



Sustainability - A Key Element for a Competitive Business Strategy

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Abstract:

A supply to chain consists of all stages related directly or indirectly from procurement to manufacture, store, and finally deliver goods and services to satisfy the demand of a valued customer. The ardent competition among different supply chain in locally as well as global scenario, improvises organisation to look from rear sight to far sight, i.e. to add both qualitative and quantitative value, while taking care of all the stakeholders of a chain. A holistic integration of supply chain components that have interactions with each other along the chain is crucial for success in a competitive globalised environment. Integration of environmental, social and economic aspect in supply chain not only makes the organisation sustainable, but it improves farm performance. Sustainability provides a competitive advantage over its competitor and plays a major role in developing long term competitive business strategy formulation.

Key Words: Supply chain, Sustainable supply chain integration, farm performance, competitive advantage, strategic performance, competitive business strategy.

Supply Chain Management

The term “supply chain management” arose in the late 1980s and came into widespread use in the 1990s. Prior to that time, businesses used terms such as “logistics” and “operations management” instead. Supply chain management is defined by various authors in different ways. Supply chain management can be defined as a combination of integrated planning, coordination and the control of all processes and activities along the supply chain to provide a value added service while reducing the total cost of all stakeholders in the supply chain (Vander Vorst, Beulens& Van Beek 2000). According to the supply chain management definition, it is a series of activities and business processes that share and transfer physical materials, information and cash across the chain (Håkansson &Persson 2004).

A supply chain consists of all stages related directly or indirectly from procurement to manufacture, store and finally deliver it to customer to satisfy his/her demand, in case of manufacturing industry; and to deliver the services required by the customer in case of service industry. It includes the movement and storage of raw materials, work-in-process inventory, and finished goods from point of origin to point of consumption. Interconnected or interlinked networks, channels and node businesses are involved in the provision of products and services required by end customers in a [supply chain](#)(Harland, C.M.,1996). Therefore, a combination of integrated planning, coordination and the control of all processes and activities along the supply chain are required to provide a value added service while reducing the total cost of all stakeholders in the supply chain (Van der Vorst, Beulens& Van Beek 2000).



In a globalised business environment, supply chain management has become important due to the increase focus on overall revenue growth and performance, instead of merely trying to achieve individual cost reductions (Chandra & Kumar 2000). Many production and servicing firms around the world have identified that transferring cost to other supply chain partners in upstream or downstream nodal points does not increase competitive advantage of the focal firm (Harland, C.M., 1996). Individual supply chain practices cannot improve their own efficiency and effectiveness since they are achievable through the interaction of different members in the supply chain (Kim 2006a). Therefore; supply chain integration is becoming important as it integrates partners or the stakeholders in a long supply chain. The supply chain integration strategy creates value for the firm's customers and draws suppliers and customers into the value creation process (Tan, KeahChoon and Vijay R. Kannan., 1998; Vickery et al. 2003).

Supply Chain Integration

The advent of the competition among supply chains has triggering profound changes in the scope and impact of supply chain management. In the worldview of the early 1980s the implicit assumption towards supply chain was that the single top management team has control over the entire supply chain. At least in theory, optimal supply chain control was obvious and feasible (Akkermans and Dellaert, 2005). This situation has changed drastically in recent years. Poor planning can easily propagate to the whole supply chain and its impact on the overall business is huge. It causes cycles of excessive inventory and severe backlogs, poor product forecasts, unbalanced capacities, poor customer service, uncertain production plans, and sometimes even lost sales (Chang and Makatsoris, 2001). Given the importance of integration of supply chains, few researchers appeared to develop and test such a concept, as most of them have focused on some components of a chain. Having a holistic view towards supply chain is crucial in success of all the presented firms within the chain as supply chain components that have interactions with each other along and entire the chain (Chen and Paulraj, 2004; Fox et al., 2000).

Sustainability

The term sustainable development is defined as "... development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987). Firms need to embed sustainability into their core business. Laszlo and Zhexembayeva (2011) describe embedded sustainability, in the business context, as: "... the incorporation of environmental, health, and social value in the company's core business with no trade-off in price or quality." (p. 100)

Sustainable Supply Chain Management

"Supply chain sustainability" is the management of environmental, social and economic impacts, and the encouragement of good governance practices, throughout the lifecycles of goods and services. - Brundtland Commission. Sustainable supply chain management has its origin in supply chain management. The integration of environmental, social and economic factors were added and extended to develop this novel and holistic concept of sustainable supply chain management. It provides a framework for the efficient use of resources, effective development of infrastructures, protection and enhancement of quality of life, economic or business development whilst protecting the social and environmental norms.



A sustainable supply chain is a system of aligned business activities throughout the lifecycle of products that creates value for all stakeholders, ensures on-going commercial success, and improves the wellbeing of people and the environment. (Business for Social Responsibility, 2007). Sikdar (2003) defined sustainability as “a wise balance among economic development, environmental stewardship, and social equity”. Carter and Rogers define Sustainable Supply Chain Management (SSCM) as the strategic achievement and integration of an organization’s social, environmental, and economic goals through the systemic coordination of key inter-organizational business processes to improve the long-term economic performance of the individual company and its value network (Carter and Rogers, 2008). The basic challenges to all is to use scanty resources to produce goods and services, still benefit society, protect environment and met ever-growing demands from customer for price, quality and availability. The World Commission on Economic Development describes a sustainable business as one “that meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987). This definition captures the three intrinsically related dimensions (social, environmental and economic) of the triple-bottom-line framework (Elkington, 1998).

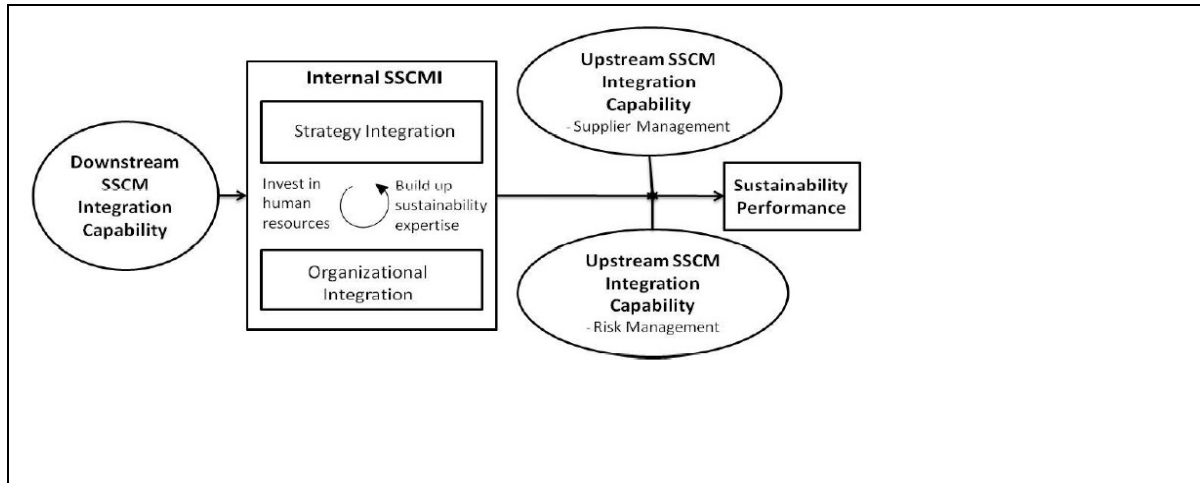
Sustainability affects all industries and governments. Issues encompass an integrated agenda of environmental, social and economic impact. Problems like biodiversity loss and climate change point to the global reach of humanity’s powers and the scale of its risk. For a more general aspect, sustainability may primarily focus on preserving those biodiversity, enriching ecological balances, improving socio-economic condition of the people and maintaining (developing) a decent quality of human life across the globe. For a corporation, on the other hand sustainability viewed as how triple bottom line approach may affect the business scenario and affect in the annual or quarterly budget. At local and global level, sustainability directs practical attention to human condition, ecological systems. Economic health, ecological integrity, social justice and responsibility to preserve holistic balances of the earth for future generation must be integrated while dealing with complex global problems. What apparently exist are a global interest in and an evolving human capacity for achieving a more sustainable world (Esty& Winston, 2006; Jacobson &Delucchi, 2009; Orr, 1994; Starik&Heuer, 2002). More people than ever appear to be learning about and trying to take more substantive, more frequent, and/or more numerous actions in reducing energy consumption, improving water quality, recycling or reusing “waste” products, upgrading their own or their stakeholder network’s health, and assisting in improving their community’s socioeconomic sectors (Danaher, Biggs& Mark, 2007).The greatest benefits are derived by extending the focus as far as possible upstream towards the raw materials, downstream towards the consumer and then back again as the product and wastes are recycled. Therefore, the imperative for sustainable production and consumption develops not only on the principles of reduce, reuse and recycle, but it demands much more than that, innovation and fundamental changes in the business process.Carterand Rogers (2008) define sustainable supply chain management as:The strategic, transparent integration and achievement of an organization’s social,environmental and economic goals in the systematic coordination of key organizationalbusiness processes for improving the long-term economic performance of the individual and itsupply chain.

Sustainable Supply Chain Integration

Various literatures pointed outthat firm compete with each other constantly; therefore, the enablers of competition are extremely vital for them. Rai et al (2006, p. 229) defined supply



chain integration as: “The degree to which a focal firm has integrated its physical, financial, and information flows with its supply chain partners.”Porter (1980) advocated the identification and strategic utilization of linkages within a firm’s value chain (i.e., horizontal linkages) and between the firm’s value chain and the value chains of its suppliers and customers (i.e., vertical linkages). Optimizing linkages between value activities, particularly optimizing vertical linkages, is the core purpose of supply chain integration strategy. Such integration should stimulate superior performance (e.g. Tan, KeahChoon and Vijay R. Kannan (1998):Frohlich and Westbrook 2001;One of the requirements for achieving a SSC is



the integration of the links. Thus, the work of Wolf (2011) identifies the most important factors that enable or prevent the integration of sustainability in SCM. Figure 1 shows the framework of sustainable supply chain integration promoted by Wolf(2011).

Fig 1: Sustainable Supply Chain Management Integration (Adapted from Wolf, 2011).

Similarly, Peters et al. (2011), in the context of pro-active inter-organizational strategies in SSC, identified the resources that allow the establishment of voluntary sustainability initiatives, which are: integration with external stakeholders, cross-functional integration, managing business units with low coupling, SC implementation, improvement process, and cultural structure.Efficiency concerns have shifted from individual elements to overall network efficiency (Ahumada&Villalobos 2009)

Sustainability Drivers

Over the past few years, global organizations have recognized sustainability as an increasingly important strategic goal (Closs et al., 2011). Linton et al. (2007) propose that sustainability as an integrative concept is following the same trajectory as global warming by both the public and private sectors. The magnitude of this concept is shown by the global interest in sustainability as evidenced by the European Union (EU) which is a highly influential proponent of sustainability (Linton et al., 2007).

The principal expected benefit for SSM is customer satisfaction. When companies undertake sustainable development initiatives, they are trying to improve their image with their customers and stakeholders, and to create a positive impression among their partners. This observation confirms that having a sustainable supply chain is mainly a marketing decision



and thanks to it companies improve customer perceptions. In this perspective, selecting and managing the suppliers is a necessary step (Bai and Sarkis, 2010). It is observed that government regulatory requirements and perceptions of responsible behaviour are significant motivations for SSM. Rao and Holt (2005) highlight positive and encouraging results for those who get involved in sustainable supply management. Surprisingly, cost reduction is not a significant reason for SSM. This issue is relatively less important compared to other arguments such as supplier's capability to innovate, and quality or trust. This distant position is certainly due to the fact that it is not easy for companies to evaluate sustainable development and thus to assess the financial gains. The lack of green IS/IT adoption in order to evaluate the eco-efficiency of SSM has been highlighted by Walton et al. (1998). The major reasons influencing SSM adoption include top management vision, government regulatory requirements, type of business sector, customer demand, competitor actions, and, other external stakeholders such as NGOs. If the potential gain to be had from pursuing SSM is under question, it is essential for companies to evaluate external and internal pressures from the perspectives of corporate, social and environmental responsibilities. Internal drivers are mainly associated with organizational factors such as top management vision, shareholders or founder's value and middle management and employees' commitment (Bowen et al., 2001). A positive top management vision of SSM influences the involvement of company in environmental initiatives and practices (Zsidisin and Siferd, 2001). By becoming more environmentally friendly, they expect higher competitive advantage (Porter and Vander Linde, 1995), increased company's brand image (Bai and Sarkis, 2010) and environmental performance (Hervani and Helms, 2005). Interestingly, Walker et al. (2008) observe that middle management commitment and employee involvement are more and more related to SSM. Environmental motivations and ethical value filtering the whole organization, becomes a "way of life". Companies' environmental efforts are also driven by external reasons. Government regulation and legislation are major pressure for companies (Walton et al., 1998; Zhu et al., 2008). Their desire to be thought leader for sustainability or innovator for new environmental regulations, transform this government regulatory constraint in a motivation or a positive driving force in SSM. This can become a source of organizational capabilities that generate competitive advantage (Rao and Holt, 2005). Whatever are the major reasons influencing SSM adoption (internal or external), companies must be aware of the opportunities created by dealing with environmental issues. These can lead to the gain of new customers, to economic benefits, to sustainable capabilities, competitive advantage, etc.

Sustainability has become a significant concern for companies that integrate environmental and social issues in their strategy (Srivastava, 2007). Today, firms are aware of the importance of their partners' sustainable responsibility in their own development (Dyllick and Hockerts, 2002; Bai and Sarkis, 2010) and environmental sustainability of any organization is impossible without incorporating Sustainable Supply Chain Management (SSCM) practices (Preuss, 2005).

Sustainability as Competitive advantage

Today, the nature of competition has changed due to the quest for sustainability; therefore companies that gain the knowledge of this changing environment and set the sustainability as their goal will enjoy the advantages of first movers (Nidumolu et al. 2009). In this global competitive marketplace, acquiring critical knowledge and information is the key element in company's survival and gain of competitive advantage in both domestic and international arena (Guo 2007). In addition to this, Rodriguez et al. (2002) emphasize on the importance of



the fact that natural resources are scarce; consequently, firms need to think of developing new capabilities, resources and activities. Companies also have to be responsible towards the society and develop social resources that will result in creation of sustainable competitive advantage (ibid).

The strategic part of supply chain management (SCM) necessitates consideration of the possible implications of efficient linkages between corporate competitive capability and supply chain strategy (SCS) in order to develop logical and integrated strategies. SCS can be referred to as the strategy outline of statements associated with sourcing products, demand management, capacity planning, the conversion and distribution of finished products, communication, and delivery. Seeing these as the main business processes associated with producing a company's product, it is significant to link them to the capability of the entire business. In other words, a firm is obliged to develop strategic capabilities in order to manage the supply chain, which is the foundation for achieving high level competitive capabilities. A set of detailed SCS should be developed for each process within the supply chain. In addition, a good understanding of the connection between corporate competitive capability and supply chain strategy is required when these strategies are developed.

Nevertheless, the essential point is that SCM assertions should be strategic and must be associated with a firm's business strategy and capability. The literature has not been consistent in showing the interactive relationship between competition capability and SCM strategy or between firms' competitive capability and supply chain strategy. A reasonable explanation for this discrepancy may be the failure of empirical studies to address specifically the continuation, role, and potential benefits of strategic "switch." The practical capabilities of a supply chain are executed to accomplish superior supply chain performance (cost, quality, flexibility, and delivery performance). This necessitates internal cross-functional amalgamation within a firm, and external integration with suppliers and/or customers (Wisner and Tan 2000; Kalra and Soberman 2008).

Firm Performance and Sustainability

Sustainable supply chain management expands the concept of sustainability from accompany to the supply chain level (Carter and Rogers 2008). Following Fritz and Schiefer(2008), sustainable supply chain management should provide companies with tools for improving their own and the sector's competitiveness, sustainability and responsibility towards stakeholder expectations. Sustainable supply chain management, however, presents greater challenges for integration of actors along the supply chain to address impacts of production and consumption within the wider sets of performance objectives that incorporate economic, social and environmental dimensions of sustainability (Linton *et al.* 2007; Carter and Rogers 2008; Seuring and Müller 2008).

Sustainability is increasingly seen as a driver for corporate performance. Companies featuring in the Dow Jones Sustainability Index show a higher performance on economic dimensions like sales growth as compared to similar companies without a position in the index. Results indicate that leading "index" firms are significantly larger, have higher levels of growth and a higher return on equity than conventional firms (Artiach *et al.*, 2010). Implementation of sustainability is enhanced by a number of capabilities at the firm level. If used properly, these capabilities accelerate the implementation of sustainability and will hence drive future growth and performance. Keijzers *et al.* (2008) found that if capabilities of a firm are used to enhance



sustainability in either positioning & marketing or in the supply chain, more success is achieved with implementing sustainability in general. Today, consumers are willing to pay small margins for additional green product features, like “organically grown” in the case of food. While multinational companies strategically opt sustainability in their practices, they are very much aware of the fact that sustainability must be implemented in all stages of the supply chain, otherwise the end product will be “only partly” sustainable and will not generate expected benefit.

Strategic Performance

The effect of globalization impacts a change in global as well as domestic market. Therefore, a quick and appropriate reaction to these changes is vital for a company to be successful in the market. According to Porter’s competitive strategy principle (Porter 1980; Porter 1998), the purpose of strategy is to go against the perfect competition to get unique position in the market. In today’s hyper-competitive environment, firms compete constantly along several competitive dimensions (Swafford et al. 2006). In this competition era, technological changes, global market effect, and close competition is both creating threat to firm and providing opportunities for them simultaneously. According to Porter (1990), competitive advantage will be gained from the organisation’s environmental positions as well as their inbound properties of industry and firms. Customers, suppliers, potential entrants and substitute products are all competitors that may be more or less prominent or active depending on the industry. So, awareness of these forces can help a company stake out a position in this industry that is less vulnerable to attack (Porter, 1979).

In order to achieve competitive advantage, a firm should consider both its internal capabilities and external environmental factors (Appelbaum, 2000). So, what matters about gaining a competitive advantage can be mentioned in two separate but related concepts: First, a firm can create a specific competitive advantage according to the evaluation of its key capabilities that is based on value creating, rare, inimitable (differentiated from competitors), and complicated (non-substitutable) assets and resources referring to the resource-based view (RBV) (Barney, 1991). This advantage makes it possible for the firm to achieve positions and level of performance better than competitors. Second, complicated factors of the environment and its uncertainty lead to imitation of the advantage with the competitors or decreasing its value for the customers (Sadri & Lees, 2001). According to Richard et al. (2009) organizational performance encompasses three specific areas of firm outcomes: (a) financial performance (profits, return on assets, return on investment, etc.); (b) product market performance (sales, market share, etc.); and (c) shareholder return (total shareholder return, economic value added, etc.). The term Organizational effectiveness is broader. Both accounting and market definitions have been used to study the relationship between corporate social responsibility and firm performance (Orlitzky, Schmidt, & Rynes, 2003).

Formulating a competitive business strategy

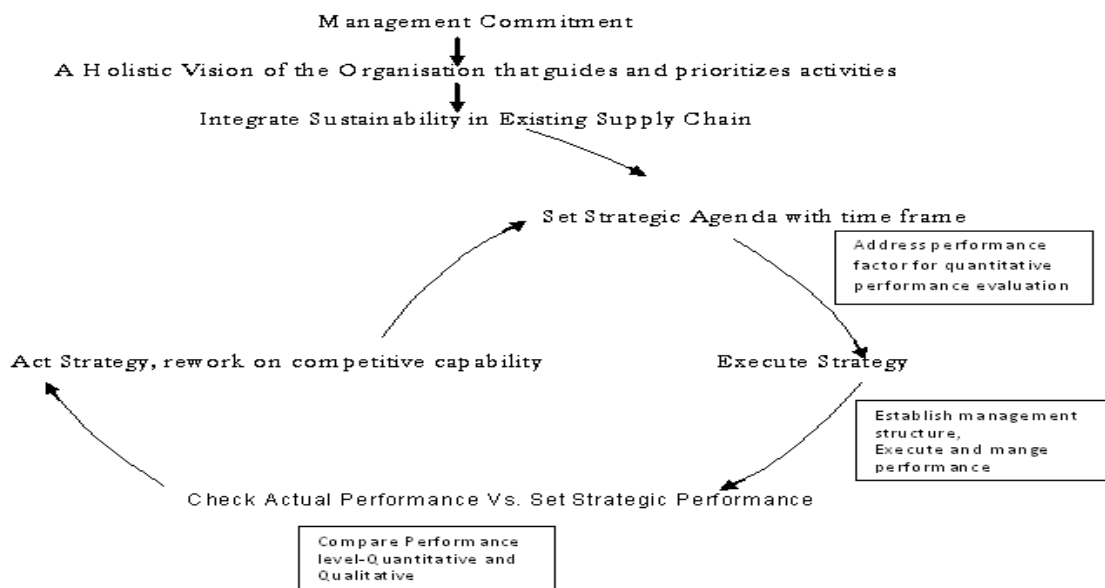
To formulate a long term competitive strategy, a firm should primarily focus on internal integration to develop internal capability. Supply networks will mutually contain many cultures, values and norms; it is therefore, crucial to have well defined objectives and shared key performance indices to benchmark the performance (Christienet al. 2006). Various researchers highlighted that sustainable supply chain management helps to lever business values. However, there are many challenges that a company has to face when handling sustainable issues (Darmanata et. al.2010). It is necessary to establish potential methods to



integrate environmental issues and legislation, their impacts and relevant costs under one umbrella when aligning with strategic objectives and goals of the company.

A strategic frame work therefore can be established first to build capabilities to ensure that a long-term focus and commitment to sustainability permeates the entire organization. This framework tries to provide a road map for developing a business strategy. It integrates sustainability in supply chain, which is based on the benefits draws from different literature. The most important step in this is the management commitment towards inclusion of sustainability in their business strategy. This differentiates one organization from its rival organisations.

The next step is building or enhancing a robust approach to sustainability involve strategy that describes what an organization wants to do and outlines an action plan that will bring that



Framework of Strategic Performance Improvement

vision to life. While making holistic vision for enhancement of performance, companies must scan business environment (both Local and Global) to understand existing risks, competencies and opportunities across their supply and value chain. It can be both short term and long term strategy based on the nature of the company, vision and mission. They must consider strategic options and develop new competencies to move from strategy to execution. Equally important, however, is the articulation of a holistic, long-term vision for sustainability and to communicate properly among the stakeholders. For example, some organizations recognized its broad sustainability issues falling into three areas: economic, social and environmental and kept performance parameters of these three along with financial and market related parameters. Within each area, the company determined priorities based on business risk, stakeholder concerns, community needs and, most importantly, the company’s values and strategy. The result is an integrated strategy for sustainability that is embedded in the organization and guided by clear priorities. Sustainability leaders rarely invest in one-off initiatives. Rather, they look for opportunities across their organizations and then adopt an organized approach to building integrated programs that not only address challenges and drivers today, but also position them for competitive advantage in the future (Berthon et. al,



2010). Execution strategy is the most crucial step of this framework, which focuses on effectively delivering an integrated program. Regardless of the path selected, the ability to prioritize the specific initiatives is crucial. It is been observed in different literature that many organisations fall behind their competitors because either they do not address sustainability issues or when they include sustainability, they simply did not know what to tackle first. As a result their total strategic performance score came out lower compared to high performing organisations, which have includes sustainability in their supply chain effectively and efficiently. In many instances, inaction is rooted in a lack of understanding of the drivers for sustainability. Companies that fail to recognize the importance of, say, cost reduction as a driver may forego opportunities to achieve significant bottom-line results in favor of other initiatives that do little to encourage better business performance (Berthon et. al, 2010).

The next logical step is check actual performance versus set performance, to know the performance level. Based on the performance level, rework of existing strategy can be made. Organisations can check quantitative performance at each set parameters and thereby prioritize due course of action, when new strategy formulation will be made. By this a continual improvement of strategic firm performance can be achieved, and gap between high performance and moderate performance can be reduced.

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