CHAPTER – I

RETAILING AND SUPPLY CHAIN MANAGEMENT IN INDIAN PERSPECTIVE – A PROLOGUE
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This chapter first laments over the retailing and the related concerns in the organized sector in India. The concept of Supply Chain Management and its applicability in the retailing context has then been discussed to bring to fore the issues and importance of Supply Chain Management in retailing thus laying the foundation of the research and describing the rationale of the study.

1.1 INTRODUCTION

The word retailing is derived from the old French word 'retailer', which means 'to cut up' or 'to break the bulk'. In the words of Philip Kotler, "Retailing includes all the activities involved in selling goods or services directly to final consumers for personal, non business use".

Retail is India's largest industry accounting for over 10 percent of the country's GDP and around eight percent of the employment. The $200 billion Indian retail market has been growing at 5 percent annually in real terms. This growth is expected to continue. A combination of increased consumer demand, improved sourcing options and larger availability of real estate are creating the foundation for a significant growth in the organized retail sector. It has emerged as one of the most dynamic and fast paced industries with several players entering the market. In order to reap the benefit of growing economy more and more, corporate houses including large real estate companies are coming into the retail business, directly or indirectly, in the form of mall and shopping center builders and managers. Large organized and professional Department stores, Supermarkets and discount superstores -- are set to take over the retail scene and have already made an appearance and are slowly changing the face of retailing in the country.

1.2 INDIAN RETAIL INDUSTRY - AT A GLANCE

The urban Indian retail sector has traditionally been structured around three small retail entities -- the grocer, the general store and the chemist. The grocer stocks non-packaged, unbranded commodities such as rice, flour, and pulses, as well as branded fast-moving consumer goods (FMCGs); the general store stocks only branded, packaged FMCGs. The chemist, apart from dispensing pharmaceutical products, sells branded FMCGs such as personal care products, and health foods. Alongside the three retail outfits, exists a large segment of smaller, unorganized
players -- paan-beedi stores (or cigarette kiosks) which stock products in sachets, batteries, confectionery and soaps; bakeries and confectioners; fruit juice/tea stalls; ice-cream parlors; electrical and hardware stores; and non-food boutiques. These retail outfits stock branded FMCGs. These apart, there are the hawkers, carts and stalls that dot sidewalks and street corners, and several door-to-door sellers such as vegetable vendors. According to the global consulting group, A. T. Kearney India Ltd, there are over five million such small retail outlets in India. Paanwalas and kiranawallas, street hawkers present everywhere are the various firms operating hither and thither; and meeting the basic needs of the general public and earning livelihood. They account for nearly 95 percent of the total retail turnover in the country and their number continues to grow.

As a result of substantial rise in disposable income of Indian households since the mid-1990s, Gross domestic product (GDP) grew by an annual rate of 6.6 percent during 1994-00 but the growth slackened to 4.7 percent per annum during the next three years before the growth remarkably rose to 8.7 percent per annum in the last four years (Exhibit 1.1). Based on the Market Information Survey of Households (MISH) of the National Council of Applied Economic Research (NCAER), the number of people in the high income and the middle income class with annual income ranging from Rs. 90,000 to one million, more than doubled from 157 million to 327 million during the last decade 1995-96 to 2005-06. The data from the Central Statistical Organization (CSO) indicate that the growth of real private final consumption expenditure, which dipped from an average of 5.7 percent per annum during 1994-00 to 4 percent per annum during 2000-03, shot up to 6.7 percent per annum during 2003-07. Retail sales (in nominal terms) in the country also followed a similar pattern: a high annual growth of 13.6 percent during 1994-00, a low growth of 4.8 percent during 2000-03 and a smart pick up in the last four years, 2003-07 at around 11 percent.

<table>
<thead>
<tr>
<th></th>
<th>1994-95 to 1999-00</th>
<th>2000-01 to 2002-03</th>
<th>2003-04 to 2006-07</th>
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<tr>
<td>Real GDP</td>
<td>6.6</td>
<td>4.7</td>
<td>8.7</td>
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<tr>
<td>Real private final consumption expenditure</td>
<td>5.7</td>
<td>4.0</td>
<td>6.7</td>
</tr>
<tr>
<td>Retail sales</td>
<td>13.6</td>
<td>4.8</td>
<td>10.9</td>
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Source: CSO, NSSO, and Technopak Advisers Pvt. Ltd.

1 The NCAER gives data in terms of the number of households and they have been converted into number of people by using the average household size of 4.7 persons derived from the NSSO surveys.
The international consulting firm, A.T. Kearney, annually ranks emerging market economies based on more than 25 macroeconomic and retail-specific variables through their Global Retail Development Index (GRDI). For the last three years (2005, 2006, and 2007) India has been ranked as number one indicating that the country is the most attractive market for global retailers to enter. The high economic growth during the last few years raising disposable incomes rapidly, favorable demographics placing incomes on younger population with less dependency, and urbanization are some of the major factors fueling the Indian retail market. Most of the organized retailing in India had recently started and was mainly concentrated in metropolitan cities.

The Industrial Policy Resolution, 1991 has given a new tool known as 'LPG' i.e. Liberalization, Privatization, and Globalization which resulted in several structural and demographic changes in the Indian Economy. These changes marked the beginning of the new era of Retailing in India and helped the retail industry to grow. Though the early signs of organized retail were visible even in the 1970s, but the retail still had a long way to go.

Eighty five percent of organized retailing is taking place in India’s urban areas while 66 percent of it taking place in India’s 6 main cities alone. The growth is much faster in south India than in northern states. The total retail market in south India is $94 billion and of this organized retail is $8.5 billion. In southern part of India, the organized retail market growth is estimated at 35 percent per annum. In Chennai the growth rate is 12 percent while in Hyderabad it is 7 percent and in Kerala it is 3-4 percent per annum. As per Technopak study the sales in the organized sector for food, beverage and tobacco is $195 billion which cover 65 percent. Sale of personal care product is $15 billion (5 percent) and apparel at 7 percent around $21 billion.

In the beginning there were only Mom and Pop Stores called kirana stores, the friendly neighborhood stores selling every day needs. In the 1980s manufacturer’s retail chains like DCM, Gwalior Suitings, Bombay Dying, Calico, Titan etc started making its appearance in metros and small towns. Multi brand retailers came into the picture in the 1990s. In the food and FMCG sectors retailers like Food world, Subhiksha, Nilgris are some of the examples. In music segment Planet M, Music World and in books Crossword and Fountainhead are some others.

Shopping Centers prospered from 1995 onwards. A unique example was the establishment of margin free markets in Kerala. The millennium year saw the emergence of super markets and hyper markets. Many Indian entrepreneurs have taken a keen interest in retailing over the last decade and have successfully established organized retail chains, notable among which are headed by the Future (Pantaloons) group, the Rahejas, the Piramals, the Tatas, the RPG group, Subhiksha.
etc. Reliance, one of the latest notable entrants in the retail sector, which had initially opened stores in Hyderabad and now has over 450 stores across India, has ambitious plans of expanding in this sector. WalMart is testing the waters by agreeing to provide back-end and logistic support to Bharti for establishment of retail chains.

A survey conducted and documented in the Jones Lang LaSalle Meghraj report entitled “The Geography of Opportunity - The India 50” (June, 2007) identified 50 Indian cities which are the potential beneficiary of the organized retail boom. These have been divided into five categories:

a. **Maturing**— Delhi, National Capital Region (NCR), Mumbai belong to this category and these markets are seeing saturation. However large one-stop malls having retail, entertainment, food and hospitality would have demand, along with hypermarkets, and malls.

b. **Transitional**— These include cities like Bangalore, Kolkata, Hyderabad, Pune, Chennai and Ahmedabad. By 2008, they would account for one-third of total market due to their large corporate sectors, high level of economic activity, above-average income and large middle class.

c. **High-Growth**— These are the 'next' retail destinations of Chandigarh, Jaipur, Ludhiana, Lucknow, Kochi, Surat and Vadodara.

d. **Emerging**— They include cities which are tourist oriented, and have setup infrastructure for IT companies like Nagpur, Indore, Nasik, Bhubaneshwar, Vizag, Coimbatore, Mangalore, Mysore, Thiruvananthapuram, Amritsar, Agra and Goa.

e. **Nascent**— These offer the first-mover advantage as the income levels and corporate activities are limited. The cities are Patna, Bhopal, Meerut, Asansol, Varanasi, Kolhapur and Sonepat. The top 15 cities in the list will contribute more than 80 percent of the total national retail business by 2008.

### 1.3 ORGANIZED VS. UNORGANIZED RETAIL

Exhibit 1.2 gives the category-wise growth of Indian retail, total as well as the organized sector, in recent years. While total retail sales have grown from Rs. 10,591 billion (US$ 230 billion) in 2003-04 to Rs. 16,648 billion in 2007-08, which is at an annual compound growth rate of about 11 percent, the organized retail sales grew much more at about 20 percent per annum from Rs. 350 billion (US$ 7.6 billion) in 2003-04 to Rs. 696 billion in 2007-08. As a result, the share of organized retail in

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2 Business Standard, November 13, 2008
total retail grew, although slowly, from 3.3 percent in 2003-04 to around five percent in 2007-08.

Food and grocery constitutes the bulk of Indian retailing and its share was about two-thirds in 2003-04 gradually falling to about 60 percent in 2006-07 (Exhibit 1.3). The next in importance is clothing and footwear, the share of which has been about 7 percent in 2003-04 and rose to 9 percent in 2006-07. The third biggest category is non-institutional healthcare whose share has slowly reduced from 9 percent in 2003-04 to 8 percent in 2006-07. The next is furniture, furnishing, appliances and services, whose share rose from about 5 percent in 2003-04 to 7 percent in 2006-07. The category of jewellery, watches, etc. constituted about 6 percent of total Indian retailing in 2006-07, rising from 5 percent in 2003-04.

The exhibit 1.4 presents the percentage share of organized retail segments in India. Food retail and Apparel and accessories retailing is the most prominent retail category in organized category. The research conducted by the Economic Times Intelligence group revealed that Apparel and accessories carries 38% followed by Food and grocery - 11 percent of the total opportunity in organized retail in India. This works out to a present food and grocery market size of over $391 million and a projected size of $1.6 billion over the next five years, a compounded aggregate growth rate of 33 percent.

The south of India has been witnessing frenetic activity in food retail especially the organized grocery segment. Stores built on the format of Food world and Nilgiris in the south have started to expand their boundaries of grocery markets that have so far been extremely localized. The west and north of India are also expected to provide good growth opportunities for retail. The supermarkets and hypermarkets/discount stores and fresh produce store formats complementing each other is going to be the way of the future.

Looking at the trends in the last two to three years, discounting appears to be the direction where food and grocery retail seems to be heading. Industry experts believe that a successful national chain will be a discount store (Srivastava, 2007). While a discounter needs to keep store overheads low, its winning edge comes from sourcing – how best it can leverage its scale to drive merchandise costs down, increase stock turns and get better credit terms from its vendors. The study (by the Economic Times Intelligence group) reveals that chain stores will account for the biggest share of the surge in food retail – no less than 95 percent of the total size, and growing at 33 percent, much faster than the 20 percent growth of the single

Food retail is more of essential commodities comprising grains, pulses and vegetables.
stores. Chain stores are touching $32 million sales, while single stores are at around $1.3 million. Coffee house chains are the primary drivers in the food and beverage sector. The leaders in this business are Barista and Café Coffee Day who have a total of 223 outlets in India.

The organized apparel segment worth $1.8 billion is expected to grow at a steady 9.5 percent per annum. Multi-brand outlets are becoming the popular destination for customers and will outrank manufacturer retailers in size.

Exhibit 1.2 Growth India Retail - Total vs. Organized

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</thead>
<tbody>
<tr>
<td>1. Food and grocery</td>
<td>7,028</td>
<td>7,064</td>
<td>7,418</td>
<td>8,680</td>
<td>8,980</td>
<td>7.3</td>
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<tr>
<td>2. Beverages</td>
<td>212</td>
<td>309</td>
<td>373</td>
<td>518</td>
<td>609</td>
<td>34.7</td>
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<tr>
<td>3. Clothing and footwear</td>
<td>777</td>
<td>993</td>
<td>1,036</td>
<td>1,356</td>
<td>1,604</td>
<td>20.4</td>
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<td>4. Furniture, furnishing, appliances and services</td>
<td>512</td>
<td>656</td>
<td>746</td>
<td>986</td>
<td>1,021</td>
<td>24.4</td>
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<tr>
<td>5. Non-institutional healthcare</td>
<td>950</td>
<td>972</td>
<td>1,022</td>
<td>1,159</td>
<td>1,359</td>
<td>6.9</td>
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<tr>
<td>6. Sports goods, entertainment, equipment and books</td>
<td>212</td>
<td>272</td>
<td>308</td>
<td>395</td>
<td>443</td>
<td>23.0</td>
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<tr>
<td>7. Personal care</td>
<td>371</td>
<td>433</td>
<td>465</td>
<td>617</td>
<td>698</td>
<td>18.5</td>
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<tr>
<td>8. Jewellery, watches, etc.</td>
<td>530</td>
<td>610</td>
<td>655</td>
<td>863</td>
<td>913</td>
<td>17.7</td>
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<tr>
<td><strong>Total Retail</strong></td>
<td><strong>10,591</strong></td>
<td><strong>11,308</strong></td>
<td><strong>12,023</strong></td>
<td><strong>14,574</strong></td>
<td><strong>16,648</strong></td>
<td><strong>11.2</strong></td>
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<tr>
<td>1. Food and grocery</td>
<td>39</td>
<td>44</td>
<td>50</td>
<td>61</td>
<td>69</td>
<td>16.5</td>
</tr>
<tr>
<td>2. Beverages</td>
<td>11</td>
<td>12</td>
<td>13</td>
<td>16</td>
<td>18</td>
<td>14.7</td>
</tr>
<tr>
<td>3. Clothing and footwear</td>
<td>168</td>
<td>189</td>
<td>212</td>
<td>251</td>
<td>268</td>
<td>14.3</td>
</tr>
<tr>
<td>4. Furniture, furnishing, appliances and services</td>
<td>67</td>
<td>75</td>
<td>85</td>
<td>101</td>
<td>120</td>
<td>14.8</td>
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<tr>
<td>5. Non-institutional healthcare</td>
<td>14</td>
<td>16</td>
<td>19</td>
<td>24</td>
<td>27</td>
<td>20.0</td>
</tr>
<tr>
<td>6. Sports goods, entertainment, equipment and books</td>
<td>25</td>
<td>33</td>
<td>44</td>
<td>63</td>
<td>68</td>
<td>37.0</td>
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<tr>
<td>7. Personal care</td>
<td>11</td>
<td>15</td>
<td>22</td>
<td>33</td>
<td>42</td>
<td>46.9</td>
</tr>
<tr>
<td>8. Jewellery, watches, etc.</td>
<td>18</td>
<td>24</td>
<td>33</td>
<td>49</td>
<td>52</td>
<td>40.5</td>
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<tr>
<td><strong>Total Organized Retail</strong></td>
<td><strong>350</strong></td>
<td><strong>408</strong></td>
<td><strong>479</strong></td>
<td><strong>598</strong></td>
<td><strong>696</strong></td>
<td><strong>19.5</strong></td>
</tr>
<tr>
<td><strong>Share of Organized Retail in Total Retail (%)</strong></td>
<td><strong>3.3</strong></td>
<td><strong>3.6</strong></td>
<td><strong>4.0</strong></td>
<td><strong>4.1</strong></td>
<td><strong>4.7</strong></td>
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Source: CSO, NSSO, and Technopak Advisers Pvt. Ltd
### Exhibit 1.3 India Retail - Share of Categories (percent)

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<th></th>
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<tbody>
<tr>
<td>1. Food and grocery</td>
<td>66.4</td>
<td>62.5</td>
<td>61.7</td>
<td>59.6</td>
</tr>
<tr>
<td>2. Beverages</td>
<td>2.0</td>
<td>2.7</td>
<td>3.1</td>
<td>3.6</td>
</tr>
<tr>
<td>3. Clothing and footwear</td>
<td>7.3</td>
<td>8.8</td>
<td>8.6</td>
<td>9.3</td>
</tr>
<tr>
<td>4. Furniture, furnishing, appliances and services</td>
<td>4.8</td>
<td>5.8</td>
<td>6.2</td>
<td>6.8</td>
</tr>
<tr>
<td>5. Non-institutional healthcare</td>
<td>9.0</td>
<td>8.6</td>
<td>8.5</td>
<td>8.0</td>
</tr>
<tr>
<td>6. Sports goods, entertainment, equipment and books</td>
<td>2.0</td>
<td>2.4</td>
<td>2.6</td>
<td>2.7</td>
</tr>
<tr>
<td>7. Personal care</td>
<td>3.5</td>
<td>3.8</td>
<td>3.9</td>
<td>4.2</td>
</tr>
<tr>
<td>8. Jewellery, watches, etc.</td>
<td>5.0</td>
<td>5.4</td>
<td>5.4</td>
<td>5.9</td>
</tr>
<tr>
<td><strong>Total Retail</strong></td>
<td><strong>100.0</strong></td>
<td><strong>100.0</strong></td>
<td><strong>100.0</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Source: Computed from Technopak Advisers Pvt. Ltd. data

### Exhibit 1.4 Organized Retail Segments Share (India)

- Books, Music & Gifts, 3%
- Mobile Phones, Watches, 4%
- Health & Beauty Products, 5%
- Entertainment, 2%
- Jewellery, 3%
- Health & Beauty Care Services, 1%
- Catering, 7%
- Furniture & Furnishing, 8%
- Footwear, 9%
- Consumer Durables, 9%
- Food & Grocery, 11%
- Apparel & Accessories, 38%

Source: HSBC, India Retail Report 2005 - KSA Technopak, E and Y and Rocsearch

### Exhibit 1.5 Market Share* (%) of Supermarket Companies in India

- FoodWorld SuperMarkets Ltd., 4.8
- Addani Retail Ltd., 5.7
- Nilgiri's Franchises Ltd., 6.2
- Trinethro SuperRetail Ltd., 7.1
- Pantaloons Retail India Ltd., 7.1
- Great Wholesale Club Ltd., 9.9
- Others, 47.6
- Subhiksha Trading Ltd., 11.5

* Basis retail value Rs. exclusive sales tax in 2006
1.4 EMERGING RETAIL FORMATS IN INDIA

India is watching resurgence of Retail sector whereby it has grown from the traditional Mom and Pop stores present here and there in the neighborhood catering to the convenience of the consumers to the emergence of shopping centers mainly in urban centers with facilities like car parking and finally growth of modern retail formats like hyper and super markets trying to provide customer with '3 V's- Value, Variety and Volume' (Narayanaswamy and Mudit). A brief description of the various modern formats of retailing emerging in India is presented below:

1.4.1 Malls

Malls are an upcoming trend in retail market. They form largest share of organized retailing today. Located mainly in metro cities, in proximity to urban outskirts, ranges from 60,000 sq ft to 7,00,000 sq ft and above. They lend an ideal shopping experience with an amalgamation of product, service and entertainment; all under a common roof. Examples include DLF City Center, The Metropolitan and Big Bazaar around Delhi, Crossroads and R-Mall in Mumbai and Spencer’s in Chennai are revolutionizing the way middle class Indian consumers shop. These malls have very efficient and effective supply chains which ensure product availability and tracking of the product is feasible easily.

1.4.2 Specialty Stores

A specialty store concentrates on a limited number of complementary merchandise categories and provides a high level of service in an area typically under 8,000 square feet (Levy, Michael 2006); Chains such as the Bangalore based Kids Kemp, the Mumbai books retailer Crossword, RPG’s Music World and the Times Group’s music chain Planet M, are focusing on specific market segments and have established themselves strongly in their sectors. Since this format has less diverse product range thus it is comparatively easy to manage supply chains.

1.4.3 Discount Stores

According to Levy and Weitz a Discount Store is a retailer that offers a broad variety of merchandise, limited service, and low prices. Discount stores offer both private labels and national brands, but these brands are typically less fashion-oriented than brands in department stores. The discount stores or factory outlets, offer discounts on the MRP through selling in bulk reaching economies of scale or excess stock left over at the season. The product category can range from a variety of perishable/ non perishable goods. The coverage of products in this kind of format
is quite extensive and the demand fluctuation is also high thus it offers challenges in managing supply chains effectively.

### 1.4.4 Department Stores

A department store is a retail establishment which specializes in satisfying a wide range of the consumer's personal and residential durable goods product needs; and at the same time offering the consumer a choice multiple merchandise lines, at variable price points, in all product categories. Department stores usually sell products including apparel, furniture, home appliances, electronics, and additionally select other lines of products such as paint, hardware, toiletries, cosmetics, photographic equipment, jewellery, toys, and sporting goods. Certain department stores are further classified as discount department stores. Discount department stores commonly have central customer checkout areas, generally in the front area of the store. Department stores are usually part of a retail chain of many stores situated around a country or several countries.

Department stores are often classified according to the kinds of goods they carry and the prices they charge; typical categories include discount, general merchandise, fashion or high fashion, and specialty. Many offer additional services, including gift wrapping, alterations, delivery, and personal shopping.

The development of department stores was linked to the growth in the 19th century of large population centres, transportation, and the harnessing of electricity for power and lighting. The Bon Marché in Paris, which began as a small shop in the early 19th century, is widely considered the first department store. John Wanamaker carried the concept to the United States in 1875 by purchasing a rail-freight depot in his native Philadelphia and populating it with a collection of specialty retailers. Among his innovations were the introduction of price tags and the development of aggressive advertising programs for his growing chain of stores. (He quipped that, while half of his company's advertising budget was wasted, he could never identify which half that was.)

Levy and Wetz defines Department stores as the retailers that carry a broad variety and deep assortment, offer some customer services, and are organized into separate departments for displaying merchandise. These are the large stores ranging from 20000-50000 sq. ft, catering to a variety of consumer needs. They can be further classified into localized departments such as clothing, toys, home, groceries, etc. Departmental Stores are expected to take over the apparel business from exclusive brand showrooms. Among these, the biggest success is K Raheja's Shoppers Stop, which started in Mumbai and now has more than seven large stores (over 30,000 sq. ft) across India and even has its own in store brand for clothes.
called Stop!. It is one of the most complicated retail formats catering to the most diversified set of consumer needs. It becomes very difficult to manage the inventory of so many products and brands.

1.4.5 Supermarkets

Supermarkets are generally situated near residential areas for easy access and maximum sales. While supermarkets offer convenience and variety to consumers, they have attracted significant criticism. As with so many advances, both technological and social, self-centered greed on the part of those in authority causes problems. For the supermarket to be beneficial to society, those owning and managing the stores must take responsibility to serve the whole purpose, social and environmental.

The supermarket also provides a variety of non-food items such as household cleaners, pharmacy products, and pet supplies. Most supermarkets also sell a variety of other household products that are consumed regularly, such as alcohol (where permitted), household cleaning products, medicine, clothes, and some sell a much wider range of non-food products.

Its basic appeal is the availability of a broad selection of goods under a single roof at relatively low prices. Other advantages include ease of parking and, frequently, the convenience of shopping hours that extend far into the evening. Supermarkets usually make massive outlays for newspaper and other advertising and often present elaborate in-store displays of products. Supermarkets are often part of a chain that owns or controls (sometimes by franchise) other supermarkets located in the same or other towns; this increases the opportunities for economies of scale.

Most supermarkets are similar in design and layout due to trends in marketing. Produce tends to be near the entrance of the store. Milk, bread, and other essential items may be located in the rear or other out of the way places. This is purposely done to ensure maximum time spent in the store, strolling past other items and capitalizing on impulse buying. The front of the store is where one finds point of sale machines or cash registers. Many retailers have implemented self-checkout devices in their stores in an attempt to reduce labor costs. A group of four or five self-checkout machines can be supervised by a single assistant.

Supermarkets usually offer products at low prices by reducing margins. Certain products (typically staples such as bread, milk, and sugar) are often sold as loss leaders, that is, with negative margins. To maintain a profit, supermarkets attempt to make up for the low margins with a high overall volume of sales, and with sales of higher-margin items. Customers usually shop by putting their products into
shopping carts (trolleys) or baskets (self-service) and pay for the products at the check-out.

A larger full-service supermarket may be combined with a department store and is sometimes known as a "hypermarket." Other services that supermarkets may have include banks, cafés, day care, photo development, video rental, pharmacies, and gas stations.

'As defined by Food Marketing Institute "Supermarket is self-service food store with grocery, meat and produce department and minimum annual sales of 2 million". It is larger in size and has a wider selection than a traditional grocery store. In India, there is growing number of such stores especially in metros and big cities' (Anjali, Gupta 2006). These stores today contribute to 30% of all food and grocery organized retail sales. Super Markets can further be classified in to mini supermarkets typically 1,000 sq ft to 2,000 sq ft and large supermarkets ranging from of 3,500 sq ft to 5,000 sq ft. having a strong focus on food and grocery and personal sales.

This research focused on the Supply Chain Management practices in supermarkets and departmental stores.

1.4.6 Hyper Market

Combination food and drug stores average 4,600 square meters of selling space. Hyper markets are even larger, ranging between 7,400 and 20,400 square meters. The Hyper markets combines supermarket, discount and warehouse retailing principles. Its product assortment goes beyond routinely purchased goods and includes furniture, large and small appliances, clothing and many items. The basic approach is bulk display and minimum handling by stores personnel, with discounts offered to customers who are willing to carry heavy appliances and furniture out of the stores. Pantaloon Retail India Ltd. (PRIL) is now emerging as India's first Hyper Market chain. Modeled along the lines of global Hyper Market Chains like Wal-Mart, the Big Bazaar will stock several product categories.

1.4.7 Convenience Stores

These are relatively small stores 400-2,000 sq. feet located near residential areas. They stock a limited range of high-turnover convenience products and are usually open for extended periods during the day, seven days a week. Prices are slightly higher due to the convenience premium.

1.5 EXPANSION OF ORGANIZED RETAIL BY FORMAT

Exhibit 1.6 provides an analysis of the expansion of organized retail in terms of the different modern retail formats. The total number of organized retail outlets
rose from 3,125 covering an area of 3.3 million sq. ft. in 2001 to 27,076 with an area of 31 million sq. ft. in 2006. Small-sized single-category specialty stores dominated the organized retail in the beginning with almost two-thirds of total space in 2001. Departmental stores came next with nearly a quarter of total space and supermarkets accounting for the balance of about 12 percent of organized retail space. There were no hypermarkets in India in 2001. Specialty stores are still the most common modern retail format with over a half of total modern retail space in 2006. Supermarkets and department stores occupied nearly an equal space of 15-16 percent each in 2006. In 2006, India had about 75 large-sized hypermarkets carrying a tenth of the total modern retail space in the country. This format is expected to gain more prominence in the future.

The emergence of organized retail undoubtedly gives consumers a wider choice of goods, more convenience, and a better shopping environment, among other benefits. This is feasible because organized retail can take several formats, from small neighborhood stores in densely populated cities with high real estate prices to large air-conditioned malls in the periphery where real estate is cheaper. Organized retail can appear small but spread in all local markets, providing the convenience of a neighborhood kirana store but with procurement on a mass scale that keeps prices low and provides greater variety.

**Exhibit 1.6 Organized Retail Expansion by Format**

<table>
<thead>
<tr>
<th>Format</th>
<th>Average Size (sq. ft.)</th>
<th>2001</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of Stores</td>
<td>Area ('000 sq. ft.)</td>
<td>Share in Total Space (%)</td>
</tr>
<tr>
<td>Supermarkets / convenience stores</td>
<td>1,000</td>
<td>400</td>
<td>400</td>
</tr>
<tr>
<td>Hypermarkets</td>
<td>40,000</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Discount stores</td>
<td>1,000</td>
<td>48</td>
<td>48</td>
</tr>
<tr>
<td>Specialty stores</td>
<td>800</td>
<td>2,651</td>
<td>2,121</td>
</tr>
<tr>
<td>Department stores</td>
<td>30,000</td>
<td>26</td>
<td>780</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3,125</strong></td>
<td><strong>3,349</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Source: Technopak Advisers Pvt. Ltd.

Organized retailers tend to start off from first-tier cities with high purchasing power and then go to second and third tier cities with more price-sensitive populations. Several chains in India have started in cities like Hyderabad and Bangalore, which are prospering from the information technology boom, to the metropolitan cities of Delhi, Mumbai, Chennai, and Kolkata, and then very quickly moving to smaller cities like Jaipur and Chandigarh. Some chains have announced plans to start business hubs in rural areas. DSCL’s Haryali Kisan Bazaars, Mahindra and Mahindra’s Shubh Labh Stores, Tata/Rallis’s Kisan Kendras, Escort’s rural stores,
and ITC-led Choupal Sagars are similar business hubs that provide value-added services, such as credit services, soil-testing facilities, education services, and agri-input supply to village farmers. In many countries, it takes decades for retail to extend into rural areas. In India, however, it appears that organized retailers are moving very fast in all cities and in all product segments (except meat and meat products). The expected benefits of that expansion are lower consumer prices for the same quality, wider variety, and a better shopping experience. These benefits should soon percolate to the mass of Indian consumers, assuming that organized retailers have free access to global- and pan-Indian sourcing directly through producers, processors, and specialized agents.

A significant trend in the market is the development of a combination of retail and entertainment centers. While the number of shopping malls has seen a spurt in the recent past, the future development is now increasingly being focused on providing for leisure activities as well. A considerable number of multiplexes are being developed as an integral part of retail malls along with facilities such as food courts, video game parlors, books stores, cinema and theatre.

Though malls are on route to be the kings of organized retail in the future, their sustainability is debatable. It will eventually come down to what value proposition a mall can provide with respect to the competition to increase its hold in the market. Given the number of retail malls springing up around the country, only the one that satisfies the Indian consumers' need for value-for-money proposition will survive.

Several surveys on consumer behaviour with respect to modern retailing show that consumers prefer organized retailers for their better hygienic environment. Although it is difficult to implement any food safety standards in the traditional retailing environment, modern organized retailers could be thought of as an entry point to ensure food safety, not only at the retail end but also all along the supply chain. Large retailers could be encouraged to guard their supply lines and provide extension and support to ensure traceability in production and that food moves from farm to plate in a hygienic environment. This would be an additional gain to consumers, enhancing their welfare.

Almost all the convenience and neighborhood stores launched by modern retailers cater not to high-end consumers primarily but to middle and lower income groups. These consumers are attracted to low, discounted price offers. The "Everyday low prices" and "Saving is my right" slogans of the Subhiksha chain have been instrumental in wooing customers and thus escalating the growth of daily footfalls. In 2007, Safal, the largest organized retail network of fruit and vegetables in India under Mother Dairy, reduced the prices of 13 selected winter vegetables to Rs 5 per
kilograms. That price was lower than the prices offered by Reliance Fresh for many of the items and 50 percent cheaper than those offered by local vendors (Chakravarty 2007). The underlying idea was to give better prices to both farmers and consumers and reduce the gap between the two prices. This shows that the entry of more players will induce sufficient competition and price wars that will eventually help consumers at the front end and possibly farmers at the back end.

1.6 RECENT CONCERNS IN RETAIL

The recent US financial meltdown however seems to have badly affected the growth of retail in US. There is an apprehension of its possible effects on retail in India. Although till now there is no concrete evidence of immediate slowdown of retail in India, organized retailers like Reliance are taking more cautious steps towards future expansion in retail. The media has recently reported the latest news of Reliance closing down its stores, though it has been officially denied by the company. Retail, however, has not been mentioned among those sectors, likely to be facing retrenchment in immediate future in the ASSOCHAM Report (2008) on job cuts, which was withdrawn due to pressures from the government.

The most important debate concerning the implications for the expansion of the organized retailing in India revolves around whether it is going to have positive impacts on the economy as a whole as compared to the traditional unorganized form of retailing. According to one camp, it has overall positive impacts in terms of generating more number of employments, new diversified forms of employments, and improving the nature of retail employment (higher salary, more job benefits, security of job, employability etc). This form of retail sector is also looked upon as a huge sector having immense business opportunities for entrepreneurs and capital investors. Moreover, organized retailing is considered to be efficient and apt to cater to the diversified and changing nature of the consumer demands in growing economies like India. The general benefits of organized retail also include improved supply-chain, improved marketability of merchandise and it is also expected that it will contribute to heightened economic activity.

As against this view, the critics of this emerging phenomenon point to the inevitable negative impacts of organized chains on the unorganized and small retailers who are under the threat of simply being wiped out by the powerful organized networks of giant retail chains. Moreover, the employees of the unorganized sector do not have the necessary skills or education required to be

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4 Yahoo news, Sep. 27, 2008
5 IndiraRetailBiz, Nov 24, 2008
6 IndiraRetailBiz, Nov 1, 2008
absorbed in the organized sector (Kalhan, 2007). Hence the claim of overall positive impact on the economy and employment in particular is brought under scrutiny. There have been major protests being launched by the unorganized retailers, who claim that their sales have evidently been affected due to the emergence of the organized retail giants. "The livelihood of five crore traders across the country is at stake if the government does not rethink the retail strategy" says Mohan Gurnani, President of the Federation of Associations, Mumbai who is a leading protestors against the government policy to slowly facilitate the boom of organized retail.7

However, the advocates of organized retailing have their own set of arguments to defend their position. The President of CII (Confederation of Indian Industry) Mr. Sunil Mittal emphasized that the traditional unorganized retail will not be wiped out by the organized form. He said, “The retail industry in the country will grow to $500 billion in the next 10 years from the existing $300 billion, while organized retail would only account for $100 billion, so the unorganized sector would also witness growth.” He also added that international evidence supports this claim. In US, for example, the number of mom-and-pop stores increased by 2% in spite of the presence of Walmart8. A draft report submitted by Indian Council for Research on International Economic Relations (commissioned by the ministry of commerce and industry in February, 2007 to assess the impact of big retail chain on the small shops in the vicinity) claims that organized retail does not negatively affect unorganized retail in the long run on an ‘absolute basis’.9 According to the ICRIER report (May, 2008), unorganized retailers in the vicinity of organized retailers have been adversely affected in terms of their volume of business and profit. However, the adverse impact on unorganized retailers tapers off over time. It also claims that there was no evidence of a decline in overall employment in the unorganized sector as a result of the entry of organized retailers.

The second important debate is regarding whether Indian retail market should be opened up to the international retail giants such as Wal-Mart, Tesco, Sears, Target etc. Whether the Indian retail entrepreneurs will survive competition from these established global retail chains is a pertinent question regarding current developments in retail market. Related to this is the current debate concerning Foreign Direct Investment (FDI) in the retail sector. Presently FDI is completely prohibited in case of multi-brand retail. In case of single-brand retail, 51% FDI is allowed with prior government approval. According to the supporters of liberalization

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7 Business standard, Mumbai, June, 2007
8 Business Line, N. Delhi, May 25, 2007
of retail sector, restricted FDI poses to be an impediment towards organized retail growth since it requires immense capital, technology and application of latest global best practices.\textsuperscript{10} However, due to strong opposition by the Left, the central government has not taken any further positive step for opening up of retail for FDI. The main concern for opposition is concerning its likely adverse impact on the traditional unorganized sector retail employment. Moreover, there is also the possibility that the foreign retail majors will hurt domestic players with the practice of predatory pricing and become monopolies. Finally, most of these stores will be focused on major cities and big towns which might result in a skewed urban development (Chauhan, 2006).

1.7 SUPPLY CHAIN IN RETAILING

Porter's (1980) ideas and proposals on achieving competitive advantage have influenced many other researchers in retailing to propose complementary theories on achieving competitive advantage. All the theories proposed by researchers are supported with examples of winning strategies implemented at renowned companies. The theories include an emphasis on planning (Porter, 1980, 1985), strategic approach (Hamel and Prahalad, 1990, 1998; Porter, 1985, 1990, 1991), marketing strategies (Day, 1994, 1999), value chain management (Porter, 1985), and supply chain management (SCM) (Christopher, 1998; Poirier, 1999; Tyndall et al., 1998).

As retailing firms strive for ways to achieve competitive advantage, they are looking for new ideas and solutions especially when retailers are working in perfect competition where products are homogenous and consumers and producers have perfect information on prices and judgement of product quality is subjective. Leading retailers are expanding the role of supply chain management (SCM) within their organizations to better manage inventory, control costs and maintain first-rate customer service. Although revenues are stagnant in many retail organizations, costs are viewed as controllable, and those expenses falling under the control of supply chain management executives are receiving strong attention from the top of the organization.

As a result a theory that has gained momentum in the last few years is the concept of ‘supply chain’. In recent years, there have been numerous advances and developments in supply chain techniques and management. One of the reasons is that as trade barriers drop and markets open, competition has become more intense – hence retailing companies need to be more competitive and cost effective. An

\textsuperscript{10} The Economic Times, July 18, 2007
initiative to help achieve this is a supply chain management program. Supply chain management is the management of upstream and downstream activities, resources, and relationships with suppliers and customers, which is required to deliver products or services. In theory, if this is done well it will lead to competitive advantage through differentiation and lower costs as suggested by Porter (1980). Moreover, some researchers claim that effective supply chain management can reduce costs by several percentage points of revenue for the retailers (Boyson, et. al, 1999).

Despite an ongoing discussion in research as well as management journals for more than two decades, SCM remains to be an unclear expression. The large amount of research in the SCM area, and the fact that SCM spans over several disciplines (Tan, 2001), has led to a wide range of definitions, expressions and concepts (Larson and Halldorsson, 2004; Mentzer et al., 2001). The discussions and conclusions about SCM are seldom based upon rigorous theory (Bechtel and Jaryam, 1997) or empirical material (Lee and Whang, 2000; Stank et al., 2001) and SCM literature therefore often becomes superficial and non-comprehendible. In addition, empirical studies indicate that many of the expected positive effects of SCM have not been realised (Fawcett and Magnan, 2002; Moberg et al., 2003; Skjøtt-Larsen, 1999, Spekman et al., 1998; Stank et al., 1999; Skjøtt-Larsen et al., 2003; Småros, 2003). Hence there seems to be a gap between the ideal SCM theory and the performance in existing supply chains, i.e. SCM practice.

Supply chain management is not a static or solution. Instead, new advances and techniques for supply chain management continue to mushroom. This tremendous growth in new ideas and processes is starting to influence and change the business processes and models of retailing companies. Hence retailing companies have many choices in selecting programs in supply chain management. In making their choices, companies need to plan for effective supply chain management, in order to gain competitive advantage.

However, to ensure that effective supply chain management can provide business success, we must **determine the critical success factors in supply chain management that can provide competitive advantage to retailing companies.**

### 1.8 WHAT IS A SUPPLY CHAIN?

In retailing context a supply chain can be defined as "**a network of facilities developed by retailers that performs the functions of procurement of material, transformation of material to intermediate and finished products, and distribution of finished products to customers**" (Lee and Billington, 1993).

The supply chain consists of all stages involved, directly or indirectly, in fulfilling a customer request. The supply chain not only includes the manufacturer and suppliers,
but also transporters, warehouses, retailers, and customers themselves. The term "supply chain" conjures up images of a product, or a supply, moving from suppliers to manufacturers to distributors to retailers to customers along a chain.

Supply Chain Management (SCM) is a well-known term that has been highly publicized throughout the business community during the past decade. In its most generic sense, it is a term that refers to the management of flow of products and services from suppliers to manufacturers and retailers through to the ultimate destination – the consumer. It also refers to the flow of information backwards and forward through the supply chain between the consumer, retailers, manufacturers and suppliers, enabling the rapid replenishment of existing products or the development of new products to meet changing market demands. But how is supply chain management defined for retailers?

The definition of "supply chains" seems to be more common across authors than the definition of "supply chain management" (Cooper and Ellram 1993; La Londe and Masters 1994; Lambert, Stock, and Ellram 1998). La Londe and Masters proposed that a supply chain is a set of firms that pass materials forward. Normally, several independent firms are involved in manufacturing a product and placing it in the hands of the end user in a supply chain—raw material and component producers, product assemblers, wholesalers, retailer merchants and transportation companies are all members of a supply chain (La Londe and Masters 1994). By the same token, Lambert, Stock, and Ellram (1998) define a supply chain as the alignment of firms that brings products or services to market. These concepts of supply chain include the final consumer as part of the supply chain.

A retail supply chain consists of vendors that supply various products. Exhibit 1.7 below is a diagram of a traditional retail supply chain. Vendors supply products to their retail customer's distribution centers as well as operate their own network of distribution centers. Retail supply chains vary in complexity, and this structure can include any number of manufacturers, vendors, distribution centers, and retail locations.

In between each entity, various carriers are used to transport these goods. Depending on the agreement between the different partners in the supply chain, the inventory ownership and ownership transfer varies. For most traditional supplier and retailer relationships, the suppliers relinquish ownership once the supplies reach the retailer's distribution center.

Along with the physical product flow, there is also an information flow between supply chain partners. Depending on the technology and collaboration efforts between partners, information flow can be extensive or limited. The type of information shared between partners could include point of sale data or forecasts.
over a certain period of time. Suppliers and retailers that collaborate extensively share inventory status data as well.

**Exhibit 1.7 Traditional Retail Supply Chain Structure**

![Traditional Retail Supply Chain Structure Diagram]

Another definition notes a supply chain as the network of organizations that are involved, through upstream and downstream linkages, in the different processes and activities that produce value in the form of products and services delivered to the ultimate consumer (Christopher 1992). In other words, a supply chain consists of multiple firms, both upstream (i.e., supply) and downstream (i.e., distribution), and the ultimate consumer. In reality, a manufacturer may receive material from several suppliers and then supply to several distributors. Therefore, most supply chains are actually networks. It may be more accurate to use the term supply network to describe the structure of most supply chains. In such a context, supply chain can also be referred to as the logistics network, consists of suppliers, manufacturing centers, warehouses, distribution centers, and retail outlets, as well as raw materials, work-in-process inventory, and finished products that flow between the facilities (Simchi-Levi, 2000). Exhibit 1.8 gives an example of the real world supply chain.

In a real world supply chain, the structure becomes more complex, and more parties' involvement significantly increases the difficulty of managing the supply chain.

Encompassed with these definitions, we can identify three degrees of supply chain complexity: a "direct supply chain," an "extended supply chain," and an "ultimate supply chain." A direct supply chain consists of a company, a supplier, and a customer involved in the upstream and/or downstream flows of products, services, finances, and/or information (Exhibit 1.9-A). An extended supply chain includes suppliers of the immediate supplier and customers of the immediate customer, all involved in the upstream and/or downstream flows of products, services, finances, and/or information (Exhibit 1.9-B). An ultimate supply chain includes all the organizations involved in all the upstream and downstream flows of products,
services, finances, and information from the ultimate supplier to the ultimate customer.

**Exhibit 1.8 A Real World Supply Chain Structure**

Exhibit 1.9-C illustrates the complexity that ultimate supply chains can reach. In this example, a third party financial provider may be providing financing, assuming some of the risk, and offering financial advice; a third party logistics (3PL) provider is performing the logistics activities between two of the companies; and a market research firm is providing information about the ultimate customer to a company well back up the supply chain. This very briefly illustrates some of the many functions that complex supply chains can and do perform.

Given the potential for countless alternative supply chain configurations, it is important to note that any one organization especially in retailing can be part of numerous supply chains. Wal-Mart, for example, can be part of the supply chain for candy, for clothing, for hardware, and for many other products. This multiple supply chain phenomenon begins to explain the network nature that many supply chains possess. For example, AT&T might find Motorola to be a customer in one supply chain, a partner in another, a supplier in a third, and a competitor in still a fourth supply chain.

Despite the popularity of the term Supply Chain Management, both in academia and practice, there remains considerable confusion as to its meaning. Some authors define SCM in operational terms involving the flow of materials and products, some view it as a management philosophy, and some view it in terms of a management process (Tyndall et al. 1998). Authors have even conceptualized SCM differently within the same article: as a form of integrated system between vertical integration and separate identities on one hand, and as a management philosophy on the other hand (Cooper and Ellram 1993).
Supply chain management involves coordinating and integrating flows both within and among companies. It is said that the ultimate goal of any effective supply chain management system is to reduce inventory (with the assumption that products are available when needed). The central aim of supply chain management is thus to have the right products in the right quantities (at the right place) at the right moment at minimal cost circumventing upon the interrelated issues of customer satisfaction, inventory management, and flexibility.

Current SCM literature differentiates between SCM from logistics. While logistics is a function, SCM is a process involving entire business activity. According to Lambert, Stock, and Ellram (1998), however, there exist important differences between the definition of supply chain management and the Council of Logistics Management’s (CLM) (1985) definition of logistics: “Logistics is the process of planning, implementing and controlling the efficient flow and storage of raw materials, in-process inventory, finished goods, services, and related information from point of origin to point of consumption (including inbound, outbound, internal and external movements) for the purpose of conforming to customer requirements.” CLM (1998) apparently agreed, since its new definition states, “Logistics is that part of the supply chain process that plans, implements, and controls the efficient flow and storage of goods, services, and related information from the point of origin to the point of
consumption in order to meet customers' requirements” (emphasis added). Thus, CLM has also distinguished between logistics and supply chain management, and acknowledged that logistics is one of the functions contained within supply chain management.

Definitions of SCM differ across authors (see Exhibit 1.10) can be classified into three categories: a management philosophy, implementation of a management philosophy, and a set of management processes.

**Exhibit 1.10 Definitions of Supply Chain Management**

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monczka, Trent, and Handfield (1998)</td>
<td>SCM requires traditionally separate materials functions to report to an executive responsible for coordinating the entire materials process, and also requires joint relationships with suppliers across multiple tiers. SCM is a concept, &quot;whose primary objective is to integrate and manage the sourcing, flow, and control of materials using a total systems perspective across multiple functions and multiple tiers of suppliers.&quot;</td>
</tr>
</tbody>
</table>
| La Londe and Masters (1994)      | Supply chain strategy includes: 
...two or more firms in a supply chain entering into a long-term agreement;
...the development of trust and commitment to the relationship;
...the integration of logistics activities involving the sharing of demand and sales data;
...the potential for a shift in the locus of control of the logistics process. |
| Stevens (1989)                   | "The objective of managing the supply chain is to synchronize the requirements of the customer with the flow of materials from suppliers in order to effect a balance between what are often seen as conflicting goals of high customer service, low inventory management, and low unit cost." |
| Houlihan (1988)                  | Differences between supply chain management and classical materials and manufacturing control:
1) The supply chain is viewed as a single process. Responsibility for the various segments in the chain is not fragmented and relegated to functional areas such as manufacturing, purchasing, distribution, and sales.
2) Supply chain management calls for, and in the end depends on, strategic decision making. "Supply" is a shared objective of practically every function in the chain and is of particular strategic significance because of its impact on overall costs and market share.
3) Supply chain management calls for a different perspective on inventories which are used as a balancing mechanism of last, not first, resort.
4) A new approach to systems is required—integration rather than interfacing. |
| Jones and Riley (1985)            | "Supply chain management deals with the total flow of materials from suppliers through end users..." |
| Cooper et al. (1997)              | Supply chain management is "... an integrative philosophy to manage the total flow of a distribution channel from supplier to the ultimate user." |

The alternative definitions and the categories they represent suggest that the term “supply chain management” presents a source of confusion for those involved in researching the phenomena, as well as those attempting to establish a supply chain approach to management.
Cooper and Ellram (1993) identify a number of aspects that differentiate a traditional commodity chain from a supply chain, see Exhibit 1.11 below:

<table>
<thead>
<tr>
<th>Element</th>
<th>Traditional</th>
<th>Supply chain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory Management Approach</td>
<td>Independent efforts</td>
<td>Joint reduction in channel inventories</td>
</tr>
<tr>
<td>Total Cost Approach</td>
<td>Minimize turn costs</td>
<td>Channel-wide cost efficiencies</td>
</tr>
<tr>
<td>Time Horizon</td>
<td>Short term</td>
<td>Long term</td>
</tr>
<tr>
<td>Amount of information sharing and monitoring</td>
<td>Limited to needs of current transaction</td>
<td>As required for planning and monitoring processes</td>
</tr>
<tr>
<td>Amount of Coordination of Multiple Levels in the Channel</td>
<td>Single contact for the transaction between channel pairs</td>
<td>Multiple contacts between levels in firms and levels of channel</td>
</tr>
<tr>
<td>Joint Planning</td>
<td>Transaction-based</td>
<td>On-going</td>
</tr>
<tr>
<td>Compatibility of Corporate Philosophies</td>
<td>Not relevant</td>
<td>Compatible at least for key relationships</td>
</tr>
<tr>
<td>Breadth of Supplier Base</td>
<td>Large to increase competition and spread risk</td>
<td>Small to increase coordination</td>
</tr>
<tr>
<td>Channel Leadership</td>
<td>Not needed</td>
<td>Needed for coordination focus</td>
</tr>
<tr>
<td>Amount of Sharing of Risks and Rewards</td>
<td>Each of its own</td>
<td>Risks and rewards shared over long term</td>
</tr>
<tr>
<td>Speed of Operations, information and inventory flows</td>
<td>&quot;Warehouse&quot; orientation (storage, safety stock) interrupted by barriers to flows; localized to channel pairs</td>
<td>&quot;DC&quot; orientation (inventory velocity) Interconnecting flows; JIT, Quick Respon across the channel</td>
</tr>
</tbody>
</table>

1.8.1 SCM as a Management Philosophy

As a philosophy, SCM takes a systems approach to viewing the supply chain as a single entity, rather than as a set of fragmented parts, each performing its own function (Ellram and Cooper 1990; Houlihan 1988; Tyndall et al. 1998). In other words, the philosophy of supply chain management extends the concept of partnerships into a multi-firm effort to manage the total flow of goods from the supplier to the ultimate customer (Ellram 1990; Jones and Riley 1985). Thus, SCM is a set of beliefs that each firm in the supply chain directly and indirectly affects the performance of all the other supply chain members, as well as ultimate, overall supply chain performance (Cooper et al. 1997).

SCM as a management philosophy seeks synchronization and convergence of intra-firm and inter-firm operational and strategic capabilities into a unified, compelling marketplace force (Ross 1998). SCM as an integrative philosophy directs supply chain members to focus on developing innovative solutions to create unique, individualized sources of customer value. Langley and Holcomb (1992) suggest that the objective of SCM should be the synchronization of all supply chain activities to
create customer value. Thus, SCM philosophy suggests the boundaries of SCM include not only logistics, but also all other functions within a firm and within a supply chain to create customer value and satisfaction. In this context, understanding customers’ values and requirements is essential (Ellram and Cooper 1990; Tyndall et al. 1998). In other words, SCM philosophy drives supply chain members to have a customer orientation.

1.8.2 SCM as a Set of Activities to Implement a Management Philosophy

In adopting a supply chain management philosophy, firms must establish management practices that permit them to act or behave consistently with the philosophy. As such, many authors have focused on the activities that constitute supply chain management such as 'Integrated Behavior', 'Mutually Sharing Information', 'Mutually Sharing Risks and Rewards', 'Cooperation', 'The Same Goal' and 'the Same Focus on Serving Customers', 'Integration of Processes, Partners to Build and Maintain Long-Term Relationships'.

Bowersox and Closs (1996) argued that to be fully effective in today’s competitive environment, firms must expand their integrated behavior to incorporate customers and suppliers. This set of activities is a coordinated effort called supply chain management between the supply chain partners, such as suppliers, carriers, and manufacturers, to dynamically respond to the needs of the end customer (Greene 1991).

Related to integrated behavior, mutually sharing information among supply chain members is required to implement a SCM philosophy, especially for planning and monitoring processes (Cooper et al. 1997; Cooper, Lambert, and Pagh 1997; Ellram and Cooper 1990; Novack, Langley, and Rinehart 1995; Tyndall et al. 1998). Cooper, Lambert, and Pagh emphasized frequent information updating among the chain members for effective supply chain management. The Global Logistics Research Team at Michigan State University (1995) defines information sharing as the willingness to make strategic and tactical data available to other members of the supply chain. Open sharing of information such as inventory levels, forecasts, sales promotion strategies, and marketing strategies reduces the uncertainty between supply partners and results in enhanced performance (Andel 1997; Lewis and Talalayevsky 1997; Lusch and Brown 1996; Salcedo and Grackin 2000).

Effective SCM also requires mutually sharing risks and rewards that yield a competitive advantage (Cooper and Ellram 1993). Risk and reward sharing should happen over the long term (Cooper et al. 1997). Risk and reward sharing is important for long-term focus and cooperation among the supply chain members.
Cooperation among the supply chain members is required for effective SCM (Ellram and Cooper 1990; Tyndall et al. 1998). Cooperation refers to similar or complementary, coordinated activities performed by firms in a business relationship to produce superior mutual outcomes or singular outcomes that are mutually expected over time (Anderson and Narus 1990). Cooperation is not limited to the needs of the current transaction and happens at several management levels (e.g., both top and operational managers), involving cross-functional coordination across the supply chain members (Cooper et al. 1997).

Joint action in close relationships refers to carrying out the focal activities in a cooperative or coordinated way (Heide and John 1990). Cooperation starts with joint planning and ends with joint control activities to evaluate performance of the supply chain members, as well as the supply chain as a whole (Cooper et al. 1997; Cooper, Lambert, and Pagh 1997; Ellram and Cooper 1990; Novack, Langley, and Rinehart 1995; Spekman 1988; Tyndall et al. 1998). Joint planning and evaluation involve ongoing processes over multiple years (Cooper et al. 1997). In addition to planning and control, cooperation is needed to reduce supply chain inventories and pursue supply chain-wide cost efficiencies (Cooper et al. 1997; Dowst 1988). Furthermore, supply chain members should work together on new product development and product portfolio decisions (Drozdowski 1986). Finally, design of quality control and delivery systems is also a joint action (Treleven 1987).

La Londe and Masters (1994) proposed that a supply chain succeeds if all the members of the supply chain have the same goal and the same focus on serving customers. Establishing the same goal and the same focus among supply chain members is a form of policy integration. Lassar and Zinn (1995) suggested that successful relationships aim to integrate supply chain policy to avoid redundancy and overlap, while seeking a level of cooperation that allows participants to be more effective at lower cost levels. Policy integration is possible if there are compatible cultures and management techniques among the supply chain members.

1.8.3 SCM as a Set of Management Processes

As opposed to a focus on the activities that constitute supply chain management, other authors have focused on management processes. Davenport (1993) defines processes as a structured and measured set of activities designed to produce specific output for a particular customer or market. La Londe (1998) proposes that SCM is the process of managing relationships, information, and materials flow across enterprise borders to deliver enhanced customer service and
economic value through synchronized management of the flow of physical goods and associated information from sourcing to consumption. Ross (1998) defines supply chain process as the actual physical business functions, institutions, and operations that characterize the way a particular supply chain moves goods and services to market through the supply pipeline. In other words, a process is a specific ordering of work activities across time and place, with a beginning, an end, clearly identified inputs and outputs, and a structure for action (Cooper et al. 1997; Cooper, Lambert, and Pagh 1997; Ellram and Cooper 1990; Novack, Langley, and Rinehart 1995; Tyndall et al. 1998).

Lambert, Stock, and Ellram (1998) propose that, to successfully implement SCM, all firms within a supply chain must overcome their own functional silos and adopt a process approach. Thus, all the functions within a supply chain are reorganized as key processes. The critical differences between the traditional functions and the process approach are that the focus of every process is on meeting the customer's requirements and that the firm is organized around these processes (Cooper et al. 1997; Cooper, Lambert, and Pagh 1997; Ellram and Cooper 1990; Novack, Langley, and Rinehart 1995; Tyndall et al. 1998). Lambert, Stock, and Ellram suggest the key processes typically include customer relationship management, customer service management, demand management, order fulfillment, manufacturing flow management, procurement, and product development and commercialization.

Supply chain management is also defined as a set of approaches utilized to efficiently integrate suppliers, manufacturers, warehouses, and stores, so that merchandise is produced and distributed at the right quantities, to the right locations, and at the right time, in order to minimize system-wide costs while satisfying service level requirements (Simchi-Levi, 2000).

This definition leads to several observations. First, supply chain management takes into consideration every facility that has an impact on cost and plays a role in making the product conform to customer requirements, from supplier and manufacturing facilities through warehouses and distribution centers to retailers and stores. Indeed, in some supply chain analyses, it is necessary to account for the 'suppliers' suppliers and the customers' customers because they have an impact on supply chain performance.

Second, the objective of supply chain management is to be efficient and cost-effective across the entire system; total system-wide costs, from transportation and distribution to inventories of raw materials, work in process, and finished goods, are to be minimized. Thus, the emphasis is not on simply minimizing transportation cost.
or reducing inventories, but rather, on taking a systems approach to supply chain management.

Finally, because supply chain management revolves around efficient integration of suppliers, manufacturers, warehouses, and stores, it encompasses the firm's activities at many levels, from the strategic level through the tactical to the operational level.

These processes, illustrated in Exhibit 1.12, provide the basic framework for the conversion and movement of raw materials into final products.

**Exhibit 1.12 Supply chain processes**

The process of production planning and inventory control encompasses the manufacturing and storage sub-processes and their interfaces. More specifically, production planning describes the design and management of the entire manufacturing process (including raw material scheduling and acquisition, manufacturing process design and scheduling, and material handling design and control). Inventory control describes the design and management of the storage policies and the procedures for raw materials, work-in-process inventories, and, usually, final products.

The distribution and logistics process determines how products are retrieved and transported from the warehouse to retailers. These products may be transported to retailers directly, or may first be moved to distribution facilities, which in turn transport products to the retailers. This process includes the management of inventory retrieval, transportation, and final product delivery.

These processes interact with one another to produce an integrated supply chain. The design and management of these processes determine the extent to which the supply chain works as a unit to meet the required performance objective.

SCM is also described in terms of a process of value adding, optimizing the use of all resources, materials, people and technology, and information for the benefit of the end customer. Christopher (1990) describes the concept of value added and customer services as:

"Customer Service is concerned with making the product available to the customer.... there is no value in a product or service until it is in the hands of the
'Availability' in itself is a complex concept, impacted by many factors which might include delivery frequency and reliability, stock levels and order cycle time. Ultimately customer service is determined by the interaction of all those factors that affect the process of making products and services available to the buyer."

Lamey (1996) discusses the integrated supply chain process through an interdependence of function (Exhibit 1.13), where there has to be an overall total control to optimize the value chain.

Exhibit 1.13 Interdependency of supply chain functions

Gattoma and Walters (1998) argue that the whole purpose of a value-based supply chain is to produce a balanced perspective which is not at the determination of customer service. They describe a model proposed by Stevens (1989) which presents the supply chain through functional trade-offs (Exhibit 1.14).

1.9 SUPPLY CHAIN MANAGEMENT CATEGORIES AND FACTORS

While the value chain and marketing approaches propose generic ideas and capabilities, proponents of the supply chain approach go a step further and identify specific activities, backed by detailed processes that can improve a firm's competitive advantage and success.
Supply chain management encompasses end-to-end management of a product or service, and includes the items shown in Exhibit 1.15. All the supply chain categories are linked together they form the Supply Chain Management System.

A summary of the supply chain categories and factors and their benefits is given in Exhibit 1.16.
### Exhibit 1.16

#### Supply Chain Categories, Factors, and their Benefits

<table>
<thead>
<tr>
<th>Categories</th>
<th>Factors</th>
<th>Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logistics (Transportation only)</td>
<td>■ Inbound transportation into company</td>
<td>■ Lower costs</td>
</tr>
<tr>
<td></td>
<td>■ Outbound transportation to customers</td>
<td>■ Faster deliveries of parts and products</td>
</tr>
<tr>
<td></td>
<td>■ Company-wide logistics coordination and management</td>
<td>■ Customer satisfaction</td>
</tr>
<tr>
<td></td>
<td>■ Reverse logistics</td>
<td></td>
</tr>
<tr>
<td>Planning</td>
<td>■ Collaborative planning</td>
<td>■ Provides better forecast</td>
</tr>
<tr>
<td></td>
<td>■ Demand generation (of products)</td>
<td>■ process, resulting in less inventory, stable manufacturing, and less stock-outs</td>
</tr>
<tr>
<td>Purchasing</td>
<td>■ Strategic sourcing and centralized purchasing</td>
<td>■ Lowers costs of purchased parts and cost reduction</td>
</tr>
<tr>
<td></td>
<td>■ Consolidate and reduce number of suppliers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>■ Collaborative bidding</td>
<td></td>
</tr>
<tr>
<td>Inventory management</td>
<td>■ Inventory management and reduction</td>
<td>■ Reduces inventory, assets, and better availability</td>
</tr>
<tr>
<td>Manufacturing techniques and mass customization</td>
<td>■ Lean manufacturing</td>
<td>■ Lean inventories and minimum waste in production</td>
</tr>
<tr>
<td></td>
<td>■ Late product differentiation and customization</td>
<td>■ Reduces number of product options and better availability</td>
</tr>
<tr>
<td></td>
<td>■ Outsourcing of non-core activities</td>
<td>■ Increases productivity via lower costs</td>
</tr>
<tr>
<td>Order management</td>
<td>■ Electronic order management, with electronic transactions and payments</td>
<td>■ Increases speed of order transactions, with better and quicker information to customers</td>
</tr>
<tr>
<td>The Internet enabled supply chain and integration of the entire supply chain</td>
<td>■ SCM systems to link the supply chain</td>
<td>■ End-to-end visibility of the supply chain, with faster transactions, lower costs and inventory, higher customer satisfaction</td>
</tr>
<tr>
<td></td>
<td>■ Efficient Consumer Response (ECR)</td>
<td>■ Reduction of cash to cash cycle</td>
</tr>
<tr>
<td></td>
<td>■ Internet as the basic engine for e-commerce</td>
<td>■ Enables Electronic product information and pricing, faster customer and supplier and financial transactions, real time order management, and electronic delivery of products and services</td>
</tr>
<tr>
<td></td>
<td>■ Inter-organizational level coordination</td>
<td>■ Optimization of supply chain</td>
</tr>
<tr>
<td></td>
<td>■ Rebuilding, or disintermediation, of the supply chain</td>
<td>■ Shorter and more efficient supply chain</td>
</tr>
</tbody>
</table>

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Exhibit 1.16 (contd.) Supply Chain Categories, Factors, and their Benefits

<table>
<thead>
<tr>
<th>Categories</th>
<th>Factors</th>
<th>Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCM Information Systems</td>
<td>- Supply Chain Management information systems</td>
<td>- Faster information flow internally and with customers and suppliers</td>
</tr>
<tr>
<td></td>
<td>- Customers access into a firm's supply chain</td>
<td>- Increased customer satisfaction</td>
</tr>
<tr>
<td>Customer Relationship Management (CRM)</td>
<td>- Management of technology, processes, information, and people (to get a 360-degree view of the customer)</td>
<td>- Higher customer satisfaction and loyalty</td>
</tr>
<tr>
<td>Metrics and tools to manage and improve performance</td>
<td>- Metrics to track key factors of supply chain performance</td>
<td>- Better monitoring and management of performance</td>
</tr>
<tr>
<td></td>
<td>- SCOR (Supply Chain Operations Reference) model</td>
<td>- Better monitoring and management of performance</td>
</tr>
<tr>
<td></td>
<td>- Competitive benchmarking process</td>
<td>- Adoption of best practices</td>
</tr>
<tr>
<td></td>
<td>- Computer modeling for SCM optimization</td>
<td>- Lower supply chain costs</td>
</tr>
</tbody>
</table>

While a supply chain can be construed as a pipeline, with Exhibit 1.17 illustrating a view of the pipeline from the side, showing directional supply chain flows (products, services, financial resources, the information associated with these flows, and the informational flows of demand and forecasts). The traditional business functions of marketing, sales, research and development, forecasting, production, procurement, logistics, information technology, finance and customer service manage and accomplish these flows from the supplier's suppliers through the customer's customers to ultimately provide value and satisfy the customer and is known as supply chain management. Exhibit 11.7 also shows the critical role of customer value and satisfaction to achieve competitive advantage and profitability for the individual companies in the supply chain, and the supply chain as a whole.

Exhibit 1.17 A Model of Supply Chain Management
To fully examine this definition and model, the role of individual business functions, and how they are coordinated across functions and across companies, should be examined. Inter-functional coordination includes an examination of the roles of trust, commitment, risk, and dependence on the viability of internal functional sharing and coordination. Inter-corporate coordination includes functional shifting within the supply chain, the role of various types of third party providers, how relationships between companies should be managed, and the viability of different supply chain structures.

Moorman, Deshpande, and Zaltman (1993) define trust as a willingness to rely on an exchange partner in whom one has confidence. Though both trust and commitment are essential to make cooperation work, trust is a major determinant of relationship commitment (Achrol 1991). Thus, trust has both direct and indirect relationships with cooperation. Dwyer, Schurr, and Oh (1987) emphasize the role of trust to overcome mutual difficulties such as power, conflict, and lower profitability. Therefore, it is proposed that trust has an effect on the sharing of risks and rewards.

Dwyer, Schurr, and Oh define commitment as “an implicit or explicit pledge of relational continuity between exchange partners.” Commitment is an essential ingredient for the successful long-term relationships that are a component of the implementation of SCM (Gundlach, Achrol, and Mentzer 1995). Lambert, Stock, and Ellram also point out that the necessary commitment of resources and empowerment to achieve stated goals is important to implement SCM.

Putting together the effects of trust and commitment, Morgan and Hunt state, “Commitment and trust are ‘key’ because they encourage marketers to (1) work at preserving relationship investments by cooperating with exchange partners, (2) resist attractive short-term alternatives in favor of the expected long-term benefits of staying with existing partners, and (3) view potentially high-risk actions as prudent because of the belief that their partners will not act opportunistically.” As such, trust and commitment lead directly to cooperative behaviors in the implementation of a SCM.

The mutual dependence of a firm on a partner (interdependence) refers to the firm’s need to maintain a relationship with the partner to achieve its goals (Frazier 1983). Acknowledged dependence is a prime force in the development of supply chain solidarity (Bowersox and Closs 1996). In addition, this dependence is what motivates willingness to negotiate functional transfer, share key information, and participate in joint operational planning (Bowersox and Closs 1996). Finally, Ganesan (1994) proposes that dependence of a firm on another firm is positively related to the firm’s long-term relationship orientation.
Organizational compatibility is defined as complementary goals and objectives, as well as similarity in operating philosophies and corporate cultures (Bucklin and Sengupta 1993). Bucklin and Sengupta demonstrated that organizational compatibility between the firms in an alliance has a strong positive impact on the effectiveness of the relationship (i.e., the perception that the relationship is productive and worthwhile). Cooper, Lambert, and Pagh also argue that the importance of corporate culture and its compatibility across supply chain members cannot be underestimated.

Lambert, Stock, and Ellram suggest there should be an agreement on SCM vision and key processes. Ross contends that the creation and communication of a market-winning competitive SCM vision shared not just by individual firms but also by the whole supply chain is essential before any SCM project can begin, i.e., its existence precedes (or antecedes) SCM. Visioning provides firms with specific goals and strategies on how they plan to identify and realize the opportunities they expect to find in the marketplace (Ross 1998). The key processes will be addressed in greater depth in the section on the Functional Scope of SCM.

In terms of power and leadership structure of a supply chain, there needs to be a firm that assumes the leader role (Lambert, Stock, and Ellram 1998). Bowersox and Closs (1996) argue supply chains need leaders as much as individual organizations. Ellram and Cooper propose that a supply chain leader is like a channel captain in the marketing channels literature (e.g., Stern and El-Ansary (1988)) and plays a key role in coordinating and overseeing the whole supply chain. Bowersox and Closs suggest that, in many situations, a specific firm may function as a supply chain leader as a result of their size, economic power, customer patronage, comprehensive trade franchise, or the initiation of the inter-firm relationships.

Research confirms the fact that the success of supply chain management is directly correlated to the presence of constructive leadership capable of stimulating cooperative behavior between participating firms (Schmitz, Frankel, and Frayer 1994). However, forced participation by a strong supply chain leader will encourage exit behavior if the opportunity exists (Cooper et al. 1997; Cooper, Lambert, and Pagh 1997; Ellram and Cooper 1990; Novack, Langley, and Rinehart 1995; Tyndall et al. 1998).

Finally, several authors suggest top management support plays a critical role in shaping an organization's values, orientation, and direction (Felton 1959; Hambrick and Mason 1984; Kotter 1990; Tosti and Jackson 1990; Webster 1988). Day and Lord (1988) found that top-level managers have a substantial impact on organizational performance. Lambert, Stock, and Ellram suggest top management support, leadership, and commitment to change are important antecedents to the
implementation of SCM. In the same context, Loforte (1991) contends lack of top management support is a barrier to SCM.

The solution to better business performance in the organized retail industry is to have a networked supply chain (Kuglin and Rosenbaum, 2001). Such a networked supply chain will connect (with its planning, purchasing, inventory management, manufacturing, order management and tracking, and customer management) to suppliers, contract manufacturers, sales channels, and customers. The backbone to the networked supply chain is communications. Most important, a networked high technology supply chain can increase shareholder value by improving capital efficiency, reducing costs, and increasing profits (Kuglin and Rosenbaum, 2001).

1.9 PERFORMANCE ISSUES IN SUPPLY CHAIN RELATIONSHIPS

The nature of goods or services purchased and the characteristics of the marketing channel often have great influence on the development of buyer-supplier relationships. According to Social Exchange Theory, retailer-supplier cooperation stems from the nature of the interdependence among the exchange partners (Lambe, Wittmann and Spekman 2001). They are dependent on each other to achieve their desired goals such as economic rewards or profits. The retailers are dependent on the suppliers who can provide popular name brand products to attract the consumers' shopping for their desired brands (Buchanan 1992; Kasulis et al. 1999). The suppliers are dependent on the retailers who are competent in marketing their products to retain their brand reputation and to expand sales and market share.

Several researchers have reported better buyer-supplier relationships lead a firm to better firm performance (Noordewier et al. 1990; Heide and Stump 1995; Groves and Valsamakis 1998; Carr and Pearson 1999; Chen et al. 2004), or supply chain performance (Benton and Maloni 2005). Performance measurement plays a significant role in evaluating performance and providing feedback to channel members involved in a supply chain as to future actions for continuous improvement in their supply chain management (Beamon 1999; Hausman 2000; Gunasekaran, Patel and McGaughey 2004).

In the face of an increasingly turbulent market environment, the importance of inter-firm cooperation has been highly recognized by organizations (Schermherhorn 1975; Noordewier et al. 1990; Eriksson and Sharma 2003). Cannon and Perreault (1999) addressed the fact that effective buyer-supplier relationships help both exchange parties manage uncertainty and increase efficiency of the supply chains. Mutual cooperation among all supply chain partners is essential to achieve better supply chain performance in terms of increasing sales with fewer inventories in the
total system and matched supply and demand (Fisher et al. 1994; Christopher and Juttner 2000).

A number of studies have focused on developing models to investigate the factors leading to cooperation or the effects of buyer-supplier cooperation on firm performance. Johnston et al. (2004) argued that higher levels of the supplier’s trust in the buyer lead the buyer to greater involvement in cooperation that facilitates better relationship performance and satisfaction. Skinner et al. (1992) contended that dealer-supplier cooperation is affected by a dealer’s dependence on a supplier, a supplier’s use of coercive power and non-coercive power, and that the resultant outcome of cooperation increases relationship satisfaction. Siguaw et al. (1998) also proposed that the cooperative norms established between a distributor and suppliers are expected to increase the distributor’s satisfaction with its financial performance.

On the other hand, the cooperation between the buyer and the supplier is surrounded by increasing uncertainty that can affect the firm’s performance. Lack of sufficient information about market demand, customer preference, or fashion trends increases the level of uncertainty perceived by the buyer/supplier in its purchase/Supply decision. Johnston and Lewin (1996) consider that the buyer-supplier relationships become increasingly important in higher risk purchase situations, and indicate that building a relationship with a reliable supplier helps reduce the perceived uncertainty and risk. The use of a relationship-building approach to respond to uncertainty has received several researchers’ attention. They have examined the effect of relationship factors such as communication (Johnson and Pharr 1997), trust (Morgan and Hunt 1994; Gao, Sirgy and Bird 2005), dependence and commitment (Gao et al. 2005) on buyer’s decision-making uncertainty (DMU). However, they did not take performance outcomes into consideration in their models.

Business-to-business relationships or channel relationships are factors that enhance performance. The dimensions of performance, both financial and non-financial, help to manage buyer-supplier interactions (O’Toole and Donaldson 2002). Heide and Stump (1995) emphasize that the performance implications of the buyer-supplier relationship are an important governance mechanism. Several empirical studies also have reported that buyer-supplier relationships can affect a firm’s financial performance (Heide and Stump 1995; Carr and Pearson 1999), customer responsiveness (Chen et al. 2004), operational performance (Prahinski and Benton 2004), and purchasing performance (Noordewier et al. 1990). To a larger extent, buyer-supplier relationships can have great impact on supply chain performance (Maloni and Benton 2000; Benton and Maloni 2005). In sum, the performance implications of strong buyer-supplier relationships are an important issue that is worthy of study.
1.9.1 Barriers to better supply chain integration and SCM Systems

Although it is clear that the supply chain must be integrated from supplier (or upstream activities) to internal processes, to downstream activities, and to customers, there seem to be few examples of truly integrated supply chains (Handfield and Nicholas, 1998). Hence, the synchronized supply chain seems to be more aspiration than reality. Furthermore, according to Siekman (1999), quoting Sandor Boyson, co-director of Supply Chain Management Center at the University of Maryland, "...... only a fourth of 117 companies in an e-commerce association claim to have extended trading via e-commerce". Evidently, as companies work towards better coordination and integration of the various supply chain activities into SCM systems, they are faced with many barriers, such as lack of internal support, short-term performance focus, misaligned measures and rewards, poor use of technology, and lack of trust (Stank et al. 2001).

1.9.2 Using supply chain management to achieve competitive advantage

The research shows that competitive advantage comes primarily from process (or skills) that are difficult to copy, product or service differentiation, or lower costs. In fact, supply chain management and integration may provide one of the last sources of such a competitive advantage as product standardization and commoditization gravitate competition toward price, and sources of differentiation become more difficult to establish (Power, 2004). The proponents of the supply chain approach have identified specific activities, backed by detailed processes, which can improve a firm's competitive advantage and success. In addition, the proponents quote that, "best in class companies enjoy an advantage in (lower) total supply chain management costs of 3 - 6% of revenues (estimated)" (Boyson, et. al, 1999). The savings come from better management of a company's activities and assets, resulting in lower costs, better products and service, and competitive advantage.

There are several other factors driving and shaping the move into better supply chain management to achieve competitive advantage. Some of the factors are competition, globalization, and consumer demand (Bovet and Sheffi, 1998). Consumer demand includes the customer's need for a high level of service, customization, and product availability – all at the same time. The proponents of supply chain management reviewed in this section argue that these issues can be addressed or improved with supply chain management. Most companies agree that supply chain integration of suppliers, manufacturers, and customers is necessary to achieve financial and growth objectives and is key to long-term financial success (Tan et al., 1999), but these alone are insufficient for business success.
1.10 ORGANIZED RETAIL AND SUPPLY CHAIN MANAGEMENT

Supply Chain Activities in retailing firms in the Past were:

- Production (conversion) activities seen as core to company success
- Used inventory to buffer production activities from environment
- Relationship with suppliers was one of having many suppliers competing aggressively for orders based on price

During the past two decades, major changes in supply chain management have been driven across a variety of retailing firms by some common trends:

- Consumers have become increasingly demanding in terms of their expectations of price, selection, availability and quality of both products and services. They are seeking higher degrees of product and service customization. Empowered customers expect on-time delivery, self-service with real-time order configuration and status information, and optimally priced product/service bundles.
- Product lifecycles have shrunk dramatically, and as a result, speed-to-market and product innovation have become critical to corporate success.
- The development of new technology solutions and the increasing utilization of the Web have enabled optimization and connectivity between trading partners. This is evidenced by collaborative hubs, e-procurement solutions, optimization algorithms and event management solutions.
- Supply chains have become increasingly global and complex, presenting greater challenges in managing supply and demand. New customer and distribution channels are being developed, then enhanced by technological innovations and geographical expansion. Existing channels are under pressure and require constant change to retain market position.
- Companies have dramatically increased their use of global sourcing partners for cost and capability reasons, extending the number of players involved in delivering value to a customer.
- Cost reduction continues to be a major corporate agenda item, and the costs inherent in the supply chain management functions tend to be significant in terms of overall corporate spend. Current margin pressures are severe, and supply chain performance is focused increasingly on the overall business impact and shareholder value.

Successful retailers today work closely with their vendors to predict consumer demand, shorten lead times, reduce inventory holding and thereby, save cost. Wal-Mart pioneered the concept of building a competitive advantage through distribution and information systems in the retailing industry.
A successful retailer's winning edge will come from sourcing - how best it can leverage its scale to drive merchandise costs down, increase stock turns and get better credit terms from its vendors. There are obvious and hidden areas where costs can be pruned and the benefits of this lower cost of retailing can be passed on to customers as lower prices, which in turn should fuel demand. One way of trimming costs is use of the latest technologies in supply chain, inventory management and use of IT tools to rack the consumption pattern and the changing habits of the consumers. Thus SCM is finding a number of applications in organized retailing.

In fact, there are some unique characteristics of retailing that increase the complexity of the retail supply chain:

- **Retail is a highly variable business.** Whether it is the time of year, the weather outside, the relative confidence of consumers or product promotions, retail demand for products and services fluctuates throughout the year. This fluctuation has a tremendous impact – not only for retailers who must ensure that products arrive on their shelves in the most cost-effective manner, but for all members of the supply chain who deal with the complexities of product lead times and production dependencies.

- **Retail complexity is high.** Retailers typically carry tens of thousands of stock keeping units (SKUs), further proliferated in complexity by the number of permutations and combinations associated with store-specific assortments. Vast geographical areas covered by retail stores forces retailers to deal with the requirements of both rural and urban locations, also adds to the complexity.

- **Retailers are the last node prior to the consumer in the supply chain.** Most suppliers and manufacturers will ship in pallet quantities. The retailer must take these pallet quantities and break them down into store-required quantities of cases and units. While a manufacturer will typically ship a relatively small number of SKUs to the retailer, the retailer must receive a high number of SKUs and sort these SKUs into store shipments. Depending on the type of retailer, the store shipments could include vastly different products – soaps, shoes, bottles, electronics, glassware and shirts – all requiring different types of handling. The in-store logistics process must then take these box/unit shipments and place the units on the shelves before they are purchased by the consumer.

- **Retail is multi-channel.** Consumers purchase product from retail stores, Web sites, kiosks, mail order and catalogues. Some product is picked off the shelf directly. Some product is shipped to consumer households. Some product is ordered via the Web and then picked up at the retail outlet. The
variety of logistical scenarios must be carefully planned and executed so that product is shipped with optimal service to the consumer and minimal cost to the retail organization.

In this context, effective supply chain management becomes important for retailers as it can help them balance supply and demand. It can assist retailers by ensuring the right product is available for consumers, thereby reducing out-of-stock merchandise and providing optimal service levels. It can provide a mechanism for establishing stronger relationships with suppliers and business partners. Finally, the supply chain functions in a retail environment tend to account for a high percentage of the costs and assets associated with operating a retail environment. Therefore, retailers who have connected their supply chain processes, implemented enabling technologies, and streamlined their asset base will likely be higher performers than retailers who have loosely implemented disparate systems.

Contemporary retail business is chain oriented; therefore synchronization of demand and supply becomes a core question. The problems with the traditional vertical cooperation between organizations are extensive. Instead of cooperating, actors dependent on each other have been seeking to achieve cost reductions or profit improvements at the expense of someone else in the supply chain. Companies engaging in transferring costs upstream or downstream arguably do not realize that such strategies will not make them more competitive, as all costs will ultimately make their way to the market in the form of increased end consumer prices.

A distinguishing component of retail supply chains is that retailers have store outlets through which consumers purchase products. This is in contrast to some business-to-business supply chains, where product is delivered directly from the supplier to the customer. For example, in manufacturing supply chains, raw materials suppliers often ship directly to their manufacturing customer, who then may ship finished goods directly to another manufacturer or customer.

1.10.1 Key Factors in the Retail Supply Chain

Sales Volume

Sales volume impacts the supply chain in three distinct ways and is an important consideration in retail operations. The first way is the relationship between sales volume and profit margin. Some products require higher volume sales to be profitable, some require less. Therefore we cannot look at all products in the same light. The second consideration looks at sales volume for each individual product within the whole retail operations. Optimization of product mix can generate higher revenues and profits. Sales volume is important to these calculations as service level
may be traded for increased profit generation. Lastly, sales volume impacts the
downstream supply chain and hence costs contributing to the final products purchase
price. Here we must consider in-transit and warehouse inventory costs, as well as the
impact of batch size costs in manufacturing.

Different products have different profit margins, carry different inventory
holding costs, and generate significantly different levels of demand. Because of this,
the nature of the product must be clearly understood. Take a grocery store for
example, where bedding products or clothing are generally going to have a higher
profit margin than say chewing gum. In order for the chewing gum to be profitable,
higher volumes of the product must be sold. At the same time, chewing gum utilizes
less inventory space per unit compared to bedding or clothing. In this regard, the
sales volume must be actively considered to determine the optimal service level and
hence inventory levels. For each product these considerations may be very different.

This is due to resource utilization and optimization. To look at this problem
further, we can consider overestimates of sales volume. With an overestimate of
volume, profit margins are reduced by the inventory holding costs of storing product,
both on the shelf an in backroom storage. For ever product on a shelf, there is a
trade-off in utilizing the space for another product. Greater profit producing products
based on margin or volume may replace lower profit producing products. The same
holds true in backroom storage, where slow moving, high inventory, and low margin
products reduce the available resources of an onsite warehouse. To reduce inventory,
we commonly see retail operations use promotions to move product, which only
further erode profits.

Lastly, we should consider the downstream effects of sales volume. Order and
batch size greatly impact the costs of producing, storing and transporting products.
In some cases, higher volume production may negatively impact the manufacturing
process based on resource constraints such as capacity. Intermediate warehousing
may be used, hence maintained inventory levels are dependent on sales and
purchasing volumes. Transportation may also be over or underutilized based on sales
volume. The costs of each process and resource requirement add to the purchasing
price for a product, so sales volume and the material flows that deliver product to the
retail location must all be considered to improve current operations and increase
profit generation. This is where we will now turn our attention.

Service Level

In further improving operations, we must consider service level and its
impacts on retail operations. How much of the end-customer's demand is being
satisfied? Commonly retail operations will attempt to fulfill 100% of customer
purchases, but this only considers revenue generation, not profits, which is importantly different. In most cases, profit generation for a company occurs with a service level below 100%. This improves the effectiveness of the retail operations by taking into account a number of cost factors indirectly affecting the product.

One important example is costs attributed to inventory. If a company believes a 100% service level is best, they may keep stock on hand to minimize the risk of stock-out. The important consideration is what is the optimal service level to maximize profits? Once this level is identified, then the retail company can adequately determine inventory levels and replenishment schedules. Because retail space is both costly and limited, effective management of service levels and inventory can create dramatic changes in profit potential.

**Order Size, Inventory and Inventory Turnover**

After determining the sales volume required and service level, order size optimization is the next step to consider. The question to answer here is what order quantity will ensure inventory remains stable to fulfill the optimal service level? By factoring in the costs of such order quantities, manufacturing costs, purchasing costs, logistics costs and the costs of time, a retail operation can better assess the order size levels that generate the highest profit returns.

The next piece is inventory levels and associated costs. If too much product is ordered, higher levels of inventory will be stored increasing holding costs. If too little product is kept in inventory, the risk of stock-out is higher and the optimal service level may not be reached. At the same time, we must remember inventory is really invested cash that is not currently creating a return. For retail operations, effectively managing cash is essential for product reordering and payment. If too much cash is held in inventory, the ability to maintain an optimal product mix in-store will be negatively impacted, driving down the profitability and earning potential for the operation. Inventory is therefore essential that needs to be monitored throughout the supply chain.

One measurement many companies look at is Inventory Turnover. This metric gauges how often inventory is creating cash flow and being replaced. Although certainly an important measurement tool, Inventory Turnover really depends on the model a company utilizes for their operations, as well as the kind of inventory being held. In the retail industry, commonly companies should identify inventory levels that buffer the service level to maintain optimization. In this case, higher Inventory Turnover does not always accurately reflect stronger operations. Stronger operations are created by balancing inventory, profit margins and volume sales, while reducing downstream costs negatively impacting the profit potential.
Lead Time

Lead-Times are important to the retail supply chain, as lead times impact inventory management. With longer lead times, the retail store must carry higher levels of inventory to reduce the probability of stock-out. If the lead time can be reduced, then lower inventory can be maintained. For many high volume products with low profit margins, maintaining lower lead time is required to keep product moving and earning profits.

Lower lead times also commonly impact the retail industry through increased order and delivery frequency. These factors improve the supply chain by creating better utilization of transportation, when the logistics provider is servicing multiple retail outlets. This also contributes to pushing inventory further down the supply chain, reducing the costs of holding inventory, as commonly the cost of space is higher for the retailer than an offsite warehouse.

Consumer Dynamics

When studying the supply chain practices of the retail industry, researchers have concentrated their efforts over the retailer and customer relationship, which in turn drives the activities between retailers and suppliers. Also, in retail supply chains, the network consists of many suppliers that serve multiple retailers, and retailers that are served by multiple suppliers. Between the suppliers and the retailers, wholesalers and other intermediaries often reside and provide the link between retailers and suppliers. There have been changes in the dynamics of the relationship between these three key players in the supply chain due to the fourth major player that drives these changes, the retail customer. Through their spending habits, retail consumers drive the level of customer service that is expected. The strategy behind each retailer is focused on being able to fulfill that demanded service. Because of recent changes in consumer spending, the focus in the retail supply chain has shifted from handling customer demands through inventory levels to handling customer demand through changes in the trading partner relationship and the use of technology in their supply chain. Like many industries, major challenges in the retail supply chain include attempts to ensure that the right products get to the right places for the lowest costs.

Griffith and Krampf (1997) address some of the trends that are driving these changes in the retail industry supply chain by looking at the changes in the way consumers shop. For example, consumers are now shopping in retail stores that appeal to consumer convenience and price sensitivity. The time that consumers spend in certain stores is declining; and therefore, retailers are realizing that on-shelf availability is becoming more critical. Due to the change in consumer spending habits,
general merchandise stores that include a wide range of product segments are emerging as revenue leaders in the retail industry. These general or mass merchandisers are creating retail stores that provide all merchandise that a consumer needs in one convenient location. Consumer habit changes are a contributing factor driving retail supply chain changes.

Ellram, La Londe, and Weber (1999) state that an increase in retailer competition is one of the major drivers in the retail industry. As a result of decreasing profit margins, discounters have been trying to distinguish themselves from their competitors. Areas of focus include customer service, product variety, and product prices. Ellram et al. (1999) link high customer service with an efficient supply chain. In order to have products available for customers, synchronized cooperation must take place along the supply chain from sourcing through store delivery. Another driver that is linked to competition within the retail industry is customer expectation.

Another retail industry trend is pushing cost out of the supply chain through continuous improvements and emphasis in efficiency. With more cost-conscious customers, offering the best price to the customer is important to increasing sales volume. In order to offer the most competitive price, retail companies, especially mass merchandisers, are using their supply chains competitively to reduce costs to the company itself and price to the final consumer.

Besides all above, the analysis to uncover the key components of an excellent supply chain in the retail industry is multi-faceted. The definition of an excellent supply chain differs by company, and is highly dependent on a particular company's business strategy. A study on supply chain management can not be complete until and unless the importance of strategy in evaluating a supply chain, including focus and fit on the activities that differentiate a company from competitors is studied. Additionally, when looking at supply chain practices, opportunities for innovation should be addressed as well as opportunities for improved efficiency. These factors, in addition to understanding the functional or innovative nature of the products being sold, illustrate the ideas that will constitute an excellent supply chain that supports a retailer's business strategy.

**Supply Chain and Product Fit**

Before deciding which specific activities will be employed by a retailing company to improve supply chain performance, one must first determine what type of supply chain is appropriate for a company's products. Fisher (1997) addresses this topic within the scope of two product families: functional and innovative. In both functional and innovative environments, the importance of choosing the appropriate supply chain strategies is evident. The difference lies in which types of strategies
should be employed to manage functional versus innovative fast-moving items. A supply chain design focused on operational efficiency and cost reduction should be designed to support functional products. Initiatives to improve efficiency, reduce cost, and reduce inventory are appropriate for this type of supply chain. Innovative products by definition do not have predictable demand. Product differentiation in innovative products typically allows higher margins. Although cost is always an important consideration, the types of costs that should be managed in innovative product supply chains are inherently different than for functional products. A reason for the fundamental shift is that the probability of stocking out and the cost of stocking out are much higher in innovative product environments with more demand uncertainty and higher profit margins. Therefore, a strategy focused on reducing inventory carrying costs could adversely affect company profitability, because the cost of stocking out is much greater than savings that can be achieved by reducing inventory. Therefore, a supply chain design focused on flexibility and responsiveness to demand fluctuation should be designed for innovative products. This entails strategies focused on deploying the correct amount of inventory in specific locations to respond to uncertainty, reducing lead time, and improving collaboration. All of these initiatives increase costs in the short-term but are appropriate when matched to a business strategy tailored towards innovative products.

In analyzing the supply chain in retail industry many areas are taken into account, including collaboration efforts, use of technology, supply chain design, and operational efficiency. An analysis of the current trends in retail show that collaboration is increasing with initiatives such as collaborative planning, forecasting, and replenishment (CPFR) and vendor managed inventory (VMI). Information technology has enabled these efforts and continues to drive increased communication across all parties in the supply chain. An analysis of internet retail illustrated the importance of supply chain to business survival. An analysis of network design, supply chain echelon coordination, and various inventory and transportation tradeoffs show the complex nature of a supply chain designed to meet internet retail requirements. In summary, strategy, collaboration, technology, operational innovation and efficiency are all essential to maintaining an excellent supply chain in the retail industry.

Porter (1996) notes that in choosing which activities to perform and which strategy to choose, companies must make and understand tradeoffs. Company image is one reason why tradeoffs arise. For example, if a retailer competes on price, but decides to stock only the highest priced product, there is a conflict. Another reason for tradeoffs is to improve coordination and control of an organization. By explicitly determining which activities are being performed and how they are being performed,
In the context of strategy across all industries Porter reinforces his point that operational effectiveness is not sufficient for differentiation from competitors. Conversely, it is deciding which activities to perform and building a strategic position around that set of activities that has the opportunity to create lasting value. In order to execute the strategy, trade-offs must be made and special attention needs to be paid to ensuring that the set of activities performed fit together and help support that strategy that has been identified. Thus, when analyzing retail supply chains, it is important to consider not only which supply chain activities that companies employ, but also how those activities fit into the company’s business strategy.

1.11 SUPPLIER AND RETAILER COLLABORATION

Traditionally, retailers have mitigated the risk of stock outs by carrying buffer inventory for those items with high demand. Because retailers are now realizing the cost of holding these stocks, there has been a shift in supply chain strategy to deal with fast moving inventory.

Retailers and suppliers have become partners in combating the changes in demand variability. The impact of the bullwhip effect, where suppliers receive a disproportionate amount of variability based on retailer consumer demand variability, has helped facilitate collaborative efforts to better respond to demand fluctuations. These initiatives are aimed at reducing costs for both the retailer and supplier.

Ellram, La Londe, and Weber (1999) researched the emerging trends in supply chain structure changes in the 1980’s. The concept of Quick Response (QR) enables suppliers to forecast what retailers are going to order before the order is actually made through information sharing. QR changes the relationship between the supplier and retailer by connecting the two with new technology. The authors show how point of sale (POS) data and electronic data interchange (EDI) changes the communication level between suppliers and retailers. Point of sale data is increasingly important, allowing suppliers to know the actual consumer demand patterns of fast moving items, which enables suppliers to prepare for the next order before the retailer makes the order. The connection between the two entities electronically through the use of EDI allows for quicker information sharing, which then leads to shorter order cycle times.
The major difference between the traditional supply chain and the one emerging during this time is the focus on the interaction between the retailer and supplier, rather than on each entity's supply chain practices within their own organization. For the first time, retailers and suppliers are sharing demand information that was once known only to retailers. Quick Response signifies the beginning of the collaborative effort.

As suppliers and retailers realize that their upstream (towards the source) partners in the supply chain are able to do activities that lead to cost cutting and better service, more responsibilities are being pushed to partners further up the supply chain. This is especially true in retail companies that sell mass merchandise and have increasing buyer power over their suppliers. The change in responsibilities can be seen in Norek's (1997) report on "functional shiftability". In the mass merchandising segment of the retail industry, retailers realize that their suppliers can supply their products in such a way that significantly reduces costs on the retail end. Functional shifts occur when one of the entities in the supply chain partnership has a substantial amount of economic power over the other entities. The more powerful entity is able to push more responsibilities and activities on to the weaker entities, and force the weaker entities to find ways to cut their manufacturing or distribution costs. In Norek's results, the four major activities that retailers are requiring from their suppliers or manufacturers were the storage of raw inventory, various packaging activities, organization of products for delivery, and electronic data interchange.

Another supplier and retailer partnership initiative is collaborative planning, forecasting, and replenishment (CPFR). Crum and Palmatier (2004) address the issue of demand collaboration between suppliers and retailers and why the acceptance of collaboration is slow, given that the possible benefits are high. They emphasize the fact that the focal point of reducing uncertainty should be on knowledge of demand. If partners throughout the supply chain have knowledge of demand, then they know what to expect in terms of selling and supplying the demanded product. This in turn lessens the bullwhip effect that causes high demand variability for partners downstream in the supply chain.

Crum and Palmatier (2004) surveyed consumer goods suppliers and retailers about the possibility of implementing CPFR by 2003, and only 41% of consumer good suppliers and 25% of retailers had any positive indications of CPFR efforts. The reason for the high level of rejection of CPFR is the fact that suppliers find that they continue to incur much of the risk, even when they do have demand information from retailers. This is partly attributed to the fact that even though retailers have demand information, at the time of order placement, they do not order in the same
pattern as demand indicates. The difference between demand information and actual orders force suppliers to fulfill orders that are not expected. Crum and Palmatier indicate that in order for CPFR to be successful, suppliers and retailers must agree on a demand management process and must open communications entirely. Most of the success is based on the trust that the partners have with one another and belief that what is forecasted between the two will be what is ordered to fulfill demand. When partners collaboratively plan for demand the overall effect should be a more cost effective supply chain.

1.12 RETAIL AND TECHNOLOGY

Retail industry supply chain partners are increasing their use of information technology to support and improve their supply chain management initiatives. This trend started in the 1980's with electronic data interchange and the use of scanning barcodes to keep more accurate track of sales throughout the industry. With more accurate data and a faster way of transmitting these data, information technology has helped increase the speed of activities within the retail supply chain. The ability to respond to customer changes and other sources of supply chain variability has become more efficient with the use of technology.

The transfer to a supply chain partnership that is more dependent on technology is due to the increasing awareness that information across partners is important to communication and cost cutting efforts. Kent and Mentzer (2003) explain this trend towards a technology-driven supply chain through the concept of inter-organizational information technology (IOIT). IOIT facilitates the information sharing process between partners. EDI is an example of this type of technology that has become familiar in supply chains. Kent studies the effect of the perception of investments on IOIT, and how these investments have impacted the relationship between partners. The results of his studies indicate that the perceived investments in IOIT by the partners in the supply chain increases the trust level between the partners. The investment indicates to other partners that there is a commitment present to optimize the channel. If the investment amount is low, then the trust level, as well as commitment level, decreases. Investment in IOIT does not only include the implementation of new data transferring and collecting technology, but also the ability to positively utilize the data to optimize the supply chain.

Additionally, one of the major projects in retail technology is the piloting and implementation of radio frequency identification (RFID) tags. RFID tags are promised to offer several advantages over barcodes including automatic detection, omnidirectional data capture, and increased data storage capacity. Some believe that RFID will provide "error-free fulfillment, delivery, and visibility" throughout the supply chain.
chain ("RFID: Powering The Supply Chain", 2002). Because RFID tags are able to hold more information than a barcode, as well as hold dynamic information about the product, more detailed item specific information can be stored. The reader that picks up RFID tag information captures data without manual intervention, reducing the need for labor.

The discovery of automatic identification technologies has been a boon to retailing; they were first introduced globally in the 1960s to assist logisticians identify products in the supply chain. Following are the recent developments in the technologies to trace the goods in the supply chain:

i. Barcodes and Multi-dimensional barcodes:

Corporations have become obsessed with driving down logistics-related costs, including transportation and warehousing. In order to facilitate the movement of goods in transit and to reduce the cost of transportation and to ease the process all most all items in a distribution centre are marked with UPC barcode. In fact, Walmart’s buying office has a sign reading, ‘If Your Product Doesn’t Have a Barcode, Do not Bother to Take a Chair in Our Waiting Room.’ Even in India the retailers in organized sector are beginning to barcode all their products; organizations like Foodworld (RPG Group) and Shoppers’ Stop (Raheja Group) have urged their vendors to supply merchandise only with standard barcodes.

ii. RFID:

Radio Frequency Identification (RFID) is an early technology starting to emerge. In order to stop the pilferage of goods in over crowded retail stores this technology plays a great role. It is expected that in coming few decades, RFID will directly connect physical products to logistics systems as the only truly automatic identification technology. This technology helps to track the product and customers’ use pattern even post-purchase. P&G currently tags (RFID) a small number of cases and pallets of products as part of a trial with Wal-Mart stores in USA. The company is focusing on the supply chain and has not even begun to think about what’s going to happen to the items post-sale.

iii. Retail Software:

Most retailers in the organized sector in India have to use retail software in their back end and front end operations and are constantly looking to upgrade their systems as they evolve. To help this growing retail sector get the best, many Indian software companies have developed software packages to suit the different and varied requirements of these retailers. Among the few who are in the market is Chennai-based Polaris Retail InfoTech Ltd, a subsidiary of Polaris, which has entered the market with its software, Retail Excel. Reputed organizations like...
Wipro Infotech, Tata Consultancy Services and NCR Technologies have created robust, retail automation software. The Chennai-based T.V. Sundaram Iyengar and Sons are currently test-marketing their new point-of-sale system for small and medium retailers in grocery and other related segments. The Bangalore based VMoksha Technologies has developed software for the retail segment while Pune-based Zensar Technologies has tied up with the RPG group for retail software. The list of that developing retail software is growing by the day. There are many other packages like MS Retail, Shopper, Retail Pro, Retail Magik, etc. that help enable the fast implementation of retail automation in India available in the market. Not to mention large ERP packages like IDA, SAP Retail, BAAN, Island Pacific, etc.

1.13 RATIONALE OF STUDYING SUPPLY CHAIN MANAGEMENT IN INDIAN RETAIL

The role of supply chain in Indian organized retail is very significant for on it depend the growth of this sector. The role of supply chain in the organized retail sector in India should be a shelf centric partnership between the retailer and the manufacturer for this will create supply chains that are loss free.

In the organized retail market in India the role of supply chain is very important for the Indian customer demands at affordable prices a variety of product mix. It is the supply chain that ensures to the customer in all the various offerings that a company decides for its customers, be it cost, service, and quickness in responding to ever changing tastes of the customer.

The infrastructure in India in terms of road, rail, and air are not sufficient. And so warehousing plays a major role as an aspect of supply chain operations. To overcome these problems, the Indian retailer is trying to reduce transportation costs and is investing in logistics through partnership or directly. The Indian organized retail sector is growing so the role of supply chain becomes all the more important. It should become all the more responsive and adaptive to customers demand. There is also need for the supply chain to be more cost efficient and collaborative to win the immense competition in this sector.

One of the most important challenge in organized retail in India is faced by poor supply chain and logistics management. The importance can be understood by the fact that the logistics management cost component in India is as high as 7% -10% against the global average of 4% - 5% of the total retail price. Therefore, the margins in the retail sector can be improved by 3% - 5% by just improving the supply chain and logistics management.

Logistics and Supply Chain enables an organized retailer to move or store products more effectively. Efficient logistics management not only prevents needless
movement of goods, vehicles transferring products back and forth; but also frees up storage space for more productive use.

The efficiency and effectiveness of supply chain and logistics management can also be understood by the fact that modern retail stores maintain lower inventories than traditional retail. In India, generally in the traditional kirana stores, three weeks inventories are kept; while in a modern retail store like Hyper city, it's nine days and it's under two weeks for Food Bazaar. Now, it is beneficial for both the manufacturer as well as the retailer. If we go through the food supply chain in India, we find that a lot can be improved by maintaining the supply chain and logistics.

As Supply Chain Management involves procuring the right inputs (raw materials, components and capital equipments); converting them efficiently into finished products and dispatching them to the final destinations; **there is a need to study as to how the company's suppliers obtain their inputs. The supply chain perspective can help the retailers identify superior suppliers and distributors and help them improve productivity, which ultimately brings down the costs. At the same time, Market logistics helps planning the infrastructure to meet demand, then implementing and controlling the physical flows of material and final goods from point of origin to points of use, to meet customer requirements at a profit.**

The nature of retail sector in India is different from other countries around the world. The organized retail sector in India is highly fragmented and there are huge inefficiencies in the supply chain. The most important part of retailing business is to find a balance between investing in front-end and back-end operations. The channel dynamics is going to change over next couple of years as the retailers start growing in size and their bargaining power is likely to increase. Probably that would bring some kind of mutual understanding between manufactures and retailers to develop strong supply chain network. In such a scenario, both the existing operators and new operators must put collaborative efforts to phase out inefficiencies in the supply chain network.

The challenges that a retail organization faces are many like: huge stock-keeping units (SKUs), seasonal variations of product lines necessitating the introduction of new SKUs, complex tax structures, the sheer geographic spread of the country, changing consumer demands, etc. This level of efficiency calls for retail automation and integrated supply chain management on the part of retailer and a retail organization has to plan to make this system work properly and try to satisfy the needs of every customer without fail.

With this background, the objective of this dissertation is to explore and investigate how firms' scope, design, and implement supply chain management in
order to gain competitive advantage. Most importantly, this dissertation endeavors to determine the critical success factors in supply chain management that can provide competitive advantage. It also explores and investigates the advances and new ideas in supply chain management and examines how firms’ scope, design, and implement supply chain management.

This dissertation provides a framework to understand a retailer firm’s supply chain management’s approach that will help a firm to be competitive and successful. Furthermore, in using supply chain management, firms are faced with choices on what supply chain techniques and developments to adopt for their businesses. This dissertation will review the choices that retailing companies have today, and will make recommendations to select the best choices, or critical success factors, based on business and customer needs. It shall also measure the performance of the retailing companies with respect to buyer-supplier relationships.

Therefore, the research revolves around -

- Determining the critical success factors in supply chain management at retailing companies.
- Are there differences between critical supply chain management factors at different retailing companies?
- Will a focus on external supply chain management factors give better business results?
- Are perceived critical gaps (and opportunities) in performance derived from traditional methodology similar to those deployed from customer needs?

To ensure a robust analysis and conclusion, the expectations and perceptions of respondents, involved in this study, are taken into consideration as well as customer requirements.

Significance of the research

There are many theories and empirical studies on competitive advantage. However, the empirical studies in retail management using mathematical models, tend to be limited in scope (Porter, 1991; Buzzel and Gale, 1990), and do not include supply chain management parameters and practices. While there has been much research on activities that can provide competitive advantage, there is little knowledge on the process of selection and impact of supply chain management on the competitive position and business performance in retailing firms. Firms need to understand how supply chain management can help them achieve competitive advantage. Furthermore, there is an expectation that retailing companies will use leading edge technology and invest heavily in supply chain management.