CHAPTER 3: CONCEPTUAL FRAMEWORK

This chapter covers the conceptual framework which is used for the purpose of this study. The framework is proposed and explained below.

3.1 Framework

McKinsey’s Seven S model is used in practice as an investigative and prescriptive framework for organizational alignment. (Kaplan, 2005). Hence its’ an execution model whose scope is organization wide. In the context of extended enterprise, scope of 7 S framework may be extended across the supply chain. This forms the basis of current research wherein the 7 S model is used as a reference to evolve performance measurement framework for supply chain. Hence along each of the “S’s” indicators are developed built on the fundamental principles as proposed in the 7 S model and their interpretation when extended to supply chain.
Figure 3.1, denotes the conceptual framework for supply chain performance. Based on the literature review, it is proposed that the supply chain performance is an outcome of various organizational inputs. These inputs are configured in with using Mckinsey’s seven S framework in the context of supply chain. It is no secret that majority of the organizations tend to focus more on the tangible and measurable hard “S’s” while the more intangible, difficult to measure soft “S’s” often don’t get the same weightage as their hard counterparts. However with the above framework, the researcher has included these soft S’s also which are vital for supply chain performance.

The difficulty of quantifying the soft S’s was reduced to a considerable extent by BSC under the learning and growth objectives which integrate staff, style and shared values to enhance organizational skills and critical processes under internal perspective. In fact while
commenting on popularity of BSC, Kaplan (2005) remarks that “one can view the BSC as the contemporary manifestation of the 7 S model which helps align all organizational variables and processes that lead to successful strategy execution”. Table 3.1 provides a comparison of the BSC and 7 S model.

Further during the initial discussions with practitioners, it was observed that majority of them have used / are using the BSC for performance measurement / strategy execution. However either the softer “S’s” were not prominently considered while devising performance measurement system or the weightage given to softer aspects was very much less as against the hard “S’s”. So in line with objectives of this research, the 7 S model was chosen as a reference model based on which a performance measurement framework was developed. It was thought that the familiarity factor (since majority were using the BSC) will be of help in terms better understanding and adaptability of the proposed framework.

The conceptual framework also links supply chain performance and organizational performance which the researcher would like to test empirically. Sections below describe the constructs in the framework.
Table 3.1
Comparison of Seven S model with BSC

<table>
<thead>
<tr>
<th>Seven S</th>
<th>BSC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strategy</strong></td>
<td>Denotes strategy. It includes critical internal processes that create a differentiated value proposition for customers, organization's efforts to find balance between long term growth as well as short term cost cutting etc. Most importantly includes outcomes of such initiatives in terms of customer value proposition</td>
</tr>
<tr>
<td><strong>Structure</strong></td>
<td>Helps in aligning the functional, business unit level objectives with corporate objectives. Enables synergies across all the members along with assigning the appropriate accountability</td>
</tr>
<tr>
<td><strong>Systems</strong></td>
<td>BSC helps organizations, design their communication and performance evaluation systems. Further, it also helps align other systems like recruitment and reward, planning and budgeting etc. with organizational strategy</td>
</tr>
<tr>
<td><strong>Staff</strong></td>
<td>This is majorly captured through BSC's learning and growth perspective by identifying the critical to success activities / functions / job families etc. This helps in putting in place acceptable level of measures for knowledge, skills, and experience of staff involved in these activities / functions / job families.</td>
</tr>
<tr>
<td><strong>Skills</strong></td>
<td>The internal process perspective measures the organizational skills, competencies and processes that are most critical for the strategy to be effectively executed</td>
</tr>
<tr>
<td><strong>Style</strong></td>
<td>BSC helps executives to focus on the tasks that are critical to strategy execution. Specific measures in learning and growth perspective enables an organization to specify and measure the leadership style it wants</td>
</tr>
<tr>
<td><strong>Shared value</strong></td>
<td>Communicating the BSC throughout the organization creates shared understanding about organization's long term objectives and strategy for achieving the same. Cultural norms and organizational values can be mapped through learning and growth perspective</td>
</tr>
</tbody>
</table>

*Source: Adapted from Kaplan (2005)*
3.1.1 Supply Chain Strategy Perspective

"Supply chain strategy can be viewed as the pattern of decisions related to sourcing of products, capacity planning, conversion of raw materials, demand management, ensuring communication across the supply chain, and delivery of products and services to end customer" (Narasimhan et al., 2006). This strategic aspect of supply chain is a direct offshoot of overall business strategy. In the short term supply chains are focused to achieve increase in productivity and quality while reducing costs associated with inventory and cycle time. In the long run, supply chain strategic goals are to improve customer satisfaction while also improving profitability and market share. Ultimate goal of supply chain is to add value throughout activities which span end to end. With supply chain view, organization's attention shifts from internal integration of activities to integration of both internal as well as external activities. This nature of supply chain forces organizations to look beyond its conventional boundaries. In fact one of the major reasons for emergence of supply chains to prominence is, organizations focusing on their core competencies and outsourcing the rest of the activities. Thus integrating the external activities and aligning efforts of outside agencies in line with organizational objectives falls under strategic goals of supply chain. Previously, improving customer service used to be achieved by increasing warehouse inventories along the supply chain, whereas today companies, with the help of integrated logistics systems manage inventories through close relationships with suppliers and LSPs (logistics service providers) who take care of transportation, distribution, and delivery services (Wisner, J. D., 2003).

As suggested by Chopra et al. (2007), "supply chain strategy specifies what the operations, distribution and service functions, whether performed in-house or outsourced should do particularly well". It determines the nature and type of procurement and transportation, manufacturing methods used for the product or operations involved in providing the service and finally distribution channels used for delivery, along with any follow up service. It also does the necessary cost benefit analysis and then decides which of these processes will be performed in-house and which will be outsourced. Unlike traditional company strategy, supply chain strategy needs the coordination and commitment of multiple firms who are part of the supply chain, to implement company strategic objectives (Defee & Stank, 2005). This doesn't mean that each firm which is a part of supply chain should be having the same
strategy. The typical objectives of supply chain strategy i.e. increase in revenue, reduction in operating costs, reduction in working capital, improvement in asset utilization etc. are only achievable through inter-firm coordination (Christopher & Ryals, 1999). Thus coordination through real time online sharing of information between supply chain members becomes imperative for the success of entire supply chain. One of the major adverse impact of distorted information across the entire supply chain, the bullwhip effect can be successfully tackled by ensuring real time and accurate information transfer among all the members of the supply chain. Kohlberger et al. (2012) summarize potential of supply chain strategy as, “it involves switching from: inward thinking to organized interdependence; cost minimization to finding advantages over competition; proprietary information systems to an open, continuously improving, internet based network; stock control to information sharing; multiple exchange processes to a process of globally optimized exchange; open competition to organized competition (‘coopetition’); a win-lose situation to a win-win strategy for all those participating in the network”.

3.1.2 Supply Chain Structure Perspective
A company’s supply chain structure includes both internal as well external members. It consists of external suppliers, internal functions of the company, and external distributors, as well as customers (Kim & Rhee, 2012). Simply put, supply chain structure is a manner in which constituent parts (links / entities) of supply chain are arranged together. It reflects the relationship between various entities involved in the supply chain. It tackles the issue of cost of storing and moving goods and services from the supplier to the customer. While doing so it also tries to address the balance between supply chain efficiency (cost) and supply chain responsiveness. In fact, as suggested by Fisher (1997), both efficiency and responsiveness form fundamental structures for supply chain. The Japanese keiretsu structure provides an early example of multiple firms using individual supply chain strategies to achieve a common purpose (Schonberger, 1982). As Waterman et al. (1980) state structure divides tasks and provides co-ordination. Ernst and Kamrad (2000) have proposed a conceptual framework based on modularization and postponement which can be used to evaluate different supply chain structures. According to them, modularization is
linked with inbound logistics and its components whereas postponement corresponds to outbound logistics. The framework proposes four supply chain structures namely:

- **Rigid** – This structure represents vertically integrated supply chain with large production runs focused with an objective of achieving economies of scale
- **Modularized** – In this structure, components are sourced from multiple sources and output of assembly process is the finished product. This by far is the most prevalent structure.
- **Postponed** – This structure exploits economies of scale in sourcing as well in manufacturing of components but the finished product is customized as per customer need or market demand
- **Flexible** – Structures wherein subcontractors are used to make different components and product assembly takes place in response to specific demand. Here economies with respect to inventory are expected due to commonality effect.

At fundamental level, supply chain by nature is based on integration and similar concepts of synchronization and harmonization across multiple supply chain members that demand the common use of materials and systems. The objective is to create timely, high quality product and information flows that drive enhanced performance (Defee & Stank, 2005). Thus supply chain structure denotes “the integration of the organization governing the network of supply chain members and most importantly the links through which the enterprise is administered (Lambert et al. 1998)”.

The traditional elements of structure like technology, communication, standards, decision making authority, degree of centralization, accountability and responsibility, reward systems etc. are equally applicable to supply chain structure.

### 3.1.3 Supply Chain Systems Perspective

Waterman et al. (1980) in the seven S framework have argued that systems denote all the formal and informal procedures that help organizations carry out their day today activities without any hiccups. Thus the systems perspective includes training systems, communication, evaluation and reporting systems for effective strategy implementation. It also includes systems such as planning, incentive and reward, budget and resource
allocation as well as quality standardization systems like ISO. Enterprise wide integrated information system / management information system which forms the backbone of day to day decision making also falls under this perspective. Systems are the best tools to implement any change whether strategic or structural. When discussing the systems perspective for supply chain, the focus is on those systems which facilitate / enhances the following,

- Forecasting system for demand estimation
- Communication with suppliers facilitating supplier participation in forecasting and planning thereby helping supply chain to address dynamic demand
- Communication with customers facilitating customer feedback which acts as an ongoing input for supply chain improvement
- Resource allocation and Budgeting which is a part of ERP system
- Performance appraisal of supply chain partners and supply chain staff

So the focus is on those systems which will help in effective implementation of strategy through the chosen structure.

3.1.4 Supply Chain Staff Perspective

This perspective deals with the people angle of organization. It covers aspects like efforts taken by organizations in terms of recruiting the right candidates, developing them as well its current employees, identifying the key management talent, nurturing it, charting out their career paths etc. More or less similar perspective is expected for supply chain. Traditionally organizations have invested in technology and processes to improve supply chain performance. However having realized that it’s not sufficient, in recent years organizations have also recognized the vital role played by people (employees as well as supply chain partners).

For improving organizational ability and to produce results in driving innovation in their supply chain organizations are now focusing on human aspects (Green, 2010).
As per Accenture\textsuperscript{11} research, high performing companies address the needs, skills and capabilities of people throughout the supply chain through following,

- Integration – Organizations need well trained, knowledgeable and competent professionals who can integrate across all processes within the supply chain.
- Education across the supply chain – Invest in educating employees across supply chain, rather than focusing on few leaders or high potential employees.
- Competition for talent – Due to rapid population growth and globalization, the balance of global labour supply has shifted to emerging economies. Hence there is tremendous competition for talented individual. So invest in retaining talent and search new ways to attract new talent.

(Source: Adapted from, Green, Andy, 2010)

Similarly in a India centric study on how companies can create competitive advantage, A.T. Kearney\textsuperscript{12} have proposed following framework of actions for nurturing supply chain talent as depicted below in table 3.1.4.1

<table>
<thead>
<tr>
<th>Actions for nurturing supply chain talent</th>
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<tbody>
<tr>
<td>Selection</td>
</tr>
<tr>
<td>Recruit the top talent</td>
</tr>
<tr>
<td>Include supply chain professionals in the organization leadership and future talent pipeline. Make CEO position available to the best capable &amp; competent professional irrespective of function</td>
</tr>
<tr>
<td>Capability Development</td>
</tr>
<tr>
<td>Ensure holistic business understanding through various projects and job rotation. (functions and geographies)</td>
</tr>
<tr>
<td>Supplement functional training, with training in executive communication, consultative selling, scenario planning and program management</td>
</tr>
<tr>
<td>Performance Management</td>
</tr>
<tr>
<td>Set both functional and business goals as performance parameters for supply chain leadership.</td>
</tr>
<tr>
<td>Have focused measurement of long term activities which will encourage best practices such as collaboration</td>
</tr>
<tr>
<td>Retention</td>
</tr>
<tr>
<td>Recognize the top performers through rewarding projects and roles</td>
</tr>
<tr>
<td>Have non-supply chain seniors as mentors to set up a formal mentoring process</td>
</tr>
</tbody>
</table>

Source: A.T. Kearney, 2013

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\textsuperscript{11} Accenture PLC is a multinational management consulting services company

\textsuperscript{12} A.T. Kearney is a global management consulting firm that focuses on strategic and operational CEO-agenda issues facing businesses, governments and institutions around the globe
The SCOR skills framework (2010) provides overall view about technical skills, aptitude and experience required to manage effective supply chain. It assesses the global needs and issues pertaining to skills management of supply chain professionals.

### 3.1.5 Supply Chain Skills Perspective

It refers to organizational skills and competencies. While discussing how balanced scorecard complements the seven S model, Kaplan (2005) argues that the internal process perspective of BSC captures the skills and competencies for which an organization is known. He further states, organizations’ strive to improve their skills by ensuring an alignment between human, information and organization capital (climate) required to support the value creating internal processes. So when applied to supply chain skills, we are interested in finding out to what extent the organization is using its supply chain to compete in the market. This is in line with the thought process shared by many researchers that the competition is no longer between two organizations but rather the competition is between their supply chains. The pertaining issues in this regard are summarized below:

- Organizations take efforts in consciously developing, strengthening its supply chain capabilities and processes
- Organizations keep tab on its supply chain performance through customer feedback and take necessary actions to ensure customer satisfaction
- Organizations strive to become an industry benchmark in terms of their supply chain capabilities

The SCOR framework (2010) lists following supply chain skills,

- Bare minimum or essential skills for overall process area (e.g. sourcing or planning) and for the individual processes
- Skills that are critical to the success of a particular process which only leaders have as against skills possessed by those who only perform at the essential level
- Training and certifications related to specific process area of supply chain
3.1.6 Supply Chain Style Perspective

Researchers have examined the link between leadership style and organizational performance. Many of these past researches have tried to link the personality traits of the leaders (trait theory) with organizational performance. Fiedler (1996) argues that success or failure of any organization or for that matter even an entire country to a large extent depends upon the effectiveness of its leadership. Management literature mentions leadership styles like: autocratic leadership, bureaucratic leadership, charismatic leadership, democratic leadership or participative leadership, laissez-faire leadership, people-oriented leadership or relations-oriented leadership, servant leadership, task-oriented leadership, transactional leadership, transformational leadership. Each style of leadership impacts organizational performance in its own way and is different (Popa, 2012). Similar to trait theories’ approach, style of leadership also has been studied in detail in the past with most of the studies concluding that participatory and democratic styles are more successful. Further, researchers have also compared transactional leaders, who frequently focus only on the transactional aspect i.e. exchange during relationship with their subordinates against transformational leaders who motivate subordinates by making them part of his vision (Ogbonna and Harris, 2000).

In the context of supply chain, the style component of seven S framework refers to leadership’s views towards its suppliers, customers, other supply chain partners, employees as well as involvement of these elements in key processes across supply chain. As sighted in Deloitte (2014) report, the supply chain leader firms are substantially more likely to empower their executive leadership in terms of delegation and end to end span of control. This emerges as one of the key difference between supply chain leader firms and supply chain follower firms. Randall et al. (2008) summarize role of organizational leadership in performance based logistics outcomes. According to them, organizational leadership plays role in,

- influencing a performance oriented mindset
- connecting network and firm strategy and
- encouraging performance based logistics competencies

Further as suggested by Cooper and Ellram (1993), role of effective leadership becomes critical when it wants to implement organizational change initiatives as the leaders can help
improve interactions within supply chain members, thereby making change a success. In terms of supply chain, the focus areas are, the leadership style adopted by managers while running their day to-day operations, their priorities, and involvement of team members in decision making. Attempt is made to capture the leadership dimension in terms of inclusion of opinions of supply chain partners and supply chain employees. Also, nature of decision making in terms of consideration of mutually benefits w.r.t supply chain partners, forms yet another dimension of supply chain leadership.

3.1.7 Supply Chain Shared Value Perspective

As stated by Waterman et al. (1980), these shared values represent guiding concepts—a set of values and aspirations for the employees within the organization. Most of the times, these are unwritten unlike formal statement of corporate objectives. They represent the fundamental ideas (many a times of the promoters’ / entrepreneurs’) around which businesses are built. They also indicate how the top management foresee the future for their organizations. They create a common and shared understanding about long term objectives of the organization. They are typically abstract in nature and are reflected through an organization’s vision, mission and values. These are the foundation for everything that the organization does (Kaplan, 2005). These belief systems are often typified by the culture that prevails within the organization. “Corporate culture is the set of overriding beliefs, attitudes, work ethic, and values that are shared by a majority of the people in an organization and which characterize the nature of the group. It is a vital factor in determining the success or failure of the company and something that starts at the top” (Woppman, 2010). Organizational culture is defined as, “a complex set of values, beliefs, assumptions, and symbols that define the way in which a firm conducts its business. In this sense, culture has pervasive effects on a firm because a firm's culture not only defines who its relevant employees, customers, suppliers, and competitors are, but it also defines how a firm will interact with these key actors” (Barney, 1986). In the past, researchers have linked organizational culture to performance with a premise that culture plays a role in generating competitive advantage (Ogbonna and Harris, 2000). They further argue that widely shared organization wide values which are also strongly embedded in the minds of employees can enable management to prepare in advance to tackle employee reactions to certain strategic
options. This helps organizations in terms of reducing their efforts in tackling such undesired consequences.

In the context of supply chain, for the purpose of this study this particular aspect is considered from focal firm perspective. Cadden et al. (2010) have tried to link elements of organizational culture to diverse range of strategic supply chain partner performance outcomes taking into consideration the entire the supply chain. Hence we consider factors such as importance accorded to supply chain function within the context of overall organization strategy, relationship aspects with supply chain partners, alignment of supply chain objectives with organization goals, clarity of objectives for both supply chain employees as well as supply chain partners and employee participation while tracking Supply Chain Shared Value Perspective.

The balance two constructs i.e. Supply Chain Performance as well as Organizational Performance are already covered in detail under literature review.