Strategic alliances in integrated supply chain management

The objective of the study is to offer a theoretical framework to explain the positive impact of interdependence between strategic alliance partners with regard to the integration of work activities, information and alliance outcomes from the perspective of supply chain management. Methodology – This approach adapted is a secondary approach where in the evolution of strategic alliances is comprehensively studied thus establishing the needs of organization across various time periods. Literatures of strategic alliances are approached from a strategic and supply chain perspective. Findings – In the dynamic and ever changing business environments, strategic alliance has become an indispensable tool for the effective and efficient performance of a supply chain. With rapidly changing product life cycles and decreased durability of technologies, strategic alliances no longer became a strategic option; it became a necessity for an organization to survive the competition. Research limitation – The information in this article is based on a sample literature available in this area. So the scope of information discussed in this article is limited to this literature sample. Practical implications – The review of this literature highlight the importance of strategic alliances in supply chain management from the strategic perspective and explain the importance of information technology for effective integration of supply chain.

Introduction For the purpose of this study, a strategic alliance is a trading partnership which links certain business processes of two or more companies which may augment effectively the competitive strategies of the firms involved while providing mutual benefits by exchanging technologies, skills, resources, or products. A strategic alliance can vary in form, function and framework. Increasing market competition, reduced product life cycle, high capital investment, increasing demand for innovation and new technologies are bringing additional pressure on companies to come up with new strategies for sustainable competitive environment (Denise Cristina Nishimura, 2010). In addition to these, all the exogenous factors like political, economic, social, technological and ethical factors related to automotive industry were the antecedents for automakers to engage in alliances.

With the fundamental shift in power to the customer and customer dictating the terms of the market, issues of interdependence among members of supply chain became more critical. Winning customer loyalty becomes more difficult in this volatile environment and it becomes difficult for firms to compete in this competitive environment with inefficient and ineffective supply chains. So organizations rather than maintaining traditional “ arms-length” relationships and having “ silo” type structures, should strategically segment their supply chain partners and form durable “ arms-length” relationships to allocate different levels of resources to each group (Damien Power, 2004).

With ongoing globalization and increased competitiveness in the market place, it becomes difficult for the organization to have foot hold across many countries which require huge investment, technological agility to serve local customers and to overcome various environmental constraints like governmental regulations etc. So companies by forming alliances can share the financial, technological resources and can effectively serve multi-domestic markets.

Strategic alliances are an instrument for combining co-operation and competition in corporate strategies. Patterns of co-operation and competition can be categorized into three groups (Nam-Hoon Kang, 2000):

Co-operate while competing: Companies may continue to compete while they co-operate in some business areas in order to learn from each other to strengthen weak areas.

Co-operate among them and compete with others: Companies may form alliance to compete with strong third parties.

Co-operate, then compete: Companies co-operate among themselves to gain competencies and compete once they achieve a common standard.

Major Alliances in Automobile Sector

Source: Adopted from Kang, N. and K. Sakai (2000), “ International Strategic Alliances: Their Role in Industrial Globalization”.

Evolution of Strategic Alliances

In the evolution of automotive industry it started with artisan production, passed through “ Henry Ford’s” mass production to the present state “ State of the art” technologies. Throughout the evolutionary past automakers formed alliances in the form of mergers, acquisitions and joint ventures. Strategic alliances have been formed between firms on a national or international basis. The current form of alliances is distinguished from the past forms. In the “ new” alliances firms remain independent from each other. During the arrangement there are common goals, but each firm has its own strategic goals. The partner firms are frequently collaborating reciprocally in their core areas of their competences rather than in peripheral businesses (Denise Cristina Nishimura, 2010).

As on 2004, 80% of the passenger cars have been manufactured by the ten firms of the five industrialized countries. The strategic alliances in the passenger car industry happened mostly among countries like USA, European Union, Japan and Korea. General Motors and Toyota, Ford and Mazda, Chrysler and Mitsubishi have formed strategic alliances (Ayegul Samsunlu, 2006). Out of these only small number of companies leverage on supplier relationships, involving suppliers in their key business processes.

Traditionally companies followed multi-supplier model, avoidance of long term contracts to enforce high bargaining power and keep the margins low. In this model organizations view themselves as individuals which are creating value to the customer by producing the deliverables. This is later dominated by a co-operative model where in companies share vital information to the suppliers, recognize areas of common interest, areas of distinctive competence among suppliers to leverage on their resources and integrate suppliers to their business process for effective and efficient performance of supply chain activities. In this organizations view themselves as a part of supply chain which creates value to the customer. This integration process among various partners of the supply chain is further facilitated by development in technological solutions that integrates information that surpasses organizational boundaries. This concept of supply chain further evolved into supply networks where in many firms in the supply chain are a part of different supply chains (Damien Power, 2004).

Reasons for Strategic Alliances

One of the reasons the automobile industry allies with foreign firms is to survive global competition under a weak relationship between the government and the industry (Hyun Young LEE, 2005). The reasons for forming strategic alliances changed over a period of time.

Reasons for Alliances

(Source: Adopted from Margarita Isoraite " Importance of Strategic Alliances")

Strategic alliances are supposed to create value for partner firms and their customers. This value is generated through synergy among the partnered firms. A large number of factors are responsible for creating the value like access to common resources, fit between partners' needs, cost sharing, market penetration, scale economies etc (Bing-Sheng Teng, 2003).

An alliance can create value in three possible ways. They are (Bing-Sheng Teng, 2003)

Increases unit sales

Lowering average costs per unit

Increasing the customer willingness to pay

An alliance along with leveraging on the competencies should also overcome the issues associated with partnering. In August of 1966, Nissan took over Prince. Besides the Nissan-Prince merger, six separate auto producer tie-up arrangements were negotiated in the late 1960s; Toyota-Hino (1966), Toyota-Daihatsu (1967), Fuji-Isuzu (1967), Mitsubishi-Fuji-Isuzu (1967), Mitsubishi-Isuzu (1968), and Nissan-Isuzu (1966). Toyota-Hino and Toyota-Daihatsu mergers materialized. It is notable that the product lines of three companies were complementary; Toyota's passenger cars, Hino's trucks and Daihatsu's mini cars. All three firms were profitable in their primary line of products. This alliance created value because the activities in which these firms are competent are complementary, so the companies leveraged on these to generate added value. On the other hand, the four negotiations involving Mitsubishi, Isuzu, and Fuji failed because they could not overcome the various obstacles; product line overlapping, management independence, and antagonism between firms (Hyun Young LEE, 2005).

The aims of strategic alliances are product differentiation, reduction in development costs, optimization of manufacturing capacity, reduction in time to market, improving productivity, speeding up the product development cycle, spreading the high cost of R&D and leveraging know-how where ever. For example, GM has created strategic alliances. It has created strategic alliances with Suzuki for small cars. It has created strategic alliance with Toyota for technology, Honda engines for Hummer, Fiat for regional dominance and Isuzu for diesel engines and trucks (Ayegul Samsunlu, 2006).

Some prime reasons for strategic alliances are (John D. Daniels, 2009)

To spread and reduce Costs

At a small volume of business, it may be caper for companies to contract the work to a specialist rather than handle it internally. A specialist can spread the fixed cost across many companies. Similarly a company having excess production and sales capacity that it can use to produce or sell for another company. Using this capacity for production or selling, the contracting company reduces its costs by not investing in fixed assets. Ford (US) had an alliance with a Japanese carmaker, Mazda. Ford focuses on cost reduction through communalization of car platforms, power trains (Nam-Hoon Kang, 2000).

Synergy and competitive advantage

Achieving synergy and a competitive advantage may be another reason why firms enter into a strategic alliance. Competition becomes more effective when partners leverage off each other’s strengths, bringing synergy into the process that would be hard to achieve if attempting to enter a new market or industry alone (Margarita Isoraite, 2009).

To specialize in competencies The resource based view of the firm holds that each company has a unique combination of competencies. Companies seek to improve its performance by concentrating on those activities that best fits its competencies, depending on the alliance partners for supply of products, services or support activities for which it has lesser competency.

To avoid or counter competition Sometimes markets are not large enough to hold many competitors. So, companies have to band together so as not to compete.

To Gain Knowledge Many companies that are open to new ideas and have the capacity to implement innovations, pursues collaborative arrangements to learn partner's technology, operational practices, or home markets so that their own competencies will broaden and deepen, making them more competitive in future.

To gain location specific Assets Cultural, Economic, Political and competitive differences among countries may create barrier for organizations to operate abroad. Then companies may seek local organizations to collaborate for managing local operations. General Motors and Ford are forming alliances with Japanese firms to build on their capacity and presence in the region. General Motors is jointly developing mini-vehicles for Asian markets with Suzuki and will assemble these vehicles in Suzuki's factory in Japan or other Asian countries (Nam-Hoon Kang, 2000).

To overcome Governmental Constraints All the countries limit foreign ownership in some sectors. So companies have to partner with local organizations to serve these markets where 100% FDI is not permissible.

Fastest means of entering markets Collaborative arrangements offer a faster initial means of entering multiple markets. Moreover, if product conditions favor diversification, it is more compelling to establish a foreign collaborative arrangement.

To minimize exposure in risky environments Companies worry that political and economic changes will affect the safety of assets and their earning in their foreign operations. One way to minimize losses is to minimize the asset base in foreign countries by collaborations.

Types of Strategic Alliances

These alliances range from relatively noncommittal types of short-term, project-based cooperation to more inclusive long-term equity-based cooperation namely mergers and acquisition, joint ownership, joint venture, formal cooperative, informal cooperative.

Horizontal Alliances

In the automobile industry, horizontal alliances occur when an automaker links with another automaker with reciprocal collaborations in joint activities. Partners can setup joint production/infrastructure to achieve economies of scale, or joint sales in order to gain more market share, or basically to transfer technological knowledge.

Licensing (John D. Daniels, 2009) In Licensing, a company (the licensor) grants rights to intangible property to another company (the licensee) to use in a specified geographic area for a specified period. In exchange, the licensee pays a royalty fee to the licensor. Used for Patents, Copyrights, Trademarks and other intangible properties. The economic motive behind licensing is for faster start-up, lower costs or access to valuable resources.

The advantages of licensing are

Licensor can cover many markets in faster speed at low cost

Licensor gets tie-ups with local distributors.

Understands local market

Disadvantages of licensing can be diffusion of technology and losing the market to licensee. The licensee can become a potential competitor. In the alliance between GM and Russian Avtovaz, GM's licensed its technology to Avtovaz, to produce sport utility vehicles in Russia (John D. Daniels, 2009).

Joint Ventures A joint venture is defined as a co-operative business activity, formed by two or more separate firms for strategic purposes, which creates a legally independent business entity and allocates ownership, operational responsibilities, and financial risks and rewards to each partner, while preserving each partner's separate identity or autonomy (Nam-Hoon Kang, 2000). The independent business entity can either be newly formed or the combination of pre-existing units and/or divisions of the partners. Joint ventures generally aim at making the new company a self-standing entity with its own aims, employees and resources (Nam-Hoon Kang, 2000). Some reasons for joint ventures are

Exploiting Capabilities and Expertise (Nishith Desai, 2011) Companies having complementary skills and capabilities engage in mutual co-operations, so that they can contribute to the co-operation. Each of the members concentrates on their competencies and depends on their partner for complementary skills so that the total value generated by the partners will be more than the value generated individually.

Leveraging Resources (Nishith Desai, 2011) With the globalization, it became difficult for one company to pool all the resource like financing, skilled manpower to serve various markets. Access to labor, capital and technological resources have become driving forces for modern businesses to withstand the competitive dynamics in the changing environment. Managing the business across the borders became more complex compelling the companies to form alliance by entering into a Joint Venture.

Advantages of Joint venture includes entering a foreign country against FDI regulations , sharing risks as well as costs, established channel partners and relations of the partner etc (John D. Daniels, 2009).

Disadvantages include conflict of vision/interest, both parties not contributing equally, lack of complete control, Market sharing leading to market contraction etc (John D. Daniels, 2009).

Examples: Hero Honda started in 1984 as a joint venture between Hero Cycles of India and Honda of Japan. After that it became the largest two wheeler manufacturer in India. In August 2011 the company was renamed Hero MotoCorp with a new corporate identity after the joint venture dissolved.

Acquisition (Eszter Molnar, 2009) The fastest way of entering new markets is by acquisition where the larger firm purchases more that 50% of stake in the smaller firm. It enables the buyer to benefit from existing structures, brand, relations, channels and business knowledge in case of a foreign takeover.

Advantages (John D. Daniels, 2009).

Saves time and quick to market – due to well established distribution and sales channels

Competition in the market remains unchanged

Disadvantages (John D. Daniels, 2009).

Obsolete technology

Resources might not be in best class

Processes and practices might not be world class

Example: Porsche’s gambit, where in it steadily increased its stake in Volkswagen since 2005 and became the majority stake holder in Volkswagen by October 2008 (Eszter Molnar, 2009).

Tata motors after the acquisition of British Jaguar Land Rover (JLR) business became a major player in the international automobile market. The main reason for the acquisition would be acquiring intellectual property rights related to the technologies.

Merger Merger is an horizontal equity alliance, where two companies often of about the same size, decide to go forward as a single company that remain separately owned and operated. An ominous merger was the DaimlerChrysler when the German based Daimler-Benz merged with US based Chrysler Corporation in 1998. It is known as “ Merger of Equals”, but it didn’t last long and they separated in 2007. Later Chrysler made a strategic alliance with Fiat under the terms that Fiat will take 35% of stake in Chrysler in exchange for supplying high fuel-efficient power train technology and small and medium sized vehicle platforms. This alliance helped Chrysler to penetrate European and South American markets and Fiat to get access to US market (Eszter Molnar, April 2009).

Vertical Alliances Vertical alliances occur when the automaker builds relationship with suppliers who provide goods and services in any business process along with the vertical chain. Basically vertical relations were mostly based on the decision making process of “ make-versus-buy”. Making decision means that the automaker produces in-house. One of the main reasons behind it is to protect its core competitive advantages. Buying decision means that the automaker purchases or outsources the production of goods or services. The shift in the strategic outlook from organizational view to supply chain view is compelling organizations to produce the core products in-house and contract the production and control of peripheral parts from strategic supply chain partners. Nowadays, in the automobile industry 30% of the parts of a car are produced by automakers, while the other 70% of the parts, which would be assembled in the final product, are produced by suppliers (Denise Cristina Nishimura, 2010).

Contract Manufacturing (John D. Daniels, 2009) In contract manufacturing, the parent company approaches a firm known as contract manufacturer with a design/formula. Once the contract is finalized then the contract manufacturer manufactures the components/products for the hiring company. The company becomes free from managing the labor but technological diffusion will occur but only for manufacturing process.

Examples like manufacturing contracts between a major carmaker and a local Chinese firm, Toyota/Tianjian Automotive Industrial and Renault/Dandong Automotive Works.

Turnkey Operations (John D. Daniels, 2009) Turnkey operations are a type of collaborative arrangements in which one company contracts with another to build complete, ray to operate facilities. Companies building turnkey operations are frequently industrial-equipment manufacturers and construction companies. Customers for turnkey operations are frequently governmental agencies.

Strategic Outsourcing

Strategic outsourcing is the alternative way for the company to accomplish its value chain activities rather than performing the entire value chain activities. In the current market place there are quiet a good number of companies that are specialized in some activities. Outsourcing these activities to the specialized companies strengthen the companies' business model either by improving the efficiency by decreasing the cost or by enhancing the effectiveness by creating differentiating advantage in terms of quality, variety, speed of the supply chain.

Subcontracting is necessary because it facilitates firm to concentrate on its core competencies; it allows for an economic method of production; suppliers are encouraged to specialize, which allows economies of scale in technology; to encourage smooth production by utilizing sources of supply. Economic Dualism theory suggests that large companies create dual economy by subcontracting, in which they can expand their resources in times of fortune and reduce capacity in times of recession, thus using sub-contracting as a cushion against economic cycles. However this theory fails in present conditions where subcontractors are seen as partners sharing risks, rewards and revenues (Paul D Cousins, 2003). This outsourcing can be entire function like Nike outsourced its manufacturing function or it can be a part of the function like many companies outsource the management of their payroll/pension systems while keeping the HRM activities within the system. A survey estimates that some 56% of global product manufacturing is exported to manufacturing specialists (Hill & Jones, 2008).

What to Outsource

With customer being the key focus in these present dynamic environments, companies' keeps on trying to increase the total value generated to the customers by increasing the gap between customer willingness to pay and costs associated with the product. To achieve this companies outsource activities that they think the specialized company will generate more value by performing that activity. In the environment of growing customer demand for supply chain efficiency and effectiveness it is recommended for the company to perform the supply chain activities that it has distinctive competence and outsource the rest of activities. In many cases out-sourcing helps companies to obtain better operational expertise that would be difficult for the company to develop in-house. Outsourcing is growing at a rate of 23% per year because companies are discovering that they do not need to do everything themselves. Yet, not all processes are outsourced. Outsourcing the wrong process could be counterproductive, expensive, or even fatal to a company (Andrea and Dana Meyer, 2002).

Core vs. Non-Core (Andrea and Dana Meyer, 2002)

The most crucial aspect of outsourcing is in making the distinction between the core competencies, which should be kept in-house, and the non-core activities, which are candidates for outsourcing.

One element of the core vs. non-core distinction is the issue of controlling one’s destiny. Becoming excessively dependent on partners reduces the strategic options available to a company.

Processes that nurture the core, protect the core, or help the company exploit its core competencies are also held internally. Companies need to think carefully about what they wish to sow, nurture, and reap in-house in order to harvest long-term profits.

Five-Stage Model (Andrea and Dana Meyer, 2002)

Prof. Fine enumerated five variables that predict the wisdom of in-sourcing vs. outsourcing.

Modularity of components/processes: Modular elements are potential candidates for outsourcing than integral elements of a product or business

Quantity of providers: The fewer the number of providers, the less outsourcing makes sense

Clock speed: The faster the clock speed, the more you want to in-source.

Importance to customer: If the customer cares about it, don’t outsource it.

Benchmark performance level: if you have best-in-class performance on the process, don’t outsource it.

Value Equation (Andrea and Dana Meyer, 2002)

A value equation used by Unilever to evaluate the added value generated by outsourcing activities to supply chain partners is

" Net Value = Internal Value from Focus + External Value from Provider – Transaction Costs"

This equation helps only quantitatively where as many qualitative parameters like whether the activity is core or non-core should also be considered. For activities that are non-core, the equation helps the company assess the value of outsourcing that non-core activity. Although the equation looks like a simple financial model, many of the terms have qualitative elements (Andrea and Dana Meyer, 2002).

Value Equation: Internal Value from Focus (Andrea and Dana Meyer, 2002)

With outsourcing, management and employees can focus more on what is important. So organizations create more value by focusing their valuable resources on their core activities and thus increase the value to the customer.

Value Equation: External Value from Provider (Andrea and Dana Meyer, 2002)

Providers can create value by being more efficient, more effective, or more innovative than the internal counterpart. This value is the key part of the value proposition. The source of the provider's value can fall into one of two categories:

Value from high economies of scale

Value from high levels of expertise.

Specialist provider achieves scale economies by aggregating volumes of activities from multiple companies through standardization and decreases the unit costs across the supply network. Value from high levels of expertise occurs when the provider can accumulate large quantities of knowledge that would be hard for each client company to replicate.

Value Equation: Transaction Costs (Andrea and Dana Meyer, 2002)

Transaction costs are inevitable in the outsourcing. Costs of internal transactions which are in general informal are very low and hidden where as the transaction costs with the outsourced company are visible and substantial. Extra transaction costs arise from having to formally specify what the partner is to do, managing that external activity. Companies decompose transaction costs into 3 categories:

Oversight costs: Cost of managing the relationship, performance, information exchange etc.

Switching costs: Cost of changing from insourcing to outsourcing

Risk: The potential costs of problems associated with the outsourcing arrangement

Evolution of Outsourcing Subcontracting model has changes drastically over last two decades. One of the most common strategies was “ Multiple

Sourcing”, which arises from the principle “ Not to keep all your eggs in one basket” which was adequate when competition is local or national. With companies becoming global, competition has intensified, time to market cycles has to be kept low, increased innovations as customers demanding high quality products, at competitive prices became difficult with multiple sourcing strategy. This shifted the focus of companies towards “ Parallel Sourcing” strategy where companies use single source within model groups and multiple sources for different products. This provides buyer benefits of sole sourcing like closer working relationships, information sharing etc and benefits of multiple sourcing like security of supply and market pricing (Paul D Cousins, 2003).

This approach is followed by what is called “ Network approach” which is complemented by concepts of Supplier tiers. In this approach suppliers are organized into Tier I (Major assemblers) followed by Tier II (Sub-assemblers). This kind of supply structure has become popular with in automotive and aerospace industry where in it allowed buyers to work with fewer, sophisticated suppliers. As a result buyers rely on fewer, powerful suppliers for supply of sub-assemblies (Paul D Cousins, 2003).

With these high levels of dependencies, scholars are considering near paradigms like agile, lean and mass customization techniques. These paradigms are creating high degrees of integration across supply chain that will require more sophisticated relationship management across supply chain partners. If managed properly firms can reduce costs, decreases time to market and increases responsiveness to customers at lower costs (Paul D Cousins, 2003).

Benefits of Out-Sourcing

Cost reduction and cost savings Out-sourcing reduces the costs if the price you are paying for the company is less than the costs that you incur if the same activities are performed in-house. Specialist companies are able to perform activities at a lower cost as they can realize economies of scale by performing the same kind of activity for various companies. These specialized companies invest more in efficient-scale manufacturing facilities/processes to spread the costs against large volumes and bring down unit costs.

Specialists also save costs through learning effects more rapidly than the clients. These companies learn fast how to operate the processes more efficiently compared to its clients. Since most of the out-sourced companies are based at low-cost global locations, costs can easily drive down (Hill & Jones, 2008).

Enhanced Differentiation Companies should be able to differentiate its final products by out-sourcing certain noncore activities. These companies can provide more reliable products by strongly focusing and achieving competence in that activity thus decreasing the defect rate. Most of these specialized companies have adopted Six Sigma methodologies and bring down error rates, thereby increasing the reliability of product.

For example carmakers outsource specific kinds of vehicle component design activities such as microchips and headlights to the specialists who have earned reputation for design excellence (Hill & Jones, 2008).

Focus on core business Strategic out-sourcing makes the managers to focus their energies and companies resources in performing the core activities that can create sustainable have more potential to create value and competitive advantage. By this companies enhance their competence and push out the value creation frontier and create more value for their customers (Hill & Jones, 2008).

Flexibility Companies gain access to new technologies and use supplier's technology to accelerate new product development. Companies can also adapt to changing business environments by changing suppliers if the existing suppliers using technologies that are obsolete. Thus companies mitigate the risk of investing in resources/technologies that have short life cycles (Yijie Dou and Joseph Sarkis, 2010).

Local Expertise

Partners also bring local expertise to the relationship. Although global companies would like to create economies of scale based on world-wide uniformity, such uniformity is not always possible. Local government regulations impact ingredients or packaging. Local customs and trends affect marketing or product mix. Supplier partners (l