture and develop entrepreneurial competencies in these informal co-operatives. The strong need for transforming the consumption based SHG’s into entrepreneurship oriented SHG’s are stressed (or highlighted) which leads to employment generation and empowerment of the weaker rural masses. The co-operative approach maximizes the impact of regional resources and capabilities. Regional co-operation in rural planning can help to overcome the disadvantages faced by the region, particularly in relation to its small size, dispersed communities, fragmented markets, environmental vulnerability, and limited institutional and human capacity. A regional co-operative approach to co-ordination will allow regions to share expertise, take advantage of the economies of scale, harmonize policies and regulations, and mobilize increased official development assistance from governmental sources.

In India, self-help-groups (SHG’s) have been in operation for a long time in many fields such as running savings and credit programmes and recycling the resources generated among its members, etc. Now even though micro-credit and micro-financing is on the rise, there is a paradigm shift in the development of SHG’s from micro-financing to micro-enterprising. Researches have been focusing micro enterprising in SHG’s which has great potential in giving value addition to the rural products at the village level itself. Most of the existing micro enterprises are in the 3P’s, - Pappad, Pickel, and Petticoat. There is a strong need to explore and expand the micro enterprising opportunities in other areas also. These co-operative groups in the service business are totally absent. Services providers are non-existent. It becomes the responsibility of the facilitating agencies like micro-finance institutions, NGO’s, voluntary organizations, to explore various opportunities existing in micro enterprising both in products and services. The importance of the entrepreneurship in socio-economic development through co-operative sector need not be over emphasized. It is useful in the promotion of industrial growth and business ventures and also for the
socio-economic prosperity of the community. The principle of self-help and voluntarism of the co-operative is necessary and is consistent with the entrepreneurial framework of the co-operative organization. Inadequate availability of entrepreneurial talent adversely affected the socio-economic prosperity of the community, the development of the manufacturing, processing, and marketing enterprises. This leads to co-operative entrepreneurship. Co-operative entrepreneurship deals with undertaking and assuming the responsibility to discover, innovate/initiate co-operative effects which is co-operative effective for higher growth of co-operative organizations and better socio-economic pattern of entrepreneur members and community by simultaneously applying co-operative values/ co-operative principles accompanied by the management principles/ practices, (Lopoyentum, 2003).

**Application of the model / concept to improve the rural supply chain**

We need to look at the characteristics of the rural market and existing distribution system to provide the right background for the model presentation. The figure 6.2.4 illustrates the bird’s eye view of the application.

**Figure No.6.2.4 Application of the model / concept**

![Diagram of the model](image)

**The rural market characteristics**

Market Structure: The rural market is widely dispersed, poor infrastructure and density of population per sq.km., poor physical connectivity with other villages & towns, low
mobility, lesser retail outlets per 1000 population, availability of limited range of branded products along with imitation products, less convenient buying, Village shops, Shandies, Jathras. Social Relations: Less number of interpersonal interactions, more frequent interactions between the same people, social norms influencing individuals are more visible. Caste/religious influence is strong. Lower literacy rates, lower incomes price sensitive.

Existing distribution system

In figure no.6.2.5, the first three levels A to B to C, because of high outlet density and large customer population permits economies of scale in developing these markets through regular working of sales-cum-distribution van.

Approaching level D requires prior selection of the Haat markets and villages located in contagious clusters.

Various schedules with level ‘C’ stockists at the nodal point could be operated towards self-restraining distribution rate for level D markets.

The next level is E. The villages are too small to allow economies in the van distribution. But these villages form the bulk of the consumption in the rural areas. Hence our focus is at levels D and E, where distribution is a problem.
Figure No. 6.2.5 Existing distribution system

Existing distribution system

Company Depot at state/ National head quarters

Redistribution stockists, Semi-wholesalers and retailers at district head quarters

Semi-wholesalers and retailers at Taluk head quarters and other mofussil towns.

-Itinerant traders at Haat markets.
-Semi-wholesalers and retailers in large villages

Retailers in smaller villages

(Pawan Bandari and Rajan Iyer, 1995)
Figure No.6.2.6 Modified distribution system

Proposed Distribution System/Model

Company Depot at state/ National head quarters  
Level A  
Company Depot at state/ National head quarters

Redistribution stockists, Semi-wholesalers and retailers at district head quarters  
Level B  
SHG-District level syndicate

Semi-wholesalers and retailers at Taluk head quarters and other mofussil towns.  
Level C  
SHG-Taluk level syndicate

-Itinerant traders at Haat markets.  
-Semi-wholesalers and retailers in large villages  
Level D  
SHG-Village level syndicate

Retailers in smaller villages  
Level E  
Retailers in smaller villages
Figure No.6.2.7 Modified distribution system for the rural market

Proposed distribution system for the Rural market

Level A
Company Depot at state/National head quarters

Level B
SHG-District level syndicate

Level C
SHG-Taluk level syndicate

Level D
SHG-Village level syndicate

Level E
Retailers in village level

Table No.6.2.1 Modified distribution system for the rural market

<table>
<thead>
<tr>
<th>Distribution system for the Rural market</th>
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</thead>
<tbody>
<tr>
<td><strong>Level A</strong></td>
</tr>
<tr>
<td><strong>Level B</strong></td>
</tr>
<tr>
<td>District-1</td>
</tr>
<tr>
<td><strong>Level C</strong></td>
</tr>
<tr>
<td>Taluk-1</td>
</tr>
<tr>
<td><strong>Level D</strong></td>
</tr>
<tr>
<td>Self-Help-group at Village-1</td>
</tr>
<tr>
<td><strong>Level E</strong></td>
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<tr>
<td>Retailer-1</td>
</tr>
</tbody>
</table>

\
The companies normally have redistribution stockists at the district headquarters. Hence it is convenient for district level syndicates also to have a base at District headquarters. This acts as the receiving point to collect the products from many companies. The District level syndicate collects products from various companies and distributes these products to various Taluk level syndicates according to their request.

The function of the Taluk level syndicate is to receive the indent for the products from various Self-Help-Groups at village level and passes it on to the District level syndicate. When it receives the products from the District level syndicate, it distributes these products to various Self-Help-Groups at the village level as per their request.

The need for Taluk level syndicate is for two reasons:
i) The quantity of the product required by the village retailer is very small and to use the exclusive delivery van for distribution is not economical. The economical mode of transportation is the state run public transportation corporation vehicles (Buses).

ii) There may not be public transport connectivity from district headquarters to all its villages. But there will be Public transport bus connectivity from the Taluk to all the villages.

Figure No.6.2.10 Taluk level syndicate to village retailer through SHG

![Diagram]

One of the members of the Self-Help-Group or its group representative collects the indent from the village retailer and sends it to the Taluk level syndicate and on receipt of the material / product from Taluk level syndicate delivers it to the village retailer through the group member.

Need based approach.

This model requires the Need-based approach, i.e., when the retailer requires /requests the products; group representative takes the indent /order and sends it to the District level syndicate through the Taluk level syndicate (The mode can be through Telephone also). The District level syndicate sends the products/materials to the village through the Taluk level syndicate and Self-Help-Group. The objective is to maintain zero level inventory at all levels. As there is financial constraint in the group, this model requires cash transactions. Moreover, cash transactions are beneficial to all the players of the system and it improves supply chain efficiency. In the existing system, the Retailer receives the material on 10 to 15 days credit. He purchases the products on fortnightly basis. As a result he keeps 15 days inventory. With this inventory carrying cost at all levels will have great impact on the profitability of the system. As there is a financial constraint for the
retailer, he cannot make use of his funds/money efficiently. The capital is blocked because of higher inventory level. When a retailer gives little thought for inventory reduction and plans for more variety of products of smaller quantity, he is making an attempt to satisfy the customer requirement better. There will be a change in his orientation from selling concept to marketing concept. In the long run there will be an improvement in his business because of his new market orientation approach of offering the right product at the right price at the right time. Limited resistance can be expected from the retailer for cash transaction. But when the retailer gets what he wants at his door-step at company price (Right price) he may prefer to buy from the system or join the network.

Is rural coverage viable?

Yes, in the existing channel of distribution, redistribution, stockists cannot cover all the villages of a District. Very low volume of purchase by the village retailer and very low profit margin (Commission of 3 to 4%) offered by the major brands makes the coverage unviable and uneconomical. The proposed model makes an effort to make the system viable and economical. As the discussion is focused mainly on rural supply chain, the scope/profits looks limited. But this is just the tip of the iceberg. When the networks and partnerships bring synergy into the system, other dimensions can be explored.

Issues and challenges in developing and promoting the concept

Social mobilization

The core element which emerges from the successful cases of any development programme on the ground is PARTICIPATION. There is sufficient body of experience that has emerged, which demonstrates that, where the poor participate as OBJECTS and not OBJECTS of the development process. The strategy for empowering the poor should be embedded in the grassroots where the underdeveloped masses, so far reliant on informal organizations for their survival are provided with formal access to the state through their own organization. For poverty eradication to be meaningful to the poor, it must be holistic.

Social Mobilization provides a suitable framework for holism in development first by catering to the needs and aspirations of the poor and second, by seeking to engineer social change on the basis of self-reliance.

Deutsch (1961) states that social mobilization is a name given to an overall process change which happens to substantial parts of human population in countries which are moving
from traditional to modern ways of life. This specific process of change, he says affects residence, occupation, social setting, associates, institutions, roles and ways of acting, demands and capabilities. Later, Deutsch gave a rather shorthand definition of his concept of social mobilization as, "The process in which major clusters of old social, economic and psychological commitments are eroded or broken and people become available for new patterns of socialization and behaviour."

Social mobilization is the process of dialogue and negotiation and consensus building for action by people, communities and organizations, etc. to identify, address and solve a common problem (UNICEF, 1997). It can be an effective strategy to create the kind of supportive environment necessary to create sustained behavioural change that will bring about community participation for sustainability and self-reliance. To achieve this, according to UNICEF (1997), the strategy must reach from the highest levels of social power to the hardest to reach and the most disempowered families and communities.

The social mobilization process deals with the whole reality, unlike many projects that deal with a slice of reality. Simplifying and fragmenting the life of the poor, their problems and solutions. Therefore, these fragmented solutions result in the problems continuing even after the project ends. The above illustrates the process. It moves upwards in a series of action-reflections which we have called mobilizations. Each mobilization is derived from a thorough probing and understanding of felt needs in due order of priority. The iterative nature of the process results in a progressive deepening of understanding their problems and how they can be collectively addressed. Through a process of reflection action reflection, the spiral of activities moves simultaneously on both the material front as well as mobilization is that the minds of the people are affected, consciousness is raised and creativity is released, while at the same time, immediate material benefits are enjoyed by the prime actors.

**The pre-requisites for sustainable development**

It is recognized that rural institutions are important stakeholders and have a vital role in achieving sustainable development in any kind of rural development programmes. The support from these institutions is a fundamental input to most economic and social activities and their participation is vital to achieve sustainable development and therefore is a prerequisite for developmental programme.
<table>
<thead>
<tr>
<th>States of development</th>
<th>Time period</th>
<th>Role of NGO / SHPI</th>
<th>Focus of Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Pre-formation</td>
<td>1-2 months</td>
<td>Initiator/Promoter</td>
<td>Identifying the poor through participatory rural appraisal methods in small / hamlets / villages / towns</td>
</tr>
<tr>
<td>2. Formation</td>
<td>3-6 months</td>
<td>Facilitators</td>
<td>Motivation to groups to select group leaders, develop rules and norms, conduct meetings, pooling, savings, issue and collection of small loans, group cohesion, adjustment systems and maintenance of accounts.</td>
</tr>
<tr>
<td>3. Stabilization (PHASE-I)</td>
<td>7-12 Months</td>
<td>Advisory / managerial</td>
<td>Leadership stabilization, training of leaders and members, regularized and increase savings, handling of group levels, transactions, interactions with other groups / clusters, addressing community interests, etc.</td>
</tr>
<tr>
<td>4. Stabilization (PHASE-II)</td>
<td>13 to 18 months</td>
<td>Advisory / managerial</td>
<td>In addition to above activities initiation of income generating of activities / programmes, linkages of banks, support new groups, demonstrative effect on others to form groups.</td>
</tr>
<tr>
<td>5. Growth and expansion</td>
<td>19 months and above</td>
<td>Advisory / managerial / consultative and institutional building.</td>
<td>Creation of aspects for groups and members, spreading the concept of building and promotion of new groups, attempts at cluster development and federation of SHG’s.</td>
</tr>
</tbody>
</table>

**Institutionalizing the strategy**

Institutionalizing the strategy requires ideas, imagination, people, initiatives and partnerships. The critical issue in translating this strategic thought into strategic action requires institutionalizing the strategy. The organizational elements which provide the fundamental means for institutionalizing the strategy is structure, leadership, culture.

**Structural considerations**

An organizational structure for the model is necessary if the strategic purpose is to be accomplished. Organizational structure is a major priority in implementing the model. The structure in its simplest concept: the division of tasks for efficiency and clarity of purpose and coordination between the interdependent parts of the model to ensure its effectiveness. An organizational structure is the way in which the tasks and sub-tasks required to implement a strategy is required. If activities, responsibilities, and interrelationships are not organized in a manner that is not consistent with the strategy chosen, the structure is left to evolve on its own and if the structure and strategy is not
coordinated, the result will probably be inefficiencies, misdirection, and fragmented efforts.

**Structural mechanisms**

The different mechanisms required for a new organizational system that has been exemplified above are summarized as follows.

1. Defining the major tasks required to implement the strategy.
2. Grouping of the tasks on the basis of common skill requirements.
3. Sub-division of the responsibility and delegation of authority to perform the tasks.
4. Coordination of the divided responsibility.
5. Design and administration of the information system.
6. Design and administration of the control system.
7. Design and administration of the appraisal system.
8. Design and administration of the motivation system.
9. Design and administration of the development system.
10. Design and administration of the planning system.

The first four of these mechanisms will lead to the creation of the structure. The other six mechanisms are devised to hold and sustain the structure. Collectively, we could refer to the last six mechanisms as organizational systems.

**Organizational leadership**

While organizational structure provides the overall framework for strategy implementation, it is not in itself sufficient to ensure successful execution. Within the organizational structure, individuals, groups, and units are the mechanisms for organizational action. The role of appropriate leadership in the strategic success is highly significant. The effectiveness of their actions is a major determinant of the successful implementation. Transformational leadership is best suited for the model as it is required to inspire involvement in a mission, giving the followers, a dream or vision of higher order than the followers’ present reality. Words inspire people, infuse spirit and drive, define strategy with supportive cultural norms and values. The roles they are required to perform are:

1. Staying at the top and see what is happening and how well the things are going.
2. Promoting a culture in which the system is energized and perform at a higher level.
3. Keeping the system responsive to changing conditions, alert for new opportunities, and bubbling with innovative ideas.
4. Dealing with consensus, dealing with the politics of strategy formulation, and implementation and containing the power struggles.

5. Enforcing the ethical standards.

6. Taking corrective actions to improve strategy execution and overall strategic performance.

**Organizational culture**

Organizational culture is the set of important assumptions (often unstated) that the members of an organization share in common. Every institution has its own culture. It is similar to an individual’s personality – an intangible yet ever-present theme that provides meaning, direction, and basis for the action. Much as a personality influences the behaviour of an individual, shared assumptions (beliefs and values) among the members of an organization set a pattern for activities, opinions, and actions within that system. Culture gives the members a sense of how to behave, what they should do, and where to place the priorities in getting the job done. Culture, formally helps the members fill in the gaps between what is formally decreed and what actually takes place. As such culture is of critical importance in the implementation of the strategy.

**Promoting the concept**

Promoting the concept is to promote the information centres and information and service centre networks. It is promoting the non-tangible products like information service. Therefore, a well thought and planned introduction of this new product (providing information and service) assumes significance. It must be remembered that the high expectations attributed to new products are often never fulfilled and many new products fail. There is a need to team up with other organizations operating like NGO’s, community based organizations, voluntary organizations, opinion leaders, change agents, panchayaths who are sometimes called social marketing channels as they all matter here.

According to Qureshi (1996) one can implement social marketing by motivating behavioural change, but it is difficult to sustain, unless the environment surrounding the target audience supports that change in the long run. The social marketers have to encounter the external public and internal public. Internal public seems to be in the development community available at the mandal level, those who act as gate keepers in controlling the information. The external public becomes most critical to the success of the programme. If they do not understand the concept of social marketing and respond
positively, then all the hard work that has gone in the creation of any programme like, setting up the village information centre and providing the information services would be lost. Hence, education of all the people concerned, both internal as well as external public is very important and often it becomes the key to the success of any programme. Before going in for a full scale operation, the concept should be tested in small scale (at one taluk level) for testing the performance and acceptance by the people. If the result of the prototype testing is encouraging, then full-scale operations can be undertaken.

**Developing the concept through 7P’s of service marketing**

**Product:** It means the product or services’ being offered. Kotler defines a product as anything that can be offered to a market for attention, acquisition, use or consumption that might satisfy a want or need. It includes physical objects, services, person, places, organizations, and ideas. Here, product is the information and services that is required by the consumer about either natural resource like agricultural products, human resources like services offered by a labour, skilled persons or infrastructures facilities like transportation/local transporters, etc.

**Price:** Price refers to value expressed in terms of money. Setting the cash price initially for information may prove to be difficult, as there are no comparative rates to the services provided. To begin with a nominal membership fee may be collected from the consumers who may wish to be in the data base of the village centre and additional appropriate price may be charged according to the type of services required by them. The pricing is so adjusted that it tends to be nominal for the services offered and they are perceptively lower than the available market price. If the pricing is to be done after taking into all the inputs such as equipment’s, salaries and maintenance costs it would be certainly be non-viable. However, in the interest of the service to the community, these types of activities have to be taken up, clubbing them with other viable enterprises.

**Place:** According to Kotler, it stands for the various activities the company undertakes to make the product accessible and available to the target customers. It includes distribution and logistics functions involved in the process. A determined effort is necessary to provide the information infrastructure in small towns and rural areas, for the reasons of availability of infrastructure facility and operational viability.

It is proposed to acquire a place/house the village centre in/near the bus stand. The bus stand is preferred as it is centrally located in a village; accessible to government road
transport corporation, accessible to local transport facility like auto rickshaw/cycles, etc., and it is the central place which attracts all strata of public and target audience.

**Promotion:** It stands for the various communication programmes designed to market the product/service and to increase consumer purchases. As stated earlier, there is a need to team up with other organizations operating in the village like, NGO’s community voluntary organizations, panchayaths, opinion leaders, press persons, change agents, self-help-groups, etc. who are also called the constituents in the social marketing channels. One can implement social marketing by motivating behavioural change. But it is difficult to sustain unless the environment surrounding the target audience supports that change in the long run.

**People:** In time with the inseparability characteristic of services, people are fundamental to the offer of the services. The success of the marketing programme depends very much on its people. The corporates make use of co-operatives as business intermediaries. Then why cannot they make use of the SHG’s (Self-Help-Groups), which are considered as the informal co-operatives as they possess distinct features of the grass root level co-operatives. The corporates and SHG’s can forge linkages in order to see that poor/rural/weaker sections of the society come into the mainstream of the development process. Such linkages will open up a new deal of opportunities for corporates as well as Self-Help-Groups. The Self-Help Groups are best suited to provide these services.

**Physical Evidence:** Physical evidence is very crucial for winning the service customer. The service provider should consciously make efforts to manage the physical evidence associated with his services. Here in the village information centre, the service environments where the services are provided are important, as it tends to influence the customers with silent messages like modernity, should reflect efficiency and reliability. The environment has the tremendous potential to communicate about the nature and quality of services provided.

**Process:** Processes are operational matters, which directly affect customer’s perceptions and are important market elements, owing to the characteristics of services, that is, intangibility of the product and the extended marketing mix. The problems in the creating of differential advantage or competitive advantage in services marketing are greater than those in the marketing of consumer or industrial goods.
Benefits from the model

1. The syndicates that are formed at the taluk level, district level, and state level have the potential to become agricultural promoter institutions providing the farmers, extension services such as distribution of seeds, offering credit, supplying agri-machines if the need be, etc. The agricultural promoter institution can identify the appropriate crops, strategies and support required to stimulate smallholder involvement in appropriate crop cultivation. There can be provision of a credit service for seed to guarantee that farmers have the required financial and input support, establishment of a marketing service to sell the products bought from the farmers to local, regional, and international buyers, construction of processing facilities at the production place. This will have strong implications for food security and income-generation opportunities.

2. Extensive mobilization and utilization of the local resources because of its exposure to the urban market.

3. Expansion of the economic activities and expansion in economic levels.

4. Expansion of the rural market.

5. Development of forward and backward linkages.

6. Vast scope for value addition for rural and agricultural products.

7. Acts as the bridge to fill the urban-rural divide.

Issues for further discussion

To study and analyze the characteristic features of SHG’s with reference to the proposed model as to how these SHG’s fit into the proposed network model.

To develop the organization structure for these SHG networks.

To study the type of support or linkage required from other institutions or agencies.

To expand the dimensions of the proposed model.

To study the challenges involved in the integration process of various agencies required.

To study and analyze the corporate attitude towards social development, SHG’s and the proposed model.

To study and analyze the opportunities available in the rural market in future.

To study further the scope of application of E-commerce in the proposed SHG network model.

To study and analyze the change in the management and relationship building that is required in the proposed model.