CHAPTER – VI

CONCLUSIVE REMARKS
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6.1 The Retail Industry in India

The emergence of organized retail has been a recent phenomenon in the country starting in the late 1990s. Its growth till 2006-07 was reasonably fast, at nearly 20 per cent per annum during the past three years. Unorganized retail also grew but at a slower pace of near 11 per cent per annum. There are signs that the growth of organized retail has accelerated in 2007-08 and is expected to gather further momentum during the coming years.

The NCAER, based on its Market Information Survey of Households (MISH), has projected that the consuming class consisting of the “aspirers”, the middle class and the rich with annual household income of above Rs. 90,000 will rise from about 336 million in 2005-06 to 505 million in 2009-10. This implies a huge growth potential of retail in the country. The sales of the India retail industry have been about US$ 322 billion (Rs. 14,574 billion) in 2006-07, amounting to about 35 per cent of India’s GDP. It is the seventh largest retail market in the world. India retail industry is projected to grow to about US$ 590 billion by 2011-12 and further to over US$ 1 trillion by 2016-17 (Exhibit 6.1).

Exhibit 6.1 Size of Indian Retail (in US$ bn)

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenue (in US$ billions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006-07</td>
<td>322</td>
</tr>
<tr>
<td>2011-12</td>
<td>590</td>
</tr>
<tr>
<td>2016-17</td>
<td>1011</td>
</tr>
</tbody>
</table>

Source: Technopak analysis

This works out to an annual compound growth rate of about 13 per cent during 2007-1 and a slower 11 per cent during 2012-17.

In India, organized retail contributed roughly 4 per cent of the total Indian retail in 2006-07, which is very small even compared with most of the emerging market economies. However, during the coming years, it is projected to grow at a compound rate of about 45-50 per cent per annum and is estimated to contribute 16 per cent to the total Indian retail by 2011-12 (Exhibit 6.2).

Exhibit 6.2 Projection of the Share of Organized Retail

<table>
<thead>
<tr>
<th>Year</th>
<th>Organized Retail</th>
<th>Unorganized Retail</th>
<th>Total Retail (in US $ billions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006-07</td>
<td>4%</td>
<td>16%</td>
<td>322</td>
</tr>
<tr>
<td>2011-12</td>
<td>96%</td>
<td>84%</td>
<td>590</td>
</tr>
</tbody>
</table>

Source: Technopak analysis
Interestingly, this huge growth in organized retail does not involve a decline in the business of unorganized retail; the sales of the unorganized sector is envisaged to grow by about 10 per cent per annum, from US$ 308.8 billion in 2006-07 to US$ 495.6 billion in 2011-12.

1.2 Organized Retail Investment

Until a couple of years ago, the Indian organized retail market was either dominated by apparel brands or regional retail chains. However, the scenario has changed dramatically. The sector has attracted not only the large Indian corporates, but also, received the attention of large global players.

As per Technopak Advisers Pvt. Ltd. estimates, investments amounting to approximately S$ 35 billion are being planned for the next five years or so. Of this, about 70 per cent is expected to come from top players including Reliance Industries, Aditya Birla Group, Bharti-Walmart, Future Group and others. Also, it is estimated that about 40 per cent of the total investments will be contributed by foreign players including Wal-Mart, Metro, Auchan, Tesco and many others, signifying the importance that the international community is attaching to the Indian retail opportunity. In short, India is attempting to do in 10 years what took 25-30 years in other major markets in the world and shall bypass many stages of “evolution” of modern retail. India is likely to see the emergence of several “innovative” India-specific retail business models and retail formats during the coming years.

Urban investments are slated to be across all modern formats although the majority share will be taken by supermarkets and hypermarkets. The share of hypermarkets is expected to increase in the lower-tier cities, as a single hypermarket would be able to cater to a significant proportion of the demand in smaller cities.

<table>
<thead>
<tr>
<th>Retail Format</th>
<th>Investment estimates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supermarkets</td>
<td>34%</td>
</tr>
<tr>
<td>Hypermarkets</td>
<td>32%</td>
</tr>
<tr>
<td>Departmental stores</td>
<td>2%</td>
</tr>
<tr>
<td>Warehouse</td>
<td>9%</td>
</tr>
<tr>
<td>Other formats* (Includes apparel, watches, furniture and furnishing, toys, etc.)</td>
<td>23%</td>
</tr>
</tbody>
</table>

Source: Technopak analysis

India, like Britain, is also a nation of shopkeepers. With over 12 million retail outlets, India has one of the highest densities of retail outlets in the world with one retail outlet for approximately 90 persons. No wonder India is the ninth largest retail market in the world with annual retail sales of approximately USD 215 billion in 2005. However, the share of organized trade in India is currently very low estimated at just Rs. 35,000 Crores in 2008 (Rs. 28,000 in 2004). This accounts for less than 4% of the total retail trade in the country.
Growing consumerism would be a key driver for organized retail in India. Several demographic trends are favorable for the growth of organized trade.

- Rapid income growth: Consumers have greater ability to spend.
- Increasing Urbanization: Larger urban population which values convenience coupled with higher propensity of the urban consumer to spend.
- Growing young population: Growth of post-liberalization maturing population with the willingness to spend (attitude).
- Tendency to spend now vs save earlier. Consumers willing to borrow for current consumption.

Going forward, TSMG projects that in the next 10 years, the overall retail market in India is likely to grow at a CAGR of 5.5% (at constant prices) to ₹1,677,000 Cr in 2015. The organized retail market is expected to grow much faster at a CAGR of 21.8% (at constant prices) to ₹246,000 Cr by 2015 thereby constituting approximately 15% of the overall retail sales. Based on the projections, the top 5 organized retail categories by 2015 would be food, grocery and general merchandise, apparel, durables, food service and home improvement.

Exhibit 6.4 Organized Retail Market in India (Rs. Cr.)

<table>
<thead>
<tr>
<th>Retail Category</th>
<th>2004 Value (in Rs. Cr.)</th>
<th>2004 %</th>
<th>2015 Value (in Rs. Cr.)</th>
<th>2015 %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food, Grocery and General Merchandise</td>
<td>2950</td>
<td>10</td>
<td>102546</td>
<td>42</td>
</tr>
<tr>
<td>Clothes, Textile and Fashion Accessories</td>
<td>10900</td>
<td>39</td>
<td>40605</td>
<td>16</td>
</tr>
<tr>
<td>Durables and Mobiles</td>
<td>3340</td>
<td>12</td>
<td>28891</td>
<td>12</td>
</tr>
<tr>
<td>Food Service</td>
<td>2000</td>
<td>7</td>
<td>24351</td>
<td>10</td>
</tr>
<tr>
<td>Home Improvement</td>
<td>2500</td>
<td>8</td>
<td>16346</td>
<td>7</td>
</tr>
<tr>
<td>Jewellery and Watches</td>
<td>1960</td>
<td>7</td>
<td>8770</td>
<td>3</td>
</tr>
<tr>
<td>Footwear</td>
<td>2500</td>
<td>9</td>
<td>6508</td>
<td>3</td>
</tr>
<tr>
<td>Books, Music and Toys and Gifts</td>
<td>800</td>
<td>3</td>
<td>3722</td>
<td>1</td>
</tr>
<tr>
<td>Others</td>
<td>1350</td>
<td>5</td>
<td>14692</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>28,000</strong></td>
<td><strong>100</strong></td>
<td><strong>2,46,431</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: TSMG Analysis

Retailers inspired by the Wal-Mart story of growth in small town America are tempted to focus on smaller towns and villages in India. However, a careful analysis of the town strata-wise population, population growth, migration trends and consumer spend analysis reveals a very different picture for India. As per the estimates, the share of the 35 towns with current population greater than 1 mn in the overall population of India would grow much faster from 10.2% today to reach 14.4% by 2025. Simultaneously, the share of these towns in the overall retail market would grow from 21% today to 40% by 2025.

Within these top 35 towns, an estimated 70-80% of trade could be in the organized sector. Hence, retailers should focus on the top 37 towns in the next decade. The opportunity in smaller towns and rural India would be smaller and fragmented as compared to the larger town.
There are a few key trends that one observes in international markets that have a bearing on India.

**Trend 1: Consolidation of market share - The big getting bigger**

In the early stages of development in retail markets, there is a proliferation of players. For example in USA in 2003 the top 100 players accounted for only 8% of the total retail market with the top ten accounting for 3.2% of the market. However, when retail markets develop there is a consolidation of players with fewer large players dominating the market. This trend is starkly visible in the developed economies of US and Europe.

As per data from M+M Planet Retail, in 1990, 30 retailers accounted for 20% share of the retail market. By 2005, only 8 retailers accounted for the same 20% share of the market. Similarly, in 1990 37 retailers accounted for 20% share of the European retail market. By 2005, only 10 retailers accounted for the same share of the market.

**Trend 2: Convenience stores and hypermarket formats are gaining prominence**

These are driven by consumer need for convenience and lower price / higher value in mass categories while big box category killer stores are gaining importance in the specialty retail categories. While supermarkets may emerge at the initial stages of retail market development, they are unable to match the consumer value proposition of convenience stores and hypermarkets.

**Trend 3: Private label products become increasingly important**

Private labels today account for 17% of global retail sales with the highest share of 23% in Europe and Asia the least at 4%. As per M+M Planet Retail data, private label penetration varies from 25%-95% among some of the largest retailers in the world.

Growing acceptance among consumers, increasing price competition and need for differentiation among retailers and lastly the ability to offer higher margins are the key factors driving the growth of private labels. Private labels provide the retailers an ability to offer
Contributing to the growth of private labels, private labels provide the retailer an ability to offer
a significant price advantage to consumers with private label prices being 16-32% lower compared to manufacturer brands.

6.2.1 Implications for Indian Retailers

The global trends have important implications for Indian retailers. The Indian consumer remains value conscious. The consumer in most cases is willing to spend money, but remain cost conscious, evaluating every rupee spent. It is therefore imperative for retailers to offer price advantage via sourcing and operational efficiency and a strong private label program to attract customers. Existing and new entrants need to achieve scale quickly for driving efficiencies in procurement, supply chain and marketing. Else they risk being marginalized by larger players.

Real estate and human resources will be the critical drivers to build scale. While there are a few hundred malls under various stages of development across the country, retailers will need to think out of the box as well to ensure availability of real estate. This may include acquiring and developing the real estate themselves rather than wait for mall development. Given the rising demand for retail real estate, retailers will need to take a long term view on rentals and look at alternative options like ownership or very long term leases. Retailers that invest in training will be able to ensure availability of quality manpower in the rapidly growing market.

In summary, the retail market is the next growth frontier for corporate India. It offers an opportunity for a large player to build a Rs. 40,000 Cr retail business spanning multiple categories by 2015 (at current prices). Compared to this, the revenue of the largest Indian retailer Pantaloon was only Rs 1085 Cr in 2005. No wonder large domestic business houses and international retailers have expressed keen interest to enter the retail sector in India. However to capitalize on the opportunity, a player needs to be aggressive in its outlook and build scale quickly.

6.3 SCM Collaboration

SCM aims at improving the total supply chain performance through collaboration among independent supply chain members. The supply chain should be managed as one single entity where end customer satisfaction is the superior goal for all involved companies. This demands collaboration at a strategic level (Stank et al., 2005) and that all involved parties have a true supply chain orientation (Mentzer et al., 2001). This way of thinking and acting, which requires an extensive strategic change in the mindsets of the supply chain members, should enable them to work and act in one common direction towards jointly agreed goals.

The use of processes in the collaboration with adjacent suppliers and/or customers is however, very low, and does not seem to be related to the internal process documentation. Only 24% of the retailing companies have, together with their partner/partners defined and described their collaboration in terms of a process. This figure must be considered surprisingly low due to
a massive amount of literature advocating a process approach in the past two decades; SCM literature and logistics business concepts such as CPFR as well as other management concepts such as business process reengineering all stands for a more process oriented view of the firm.

In general, lead times and service measurements are considerably more used than measurements related to the total logistics costs. This also agrees with the internal use of measurements at the respondents’ companies where service related measurements are applied more. Other studies report similar findings (see e.g. Aronsson, 2003) and can probably be explained by the difficulties of measuring logistics costs. The exact cost for different logistics activities involved in the collaboration is often not available at the companies. Furthermore, even if the total cost figures for a certain activity can be found, there could still be difficulties in identifying a correct cost driver.

The retailing companies in India have not applied a predefined way of how to share costs and savings in the collaborations to any great extent. This result is also in line with the results presented by Spekman et al. (1998), who found that risks and rewards were shared equally between the partners to a very low extent. These findings indicate a great potential for improvements in this area for future collaborations.

3.1 The planning of supply chain activities

When considering the planning of supply chain activities involved in the collaboration, joint planning on an operational level is regarded as the most common way. The degree of joint strategic planning is lower when regarding mean values and distribution for the companies. 66% of the retailing companies have answered one or two at the question about to what extent joint strategic planning of supply chain activities is performed. This indicates a low degree of strategic thinking in most of the collaborations amongst retail companies. Thus, when considering a planning of supply chain activities involved in the collaboration, it seems to involve rational joint issues, but at a strategic level the planning is done individually. Furthermore, the extent of joint, operational respective strategic planning in the collaboration, are not positively related to each other. Thus, more strategic planning does not seem to facilitate or lead to more operational planning or vice versa.

3.2 The information sharing

58.8% of the retailing companies share at least two types of information at least once a week, which has been considered in this study as the lower limit to describe the information sharing as intensive. The type of information that is shared by most companies at least once a month is forecasts, which is shared by 94% of the companies.

When considering mean values for the frequency of sharing for the companies sharing a specific type of information at least once a month, operational information types such as
confirmations, error messages and inventory levels are the most frequently shared, as can be expected.

According to the respondents the shared information is on average to a great extent processed and adjusted for the specific receiver. The degree of processed/adjusted information is also significantly higher for the respondents that belong to the 58.8% that share information more intensively.

EDI and Internet based EDI are considered to be the main means of communication by just 5.06% of the companies. This group of retailing companies also shares information more frequently than those with only traditional means. This result was expected due to the poor opportunities to share information in a more efficient manner with EDI and other Internet based alternatives.

The use of such communication means, however, does not seem to influence and facilitate the extent in which the shared information is processed and adjusted for the receiver. The results imply that the use of EDI and Internet based alternatives facilitates the transferring of information, but not the content of the information, i.e. to what extent the information is processed and adjusted for the receiver. This is also supported when considering what types of information are shared significantly more frequently in collaborations with EDI or Internet based EDI. Above all, it is operational information types such as error messages and inventory levels that are shared more frequently by EDI users. The need for adjustments of these types of information is probably lower than, for instance, forecasts and other information types that are more difficult for the receiver to interpret.

6.3.3 The actions undertaken in the collaboration

According to the literature about SCM and collaboration, a higher intensity of information sharing and joint planning of supply chain activities could be facilitated by a clear process approach. A clear process description will increase the knowledge about the activities involved and how they are related to each other. In addition, the output from the process becomes clearer and can therefore be more focused. This could lead to better incentives for the participating actors to increase their information sharing and the degree of joint planning since the advantages will be more obvious.

However, this study only investigated statistical relations and what comes first of the three aspects in the collaboration is therefore not investigated. Most probably, it would not be possible to make a strictly causal order of the aspects. For example, as stated above collaboration could start with a clear process approach and cause more intensive information sharing due to an increased understanding for the need of sharing more information. The opposite order is, however, also possible; an intensive information sharing could force the actor involved to specify their collaboration in terms of a process in order to be able to use the shared information in an efficient way. Furthermore, a need for an intensive information sharing could
ify implementation of EDI between the partners, which in turn could demand a process definition to bring about correct use.

4 The respondents' supply chain orientation (SCO)

The companies' SCO is considered an important prerequisite to collaboration based on M. On a general level when considering mean values and distribution of answers in the different variables, the companies seem to have a good SCO.

Apart from a prerequisite in the ongoing collaboration, a good SCO could also function as important trigger for improvements of the collaboration. It could be argued that companies involved in more intensive collaborations would in general have a better SCO than their leagues with less intensive collaboration. For example, in the planning of supply chain activities, an intensive joint strategic planning would most probably demand a well functioning 10 with a high degree of trust, good personal chemistry, compatible company cultures etc.

The results of this study can however not support this view since most of the variables investigating the respondent's SCO are independent from the other content variables. In fact, in the case the contrary relation is found; companies with a defined process in their collaboration experience more problems with different goals between the companies.

The only SCO variable that seems to be positively related to the intensity of what is done in the collaboration is the involvement of top management in the ongoing collaboration. The results show that top management is more involved in collaborations with more frequent information sharing and joint operational planning of the supply chain activities. A reason for this could be that involvement from top management gives the logistics department the authority to carry out the collaboration and bring it to a more intensive level. As stated in the introduction, the involvement from top management means an increased focus on the collaboration and is regarded as a necessary prerequisite to get SCM based collaboration to action (see e.g. Ireland and Bruce, 2000).

For the same reason a higher degree of involvement from top management should also increase the degree of joint strategic planning between the actors. No such relation can however found in this study; a higher degree of top management involvement in the ongoing collaboration is not positively related to the degree of joint strategic planning of supply chain activities.

To conclude, top management has a more active role the more intensive the collaboration is on an operational level, but however not in collaborations with more joint strategic planning. A reason for this interest could be that it is the intensity of the collaboration on an operational level that causes the positive effects of the collaboration rather than if the collaboration includes joint planning on a strategic level. The results can be interpreted as if the management engages in operational issues since these are connected to the intensity of the
collaboration. It is the intensity that in turn causes the positive effects of the collaboration rather than joint planning on a strategic level.

6.5 Driving forces, barriers and effects collaboration

With regard to driving forces for the collaboration, 72.6% of the responding retailing companies have answered 4 or 5 to the question of how important cost related factors were. The same question for service related factors was 95.3%. Mean values were 3.87 and 4.4, respectively. The results are valid for all types of companies, i.e. size of company and production characteristics.

The results indicate that both cost and service are considered as important reasons for setting up collaboration. This is in line with the SCM literature, which advocates improvement to both cost reduction as well as service enhancements as a result of increased SCM and collaboration. The findings are also in line with previous survey based research done by Spekman et al. (1998), who found that the most important reasons to engage in SCM collaboration could be found both on issues related to cost reduction as well as service. The most important reasons for this, according to their study, were increased end customer satisfaction, improved profits, satisfy supplier/customer requests and reduction of overall operating costs.

6.5.1 Barriers

Barriers to SCM are divided into two main groups, human related and technology related barriers. When considering the human-related barriers such as the involvement from top management. Management involvement is needed in order to make intensive collaboration happen. Thus, an important barrier for collaboration could be a lack of top management involvement.

Technology related barriers are the second most commonly experienced problem according to the respondents. The results of this study are in accordance with the results presented by Hoffman and Mehra (2000) and show that technology related problems still occur and cannot be ignored. Despite the development in the area over the past few decades, IT and technology related problems could still be considered as a main barrier in ongoing collaboration.

6.6 Supply Chain Performance

The balancing act of maintaining a high level of service and low costs is becoming harder for retail supply chain directors as businesses try to meet the growing customer mantra of “more for less.” This pressure comes at a time when business is becoming more global, supply chains are lengthening, and competition is on the rise.

Although this challenge is not new, the outlook is that it will intensify as a number of factors — economic, regulatory and market-driven — become more acute. Consequently, supply chain performance will have increasingly significant impact on overall business success.
Conclusively after research one must know the answer to question - What steps should tailers be taking now to improve their Supply Chain?

Assess where you are now
Transformation of the retail supply chain is a journey and requires a roadmap, or structured approach, on how to get there. The journey should begin with a diagnostic assessment of company's current supply chain performance, and comparing it to a future end state. The assessment should also analyze how the retailer company is positioned relative to leading practices of other companies both within and outside of the retail industry.

As a retail company matures through the various stages of a static enterprise model - functional optimization, horizontal process integration, external collaboration, on-demand supply chain - certain characteristics are evident. A diagnostic assessment will help determine where you are on the maturity model and help prioritize initiatives that will have the greatest impact on shareholder value and ROI. Based on this assessment of supply chain maturity in terms of processes, organizational aptitude and enabling technologies, one can begin to formulate a supply chain vision and strategy.

Develop a strategy for making change
The strategy should include the following key steps:

- Identify the company's core supply chain differentiators and capabilities, and assess current performance.
- Determine which functions could be better performed by a partner, and begin to identify these partners.
- Define the supply chain process components and needs for organizational reconstruction.
- Define the measurement framework, which is aligned with business objectives and goals. Set targets and thresholds for the key supply chain performance indicators.
- Evaluate the financial and operational value to be achieved in terms of financial performance and operational performance characteristics such as cycle time, quality and service level attainment. Use modeling tools to simulate end-state financial statements and operational performance criteria.
- Define the real-time information and connectivity vision, including an open and services-based technology architecture, required to support the vision.
- Prioritize which initiatives will have the greatest impact on growth, operational excellence, ROI and shareholder value.

Create a roadmap to achieve transformation
Transformation requires a roadmap that establishes the steps required to achieve the vision. Each supply chain component has associated performance criteria - both financial (e.g., intrusion, revenue influence) and operational (e.g., cycle time, quality, service level attainment).
The initiatives with the greatest business impact, both financially and operationally, can be prioritized and implemented with speed to bring value to the organization. A transformation portfolio should be created which focuses on these prioritized initiatives.

4. Achieve the benefits of a new approach

A new mindset is required for implementing the strategy. The old model of fixed strategy and long implementation times is dead. In its place, companies are demanding either rapid return on capital (ROC) or an ROI that is self-funding, with a modular approach to implementation, often involving pilot followed by a scale-up.

More scrutiny is now being placed on the delivery and tracking of benefits, helping to ensure that benefits flow through to the bottom line and that multiple supply chain initiatives do not “double account” for benefits and overstate the business case, especially in inventory and process cost reductions. On-demand implementation approaches (e.g., gain sharing, pay-as-you-use) can provide the impetus to kick-start major transformation programs and generate the change momentum required to build a longer-term vision.

The description of logistics collaboration given here shows that retailing companies involved in collaboration are concerned with operational issues and that their collaboration is seldom brought to a strategic level. In addition to this, the results indicate that there are serious differences in attitude and behaviour between supplier and customer collaborations. The study shows that it is more intensive collaboration at an operational level that contributes to the achievement of better results, and that top management involvement has shown to be an important driver for such collaboration.

Below, the most important results from the study are summarized into five major findings concerning supply chain among retailing companies.

1. Supply chain management as practiced today is concerned with operational issues and is seldom brought to a strategic level

Collaboration based only on operational issues can not be regarded as enough to consider SCM implemented; it is first when a strategic level becomes involved that a shift towards real SCM based collaboration can be possible (Stank et al., 2005). When for instance Mentzer et al. (2001) consider SCM as “the systemic, strategic coordination of the traditional business functions and the tactics across these business functions within a particular company and across businesses within the supply chain, for the purposes of improving the long-term performance of the individual companies and the supply chain as a whole” (Mentzer et al., 2001 p. 18), the survey results provide another picture.

The poor SCM practice by most of today’s retailing companies becomes even more worrying when considering empirical investigations that acknowledge a direct linkage between SCM and company performance. The recognition of the importance of logistics and SCM issue:
In a company strategy perspective has been made in a number of articles the last years. One example of this is D'Avanzo et al. (2003), who identify a statistical relationship between superior supply chain performance (measured by the company's inventory turns, cost of goods sold, and return on assets), and financial performance (measured by compound average growth rate, GR). In a similar way Poirier and Quinn (2004) concluded from their survey based study that: "Perhaps the most important insight from our survey is that the real business benefit of advanced supply chain management remains largely untapped. The result only hint at what can achieved in terms of cost savings, revenue increase, profit improvement, customer dissatisfaction ratings, and more. If businesses keep an open mind and dedicate themselves toward real advancement, they can start to see breakthrough results in all these areas." (Poirier and Quinn, 2004, p. 31)

To conclude, the survey results show that SCM in practice does not resemble SCM in theory. The gap consists of the lack of a strategic level in the collaborations. As a consequence the missing dimension, it can be argued that the many promising advantages with SCM have yet been realized.

There are differences in attitude and behaviour between customer and supplier collaborations

Apart from a low rate of strategic issues in the collaborations, the differences identified between supplier and customer collaborations also indicate that SCM based collaboration is more an utopia than a reality. In general the results of this study points to the fact that the retail company upstream seems to be able to manage and design relations in the supply chain much more than in the case for relations downstream. From a SCM theoretical point of view, this cognized pattern can have serious consequences for the collaboration performance in the supply chains.

As is the case for the first finding, the results of this study are in line with other similar empirical studies. For example, Spekman et al. (1998) concluded in a survey based study that there are serious differences in attitude and behaviour between collaborations with suppliers and customers which inhibit a proper SCM practice - "In summary, we have implied that business
has yet to crack the code; supply chain partners still do not share a common vision or react to the same set of metrics. If this is true, opportunities have been lost and many challenges remain. For a number of firms, talk is cheap and supply chain management is still only part of today's jargon. A number of firms are sacrificing cost effectiveness, revenue enhancement, and customer satisfaction because they are unable to work effectively across the firms that comprise their supply chains" (Spekman et al., 1998).

Exhibit 6.7

Exhibit 6.7

Mattsson (2002) describes this situation as the traditional view of supplier-customer relations where the customer "demands what he wants" from the supplier. The differences can be explained by the fact that retailing companies with customer collaborations often find themselves in a weaker negotiation position than their colleagues with supplier collaborations. They feel that they need to struggle to keep their customers and therefore the service toward their customers becomes important. The collaboration can also increase their competitiveness due to the closer ties with the customer, which in turn strengthens the opportunities to keep the customer (Mattsson, 2002).

3. Companies with more intensive SCM at an operational level achieve better effect from their collaborations

Together, the two first findings give a discouraging picture of logistics collaboration in practice. The study, however, also gives signals concerning the positive effects of collaborations that are discussed in theory. In accordance with SCM literature, several of the analyses presented in this study show that companies with more intensive collaborations at an operational level achieve better effects of their collaborations.

Existing collaborations can, however, despite the obvious advantages not always be considered as intensive. The process approach in the collaborations is perhaps the area with the greatest potential for improvements in order to bring about more intensive collaboration. For
stance, only 24% of the companies had together with their partner/partners described and defined their collaboration in terms of a process. An improved process approach could be an important enabler for more strategic collaboration, which is today not present in the collaborations. Following the SCM logic, a larger degree of strategic content in the collaboration would imply that even better results can be achieved when it comes to service improvements as well as cost reductions.

**Top management involvement is an important driver for increased intensity in logistics collaboration**

This study supports the view that together with an improved process approach in the collaboration, top management involvement is an important driver for increasing the intensity of the collaboration and thereby achieving better effects. The need for top management attention discussed by several authors within the SCM field (Andraski, 1998; Ireland and Bruce, 2000) as well as in other related fields such as the strategic alliance literature (Moss Kanter, 1994) and this study confirms that the call for top management involvement is justified.

**Exhibit 6.8**

- **Supplier**
- **Focal Company**
- **Customer**

<table>
<thead>
<tr>
<th>Strategic level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased intensity in collaboration</td>
</tr>
<tr>
<td>Increased intensity in collaboration</td>
</tr>
</tbody>
</table>

**Exhibit 6.9**

- **Supplier**
- **Focal Company**
- **Customer**

<table>
<thead>
<tr>
<th>Strategic level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased top management involvement</td>
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<table>
<thead>
<tr>
<th>Operational level</th>
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<tbody>
<tr>
<td>Increased intensity in collaboration</td>
</tr>
<tr>
<td>Increased intensity in collaboration</td>
</tr>
</tbody>
</table>

More positive More positive
5. Top management involvement in dyadic collaboration is an important driver for increased collaboration on the other side of the focal company

Considering the dyadic collaborations in the study, top management has also proven to be an important driver for increased collaboration with companies situated on the other side of the focal company. Standing above the functional silos, top management is expected to facilitate the internal collaboration at the focal company, which is a prerequisite for linking the supply side with the customer side and vice versa. Thus, as a consequence of their involvement in dyadic collaboration on one side of their company, top management also functions as a driver for more collaboration on the other side.

Exhibit 6.10

<table>
<thead>
<tr>
<th>Supplier</th>
<th>Focal Company</th>
<th>Customer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic level</td>
<td>Increased top management involvement drives collaboration on the other side</td>
<td></td>
</tr>
<tr>
<td>Operational level</td>
<td>Dyadic collaboration</td>
<td>Increased collaboration</td>
</tr>
</tbody>
</table>

Over the last decade more and more organizations have drawn the conclusion that they can no longer compete in isolation. This has resulted in a shift in corporate strategies and a focus on the supply chain as a better way to manage customer service, responsiveness, asset utilization and business complexities. Managing products from start to finish, from suppliers to customers, and focusing on optimizing the execution of the supply chain has become a key component of their overall strategy and a major contributor to maintaining their market leadership position. In a world where customers are more demanding and have a large number of choices, servicing them with reliability and flexibility is crucial to the financial success of a business. As more evidence that supply chain practices help contribute to the financial performance of a company is accumulated, the drive behind this trend will only increase.

6.7 Recommendations for Retailing Companies

- Align the overall short medium and long term business strategy with an integral SCM execution.
- Make education and training in SCM principles, techniques and practices a high priority.
- Encourage managers to step back from the day-to-day ‘firefighting’ mode of operation and allocate time to plan for the future.
• Make a commitment to invest in SCM solutions and new IT technologies to achieve supply chain process improvements.
• Promote and manage change. Change is a constant reality that can offer opportunities.
• Open communication lines with suppliers and customers. Companies need to closely integrate themselves into the supply network. Supplier-side and customer-side collaboration is essential in order to optimize the supply chain.
• Focus on improving forecasting techniques, order cycle time through improved interaction with customers and suppliers, and optimize inventory levels.
• Start planning for new technologies that provide supply chain transparency, such as RFID. These will change the way you use information, so get ready.
• Measure the effectiveness of SCM against critical market and customer focused performance measurements such as on-time delivery, inventory turns, lead times, etc.

It is high time for action. To quote Peter Drucker once more, if companies “continue to do what they have always done; they will always get what they have always got.” While the business world is changing, the companies that fail to take action could struggle, will continue refighting’ and eventually could fail.

8 Current Supply Chain initiatives retailers are working on

Retailing Companies today are placing more emphasis on the supply chain to transform their business model. They are radically changing the way an organization senses, thinks, interprets and reacts. More and more, successful companies are organizing their supply chains horizontally (as opposed to the traditional vertical functional silos) and orchestrating end-to-end extended supply chains, or value chain networks. They are extending the “four walls” inside their enterprises by integrating more with the “outside” – through sharing knowledge and innovation with suppliers.

Retailers are reviewing their supply chain practices and defining visions for the future; it at the same time, they are fixing the basics – cleansing data, defining improved metrics, standardizing business processes and practices, training staff, and integrating technology – all in hopes of developing a low-cost supply chain that competitively positions the organization for the future.

Let us put forward what Indian retailers are currently doing to improve their supply chain, focusing on current initiatives.

Collaborative Planning, Forecasting and Replenishment (CPFR). Retailers are interested in finding ways to reduce inventories and improve their ability to both anticipate and fulfill consumer demand. They are improving their forecasting and merchandise planning activities and finding ways to work with manufacturers and suppliers to reduce cycle times and inventories throughout the entire supply chain. They are also looking at ways to replenish
inventory rapidly through auto-replenishment tools and ways to improve working capital such as:

Radio Frequency Identification (RFID) assessment. Indian retailers are assessing and in some cases piloting – RFID technology. They are closely watching Wal-Mart and other key retailers, including Metro AG, to determine the readiness of the technology and the success of rollout efforts. More importantly, they are developing their own business cases to link the use of RFID technology to business benefits and implementation costs. Metro AG’s “Future Store Initiative” has delivered very strong results to date – results that will increase the visibility and popularity of retail technologies such as RFID. Concerns, while minor, are mostly associated with privacy issues – for example, the extent to which retailers have knowledge about the products consumers have in their homes.

Buying optimization. Retail organizations are performing strategic sourcing reviews, streamlining their buying practices and policies and investigating the potential for e-procurement technologies, particularly for non-merchandise spend. These projects tend to be low-risk but are associated with high returns: reduction in uncontrolled, unapproved spending from 5 per cent to 30 per cent; bulk discount savings of up to 20 per cent; and, significant reduction in administrative costs. They are also continuing to review their merchandise buying practices and looking for ways to reduce costs, improve inventory levels and better manage their base of suppliers. This is particularly important for Indian retailers who are sourcing products from around the globe.

Data synchronization. Retailers are also looking at ways to synchronize their data with that of their trading partners. It has been shown that inaccuracies in the supply chain contribute to approximately 10 to 15 per cent of total out-of-stocks. Data synchronization enables rapid purchase order and invoice reconciliation, eliminates data re-entry and reduces catalogue errors.

Reviewing supply chain network infrastructure. Revisiting the supply chain network is no small feat. Few retailers are interested in reviewing the cost-effectiveness and service levels supplied by distribution centers to retailers across India. This process normally involves utilization of sophisticated algorithms that take large amounts of data and determine costs and benefits of alternative network designs. There are other retailers who are constructing new distribution centers to support their growth and productivity objectives.

Outsourcing non-core functions. At a macro level, the retail industry has not yet, unlike other industries, outsourced core business processes such as human resources. However, retailers have outsourced supply chain functions and continue to outsource application management services (not complete outsourcing of information technology, but rather outsourcing of selected application support functions, such as help desk).

Legacy application replacement. Some Indian retailers are running portions of their supply chain with custom-developed applications, but more and more of these custom applications are being replaced with packaged software applications. For example, a number o
Indian retailers are replacing their legacy warehouse management solutions with off-the-shelf packaged software. These projects tend not to focus on the technology alone but involve changes to business processes, people, the organization, and metrics in order to improve service levels from the distribution centre and/or lower service costs.

**Supply chain visibility / information flow.** Indian retailers are looking for ways to improve supply chain visibility across the entire pipeline. Supply chain event management tools have provided the capability to view end-to-end processes across the supply chain. This end-to-end view can help identify bottlenecks for product and information flow, allowing appropriate solutions to take place.

**Supply chain processes automation.** Many supply chain automation applications now exist in retail. Automated data collection is a common application, due to the increased use of data collection devices and the high penetration of data warehouses. Also, many technologies in the logistics space – such as robotics – have improved productivity dramatically, justifying their initial capital expenditure.

While some of these initiatives involve the implementation of technology, retailers are developing business cases to support changes to their supply chain environment. The technology initiatives are usually preceded by a business process improvement initiative and subsequent business case linking the identified process and organizational changes with the technology implementation.

### 9 Available tools that enable improvements in Supply Chain Management

There are a number of tools available to enable effective retail supply chain management. These tools span a variety of purposes – some are used to manage planning; some are used for transaction-level processing; some are used as optimization algorithms; others are integration tools that link suppliers to manufacturers to retailers.

The retail industry is characterized by a plethora of different systems. In fact, most retailers have taken a best-of-breed approach to their information technology architecture, as opposed to implementing Enterprise Resource Planning (ERP), which is more widespread in the consumer packaged goods industry.

Listed below are examples of off-the-shelf software systems that impact and enable supply chain management in a retail environment. This is not meant to be an exhaustive list of tools, nor is it meant to represent a rating of available products. It is simply representative of the potential tools available in each category.

- **Merchandise and assortment planning systems.** While some would argue that merchandising and assortment planning functions are not supply chain functions, they do have an impact on a retailer's supply chain as they impact store service levels and inventory levels. Tools from GERS, JDA, Retek, SAP and STS can be used to assist in the merchandising and assortment planning process. More broadly, these tools offer
additional capabilities in supply chain management from both a planning and execution perspective.

- **Supply chain planning and optimization.** In terms of CPFR and/or any other type of retailer/supplier collaboration, there is a variety of tools available to retailers. Some of the aforementioned tools (from JDA, Retek and SAP, plus tools offered by PeopleSoft and Oracle) offer Web-based collaboration functionality. There are also other specialized tools from i2, Manugistics and Synchra Systems. In addition to CPFR and Web-based collaboration, both i2 and Manugistics offer transportation optimization functionality as well as supply chain network optimization tools. They utilize alert-type functionality and exception-based management to highlight issues in the supply chain that require management attention.

- **Warehouse Management Systems (WMS).** There are a wide variety of WMS products in the marketplace to support the needs of the retail industry, such as Catalyst, EXE and Manhattan. WMS products tend to focus on optimizing the flow of goods within the four walls of the distribution centre, but also offer some functionality aimed at inbound and outbound transportation planning and execution.

- **Event management.** There are a number of products, including some listed above, which offer event management functionality. These products enable detailed tracking of supply chain events such as product movement or equipment breakdown (i.e., supplier downtime) and provide mechanisms to identify alternatives. Products include i2, Manugistics, Red Prairie, SAP and Viewlocity.

- **Marketplaces and exchanges.** There are a number of marketplaces that can be utilized to improve supply chain management performance. Transportation organizations such as the National Transportation Exchange (NTE) and Freightwise provide a mechanism for retailers and manufacturers to buy and auction transportation space. Simple auction marketplaces such as eBay are being used to sell close-out or defective but saleable inventory and supplies no longer required by retailers. The World Wide Retail Exchange (WWRE) offers members functionality such as collaboration, data synchronization, negotiations and auctions, demand aggregation, and order management.

- **Procurement tools.** While some of the broader off-the-shelf products from JDA, Retek and SAP offer procurement functionality and Web tools to assist in the procurement process, other more specialized e-procurement tools exist (e.g., Ariba, which is being used by STAPLES Business Depot, Target and Hallmark).

- **Data synchronization.** As is the case with other areas, some of the broader applications such as SAP, JDA, Synchra and i2 offer solutions for data synchronization. ECCnet offers Indian retailers a standardized online forum for data, images and bar code communication. Other marketplace tools are offered by Trigo, Lansa and IBM (Websphere Business Integrator and Crossworlds).
• **RFID.** Radio Frequency Identification is a highly popular topic for supply chain professionals. The concept of tagging pallets, cases and items with a radio frequency-enabled tag that can be read immediately and enable real-time tracking of product throughout the supply chain is a concept that is expected to transform supply chain management as we know it today.

Third-party logistics is not a tool in terms of application software but is worth mentioning cause it can enable improvements in supply chain. A number of retailers have already sourced a portion of their supply chain to a third-party logistics organization. An outsourcing relationship, if properly managed, can benefit a retailer in terms of improving service levels and reducing overall costs.

### 10 Supply Chain Performance

The importance of fostering closer relationships, such that both buyers and suppliers expect to achieve long-term benefits and react to uncertainty, is highlighted in business-to-business marketing and channel relationship studies. However, the development of buyer-supplier relationships involves not only an economic focus, which is the more frequent focus of search, but also the social aspect of exchange. The present research framework was developed on the basis of theory of social exchange and transaction cost analysis.

The primary objectives of this research are:

- To develop a framework that identifies the critical determinants of retail supply chain performance and to investigate their impact on supply chain performance,
- To define the pertinent aspects of supply chain performance for a competitive retail setting and to examine the linkages between those performance dimensions,
- To identify the key dimensions of buyer-supplier relationship, and to explore the effects of these relational dimensions on retailer-supplier cooperation and retailer/supplier's decision-making uncertainty (DMU), and
- To discuss the similarities and differences from both the perspectives of the retailer and the supplier.

The conceptual model was tested and the major research findings are summarized as follows:

In both the retailer model and the supplier model, the results showed that positive supply chain performance was primarily driven by cooperation between the retailer and supplier, and a negative impact was resulted from the retailer/supplier's DMU. These findings highlight that a retailer/supplier's DMU coexists in current retailer-supplier collaborative relationships. Though the ultimate goal of the relationship is to achieve economic and non-economic rewards, the detrimental effects of DMU on supply chain performance reveal that some incongruence or
disagreement shadows retailer-supplier cooperation. Particularly, it was found that DMU has the most negative impact on financial performance.

Empirical evidence in the retailer model supports the contention that supply flexibility, non-financial performance measure, has a positive influence on the financial performance of the supply chain. Non-financial performance measures are leading indicators of future financial performance and can provide managers with strategic thinking about increasing customer focus. To both suppliers and retailers, the positive link between supply flexibility and customer service showed that the enhancement of their operational efficiency is crucial to differentiate from the competitors and to gain a competitive advantage in this increasingly competitive market.

This research incorporates two cultural variables - trust and relationship, with other relational variables (i.e., dependence and power) that are well defined in the Western societies. These have shown to have significant effects on retailer-supplier cooperation in the retailer model. Trust between the retailer and the supplier is the essential basis of engaging cooperation. A significant result found that both the retailer and the supplier consider that relationship with their retailer partner is an effective mechanism for the mitigation of their DMU. It can be concluded that trust and relationship are the two key facilitators to delivering a sustainable relationship between the organized retailers and their suppliers.

The results showed that a supplier’s power exists in the goods supply chain, and the retailers are increasingly more dependent on their suppliers. A supplier’s use of coercive power erodes the retailer’s efforts involved in its cooperation with the supplier, whereas a supplier’s use of non-coercive power promotes the retailer’s cooperation.

Apart from the relationship with the supplier, from the retailer’s perspective, a significant finding supports the query of ‘whether better relationships can lead to improved supply chain performance through the mitigation of the retailer/supplier’s DMU’. This does not mean that establishing a closer relationship with the supplier partner is not useful in the mitigation of retailer/supplier’s DMU. To manage uncertainty is a pressing, but challenging, task for both the retailer firm and the supplier firm. The results suggest that on the basis of a good relationship a more effective collaborative approach can be initiated to resolve supply chain inefficiencies. As such, it may mitigate the uncertainty experienced by the supply chain members.

6.11 Contributions of the Research

This research has made the following substantive contributions:

First, this research contributes a holistic empirical model, which has been lacking in the extant channel relationship literature and supply chain management literature, to investigate the links among retailer-supplier relationships, retailer/supplier’s DMU, and supply chain performance. The results of this research are unlike those of most other studies which claim that uncertainty has a negative impact on the relational behaviors or relationships between retailers.
nd suppliers. These findings add knowledge to the supply chain relationship literature, specifically, they extend our understanding that a retailer/supplier's DMU can hinder different aspects of the supply chain performance.

Additionally, perceptions from both sides of the channel dyad provide different views into their collaborative relationships and DMU, and their effects on supply chain performance. The differences and similarities of the results across the two perspectives challenge the traditional assumption that all channel members behave in a similar manner. When developing relationship strategies, researchers or exchange partners should take into account those divergent expectations and perceptions on, for example, relationship factors and uncertainty.

Second, this is the first study, as far as we are aware, to investigate the relationships between retailer-supplier cooperation, DMU, and supply chain performance in the setting of organized retailers and their suppliers. The findings from this research contribute to the broader organized research in business-to-business marketing.

Third, this research incorporates various dimensions of non-financial performance measurement in assessing supply chain performance. This focus is important to enhance our understanding that the evaluation of the performance of a supply chain should encompass eminent dimensions of both financial and non-financial performance, but not to limit itself to either one. Furthermore, this broader view provides management with a more comprehensive picture of how well the supply chain performs, and highlights the directions for establishing a firm’s competitive advantages and creating value across the supply chain.

Non-financial performance provides an assessment of the competitiveness of an organization and also stimulates management to develop effective strategies to differentiate themselves from their competitors. The framework proposed in this research can be considered a starting point for an assessment of the need for supply chain performance measurement for tail businesses.

Lastly, this research shows that operational efficiency such as supply flexibility and levels of customer service, which have been neglected in most channel relationship studies, can be improved through the enhancement of retailer-supplier relationships. Therefore, this study adds evidence to the body of literature in business-to-business marketing and supply chain management.

12 Limitations

Some limitations of this study must be addressed. First, the small sample of suppliers may affect the stability of the parameter estimates. Thus, the empirical findings from the supplier's perspective should be interpreted with caution. Since the retail market is brand-oriented and dominated by several leading international suppliers, the limited number of suppliers in the field has placed some constraint in collecting matched pairs of retailer and supplier. The retailer-supplier relationship presented can be considered a quasi-dyadic relationship. To compensate for this
limitation, face-to-face interviews helped this research minimize any information lost in the small sample and provided a contrasting picture of the dyadic channel relationship.

Second, though a study limited to NCR part allowed the researcher to control complex market variables that may be different from industry to industry, or country to country, the generalisability to other industries or countries may be limited. The product categories focused on in this research are limited which are susceptible to fashion trends, weather, and sports events, and importantly they contribute to the largest part of sales for most retail stores. However, the contribution of bringing a different insight into the buyer-supplier relationship in a more focused industry should be encouraged in studying supply chain relationships.

Third, the sampled firms were limited to small and medium-sized (organized) retailers. The findings and conclusions may be different if large firms were sampled. Ideally the research agenda for building external validity would include replication with different firm sizes as well as in other distribution settings. Realizing these limitations, future studies should collect data from a larger population and different countries to further validate or extend the theoretical construct identified in this study.

6.13 Directions of Future Research

Several opportunities for future research spring from the results of this study. First, the results did not show any association between power-dependence and decision-making uncertainty. Perhaps the survey questions were too general and did not fully capture the respondent's perception with respect to the relative dependence on its exchange partner and its use of coercive power and non-coercive power. Future research may consider measures that better reflect the relative influence of the firms over specific relationship issues such as product/service quality, pricing policy, return goods policy, and other marketing assistance. Similarly, to further refine the dimensions of decision-making uncertainty would help to clarify the conceptualization.

Second, performance measurement development is an ongoing process and the instrument can be strengthened only through a series of further refinement such as measures of customer service, flexibility, or financial performance and tests across different populations and settings. These would provide the decision maker with more effective measures to monitor the performance of the supply chain.

Third, this study indicates that the retailer's dependence on the supplier would induce the retailer to invest more effort in the collaborative relationship. Transaction-specific investments such as opening a mono-brand store for a specific well-known brand could create motivation or incentive for the counterpart to offer more support and to cooperate with the retailer (Heide and John 1988; Buchanan 1992). Will this type of investment increase the level of dependency from the supplier side? Will the shift from an existing collaborative relationship to a collaborative
relationship, as Muckstadt et al. (2001) suggested (Exhibit 8.1), lead exchange partners to the reduction of DMU and facilitate improvement in supply chain performance?

14 Implications and Concluding Thoughts

Managing uncertainties in decision-making is important for any business firm. The findings of this research suggest that a retailer or supplier's decision-making uncertainty adversely impacts the financial performance of the supply chain. To resolve the root problem, dynamic coordination plans such as communication facilitation, sales information sharing, and performance review may be initiated by supplier firms in their business collaborative activities. To encourage information sharing from retailers, suppliers could use more non-coercive influence strategies to convey the importance and benefits of inventory visibility, so that supply chain members are able to better manage their product supply and demand and improve the efficiency that occurs in the supply chain.

In addition, as supported by research findings, trust and relationship are key elements to keep the retailer-supplier collaborative relationship sustainable in the long run. Taking into account the various direct and indirect effects of relationship variables on supply chain
performance requires reciprocal effort by retailers and suppliers in order to achieve congruent goals for their value chains, or else be defeated by other supply chains.

The performance implications provide managers with insights into the areas where supply chain performance can be improved and what should be focused on in order to achieve better performance. Performance measurement allows both suppliers and retailers to assess the performance of themselves and their supply chain members, and to identify what factors contribute to or undermine the performance of the supply chain. The balance of including appropriate financial and non-financial performance measures should be taken into account in managing buyer-supplier relationships.

6.15 Supply Chain - the future

A number of retailers are taking the necessary steps to simplify their supply chain, reduce overall costs, reduce stock-out occurrences and reduce inventory levels. They are looking at the implications of technologies such as wireless and RFID on the supply chain. But how would one describe the characteristics of the future supply chain?

Based on knowledge of what supply chain leaders in various retail are planning and doing – both within and outside of the retail industry – we have identified the strategies that successfully competitive supply chains are utilizing. They include:

- Innovative supply chain vision
- A focus on differentiating competencies
- Dynamic global sourcing and demand synchronization
- Use of emerging technologies

Innovative supply chain vision. The winners in today's competitive landscape will deploy smart supply chain models that deliver game-changing standards of service at competitive cost. They will connect the end-to-end value chain and differentiate supply chain approaches based on product/customer segments. Successful innovation is the key driver for revenue growth, competitive margins and, in some cases, even survival. Increasingly, this innovation has to be delivered through a virtual network of partners working together in collaborative environment to bring product and services to market faster, smarter and cheaper.

Retailers such as Wal-Mart have developed game-changing supply chains that provide the organizations with a competitive advantage.

Focus on differentiating competencies. The trend toward global sourcing an increasing use of partners for supply chain activity is set to continue, fueling the growth of networked value chains. Retailers are already sourcing global products and increasing their use of partners for areas such as logistics, transportation and distribution. Driving this trend is the imperative to not only seek unit cost advantage and secure best market capabilities, but also to share risks with partners and create a pay-as-you-use variable supply chain model. Operational excellence in managing all supply chain functions remains a foundation for any world-cla
Supply chain. However, a new perspective on operations excellence is required, not only in what company does but also in what a company's supply chain partners do and how a business orchestrates them.

**Exhibit 6.12 Integrated Retail Supply Chain Model**

**Dynamic global sourcing and demand synchronization.** Global sourcing patterns will continue to shift dynamically in search of lower-cost sources. In addition, retailers will continue to rationalize and harmonize their own global value chain resources in search of more efficient and effective means of satisfying global customer demands. Fast, flexible, efficient and transparent response to changing customer demands and supply shocks remains the goal for supply chain management and will be essential to compete in this new world.

**Use of emerging technologies.** Innovative new technologies (such as RFID) continue to emerge that enhance and transform supply chain capabilities and afford new ways to deliver and finance technology infrastructure on a pay-as-you-use basis. This type of model will be a critical enabler that delivers new capabilities, enhances ROI and supports fast, modular implementation of supply chain concepts across multiple value chain partners. For example, a major retailer created a supply chain that is driven by customer demand and supply chain events. The first to implement supplier electronic collaboration, which was extended to Vendor Managed Inventory (VMI), this company is now using RFID tags and scanners for inventory management, auto-replenishment and loss prevention.

**16 Influences on Technology Implementation in Supply Chain**

Given the pressures to keep costs low and service high, most retailers will choose to make supply chain modifications rather than fall victim to increased competition. Whether they
undertake large-scale restructuring, small, incremental improvement, or something in between there are a number of factors that can affect any technology implementation.

- **Supply Chain Visibility and Control**
  Supply chain directors need to maintain end-to-end visibility and management of the supply chain, either by taking greater ownership through centralized distribution partners to achieve the desired results.

- **Third-Party Integration**
  Many retailers rely on the services of third-party logistics companies to deliver specialized services. Given the additional integration and coordination requirements, this can slow down the restructuring process.

- **Loss of the Big Picture**
  As more companies look at ways to provide more proactive service and reduce costs supply chain directors may try to focus their attention on specific points within the supply chain, resulting in “point solutions” or software for specific tasks such as store task management, transport scheduling or merchandising management, resulting in the inability to see the bigger picture and need for integration.

- **Understanding Costs**
  It has never been more important to understand true supply chain costs that can affect tradeoff decision making. This often requires data to be captured and analyzed in completely new ways.

- **Technology Confusion**
  Many retailers recognize technology as an enabler, but it can also be considered a hindrance. Today, there are more technology choices than ever, but not all are accompanied by clear business benefits. This creates a high degree of skepticism and uncertainty from supply chain professionals. It is important for companies to educate themselves on new technologies to better understand their opportunities.

### 6.16.1 Accuracy and Visibility

One key investment retailers are likely to make is in areas that will help improve visibility of products in the supply chain and allow real-time, accurate information to be easily accessed and shared collaboratively with all parties within the chain. In particular, retailers will look for ways to streamline product introductions, make ordering and replenishment processes more effective, and analyze data that will show what consumers will want to buy in the future enabling better category planning.

### 6.16.2 Tracking with Radio Frequency Identification

Radio frequency identification (RFID) tags are evolving as a major technology to track goods and assets within the retail supply chain. There are already a number of global retailer
ing RFID-enabled tags on pallets, cartons and even individual items. RFID tags can carry more information than a bar code and can be scanned without line of sight by a high-speed reader from a distance of several meters. Readers are being used in distribution centers, at store receiving bays and at doors to the shop floor, enabling retailers to compile and analyze data on in-store and on-floor stock levels and goods in transit with point-of-sale data. Early results of the Wal-Mart RFID initiative have shown a reduction of 16 percent in out-of-stocks.47

Because RFID is still in its infancy, many retailers aren’t sure when and how to utilize the technology. Many retailers are waiting for a compelling business case, adopting a pragmatic attitude, and hoping that norms and standards will stabilize before pushing for adoption. However, since industry-driven standards for the use of RFID are becoming more prevalent, retailers are increasingly looking at where the benefits of using RFID might be in their own business model (such as the ability to find stock quickly or count it faster), while keeping up-to-date on how the technology is being developed and deployed.

A first step should be to more fully understand its potential use and then to identify the gaps in current capabilities that might be improved by RFID usage. A more pressing concern is to simply make better use of existing information.

16.3 Standardizing Data

Because improved data accuracy has an impact on supply chain efficiency, more retailers are looking to work with their suppliers to meet Global Data Synchronization (GDS) standards. Opting new technologies such as self-check and RFID creates even higher volumes of data, thereby increasing the complexity of maintaining a high level of accuracy. With GDS, suppliers and buyers will be able to communicate product information using a “common language,” rather than having to first “translate” the different numerical product codes and descriptions (an error-prone process) before being able to integrate the information in their systems. Although this may seem like a painstaking, time-consuming task, major industry players are convinced that standardization is worth the investment, because the supply chain will flow better and conforming to GDS is a requirement for effective RFID adoption.

16.4 Collaboration

For the supply chain to work more efficiently, all parties involved — from raw material suppliers to consumers and every touch-point in between — will need to work more collaboratively and invest in technology that enables them to more easily share accurate product information. Progressive businesses are looking more holistically at where the burden of costs is

carried. Because store operations personnel want to move some of the more costly, labor-intensive aspects of store retailing further upstream — e.g., suppliers or distribution centers providing floor-ready merchandise — cost models are being used to illustrate the tradeoffs to make the right decisions.

6.16.5 Supply Chain Networks

Successful retail businesses of the future will be those that play an integral role in developing a winning supply chain with partners up and downstream, rather than focusing purely on tactics that deliver individual success. Researchers estimate that the collaborative partnership approach could cut supply chain costs by 10 percent while improving the quality of the end product. There is a real desire for these networks to outperform one another; this will be a key driver in delivering cost-effective chains in the future.

6.16.6 A Moving Target

Given the increased cost of fuel, the scarcity of qualified drivers, work-hour regulations and congested transport networks, attention needs to be paid to transporting goods more efficiently from suppliers’ warehouses and retail distribution centers to stores, or even to customers. However, this is one area where the use of integrated systems is at a relatively embryonic state.

Some retailers have installed transport management systems to improve and streamline routing plans and to put an end to the chaos that exists when orders are placed via a mixture of computerized and manual methods. However, the benefits have not been proved and adoption remains low.