

General overview of hyundai motors management essay



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Over the years, many companies have reduced their business cost and expanded their product lines through an aggressive supply chain strategy. Low cost-country sourcing, multi-tiered supplier networks and business process outsourcing are among supply chain initiatives that companies have employed. The benefits of these initiatives are apparent, companies are able to reduce cost of goods, develop new markets, and free up resources to focus on core value adding processes (PWC, 2010). However, these benefits are often accompanied by greater supply chain complexity and exposure to new risk. All supply chain are vulnerable to one type of risk or another (Snyder et al 2006).

1. 1 General Overview of Hyundai Motors

Hyundai motor company (HMC) was established in 1967 to design , assemble and manufacture cars for local consumption and export (Wright et al. 2009). The company is South-Korea's largest auto-maker contributing about 50% of their total automobile manufacturing output. It operates the world's largest integrated automobile manufacturing facility in Ulsan, which has an annual production capacity of 1. 6m units (Chung-Koo, 2010).

Hyundai Motor company has manufacturing/assembly plants in parts of Europe, North America, Africa and Asia but mainly produces and supplies its main components from the Manufacturing plants in south-Korea. Labor relations has always being a confrontational issue between the top management and labor unions, with workers constantly demanding for better working conditions, increased wages and union's involvement in management decisions. Complex organizations such as Hyundai are very

interdependent, with a single disruption creating a ripple effect that can dramatically impact the entire operation (Peck, 2005).

This essay gives an insight on the supply chain disruption at HMC in 2003 caused by a 47-day labour strike in their South-Korean plants, which led to about US\$1.2 billion in loss sales (Globalinsight, 2003), with emphasis on the disruption caused by the strike on their European operations.

2.0 Literature Review

Risk is defined as a chance of danger, damage, loss, injury or any other undesired consequence (Harland et al, 2006). The royal society (1992) defined risk as the probability that a particular adverse event occurs during a stated period of time or result from a particular challenge.

There are two broad categories of risk affecting supply chain Network. The first risk arising from the problems of coordinating supply and demand, also risk arising from disruptions to normal activities. Generally, disruptions need not to be physical in nature to severely interrupt the flow of goods, information or funds throughout the supply chain. For example, work stoppages, slow-downs e. t. c can be disastrous to the business that rely on those services to manufacture and distribute their products. Disruptions in supply chains can be caused by conscious acts by a person or a group. Depending on the intention, these acts can be classified as terrorist or non-terrorist. Terrorist attacks are often intended to destroy while non-terrorist acts are not. Wilson (2007) defined disruption as an event that interrupts the material flows in the supply chain, resulting from an abrupt cessation of the movement of goods. It can be caused a natural disaster, labour disputes,

dependence on a single supplier, supplier bankruptcy, terrorism, war and political instability. However, organisations can mitigate all these risks by becoming more resilient, a resilient enterprise is better able to endure the vagaries of global trading. In supply chain, resilience measures the ability to, and speed at which they can, return to their normal performance level (Sheffi et al, 2005).

2. 1 HYUNDAI GLOBAL OPERATIONS STRATEGIC ANALYSIS

Hyundai motor company has investments in manufacturing plants in North America, Europe, Asia, Africa as well as research and development centers in Europe, Asia, North America, and the Pacific Rim. In 2009, HMC had a total financial sales returns of \$57. 2billion in South Korea making it the country's second largest corporation, or chaebol (Chung-Koo, 2010). An examination of the globalization of HMC reveals three themes:

See Appendix B for Global operations as at 2003 and SWOT Analysis

2. 2 EUROPEAN OPERATIONS

European market is HMC's biggest export market (Hyundai. com, 2010). As at 2003, it had assembly plants in Turkey and Russia, the strategic objective was to profit from HMC's success in Europe in the early 1980's with the pony, when HMC became the largest auto importer into the continent. Sales to countries in Europe accounted for 30% of the company's total production those years. By establishing assembly plants in Europe, HMC sought to boost its sales and avoid imposition of sales quotas.

KOREAN

PLANTS

Russian

Plant

Turkish plant

European

UNION

Fig. 2. 2. 2

2. 3 THE EVENT

In June 2003, following a fall-out with its Unionized worked force, a company-wide labour strike at the South-Korea based HMC, brought the automakers manufacturing and distributions operations to a grinding halt. Union workers put down their tools demanding wage increase, shorter working hours, fewer working days and its involvement in management decision making process. The labour strike/walk-out which lasted for 47 days cost the automaker about 1. 26 trillion won (\$1. 1 billion) in loss production and sales, with another \$630million in missed shipment (Korean Herald, 2003). The Automaker suffered a severe inventory shortages which led to a disruption in output, forcing the company to miss out on an upturn in domestic demand, which was revitalized following a cut in excise duty by the South-Korean Government, earlier in the month (KoreanHerald, 2003).

Shortages in production and inventory also led to a halting of operations in the automakers' plants Russia. Also, plants in parts of China, Turkey and India were forced to cut their production capacity by 50% as their Korean plants were unable to meet the demands for critical components needed for production (Globalinsight, 2003). A Korean government official Choi-Kyoung, said the labour strike also had a hard knock on the country's national economy and undermined the country's international ratings (Dowjones Factiva, 2003).

Fig 2. 3. 1

The European Market, which is of emphasis in this essay was terribly affected by the disruption caused by the labour strike. Apart from the total halting of operations in the automaker's assembly plants in Russia and 50% reduction in production in Turkey plant which supplies all of Western Europe and parts of Africa, an originally planned test riding ceremony in Hungary as part of a Marketing campaign was also halted, leading to an unquantifiable loss in potential sales and growth in its European market.

Fig 2. 3. 2

Diagram showing steep in distribution and sales in Europe due to halting of operations at the Hyundai's Russian CKD plant in Mid July and a 50% operational level an Hyundai CKD plant in Turkey due to cut off in supply of essential components form Korean Plants.

3. 0 Theoretical model

Moving Ahead, a supply chain risk management framework would be used to map out the supply chain risk/security faced by the Hyundai motor company (Europe) in 2003, and building in resilience. The Framework is meant to

Map out the supply chain, and identify the vulnerabilities in the critical nodes of the network

Analyze the vulnerabilities and identify reduction mechanisms in the supply network

Deploying specific actions to prevent and mitigate risk

Generally, the first step in implementing any resilience strategy in a supply chain is mapping out the supply chain, identify the critical nodes within the supply chain and, finally identifying the vulnerabilities in the critical nodes of the s

Expanding this framework, the first activity is to map out the supply chain risk/security threat as demonstrated below.

The risk identified above, from the different nodes from the Korean plants to customers include:

Labour Strike at plants

Pilferage

Parts Damage

Ports closure

Dispatch errors

Changes in governments' and European Union import & export policies

Transportation link disruptions

Distortion in information across the network (Bullwhip)

Fluctuations in demand at retail end

These are basically operational risk as identified by Kleindorfer et al (2005).

Using the Sheffi and Rice (2005) framework the risk above can be classified based on disruption probability and severity.

The vulnerability map categorizes the relative likelihood of potential threat to an organisation and its relative resilience to such disruptions. Such maps can then direct management attention and prioritize the planning (Sheffi and Rice, 2005)

4. 0 Testing and Expanding the Model

4. 1 The way ahead: Creating the resilient supply chain:

Risk management involves two components: Prevention and recovery. The focus of prevention is on avoiding disruptions, and the avoidance methods depends on the type of disruption. Recovery and business continuity are concerned with activities after the disruption has occurred , the question at that point is how resilient the organisation is-how quickly it can recover and get back to prior level of production (Richardson et al, 2009)

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Every organisation is a citizen of its supply chain, since it depends on the web of suppliers, labour force, logistic organisations, port operators and many others to get its parts to plants and distribute products to customers. Thus, avoiding a customer disruption can be thought of in terms of “ shock absorption” between stages of its supply chain. An organisation’s resilience is a function of its competitive position and responsiveness of its supply chain (Sheffi and Rice, 2005) In competitive markets, fast responding Companies can gain market share, and slow responders risk losing it. Organisations with market power that respond quickly to disruptions have the opportunity to solidify their leadership position.

Hamel and Valikangas (2003) stress that resilience is not just concerned with recovery, flexibility, or crisis preparedness , it is also a distinct source of sustainable competitive advantage. Contu (2002) indicates that resilience is a critical capability for success. Focusing on resilience as a distinctive organisational capability, Stolz (2004) stated that resilience is the key to developing a strategic plan that

is sustainable and capable of producing results that are better than less resilient competitors

Risk assessment and analysis

EVENT READINESS

EFFICIENT RESPONSE

RECOVERY

Sustainable competitive advantage

Supply Chain Resilience

Risk Re-assessment and organisational learning

Flexibility

Redundancy

Collaboration and planning

Fig 4. 1. 1

Conceptual Framework of the relationship between Resilience and Competitive advantage.

Adapted from Ponomarov and Holcomb (2009)

Fundamentally, Sheffi (2005) expresses that organisations can bolster their resilience by either building in redundancy in the supply chain or by flexibility.

4. 2 REDUNDANCY

Redundancy is simply the concept of keeping some resources in reserve to be used in case of a disruption. The most common form of redundancy are safety stock, but it also includes the use of multiple suppliers even when such secondary suppliers have higher cost, and deliberate low capacity utilization rate (Sheffi and Rice, 2003). In the case of Hyundai, the Indian plant unlike plants in parts of Europe was not affected by the disruption caused by the labour strike. The Hindu (2003) reported that company

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officials at the Hyundai Indian plant expressed that they would not be affected by the labour strike at their parent company in Korea due to 90% indigenization levels achieved in supplies of components and also, due to the fact that they had adequate inventory of critical components supplied from Korea. This was also a source of competitive advantage, during the strike in Korea, the data released by the Society of Indian Automobile Manufacturers (SIAM, 2003) showed that sales of Hyundai cars in India rose by as much as 40%, total sales were estimated at 11,941 units.

Also, Hyundai plants in Korea were able to recover quickly from the disruptions caused by the labour strike due to the fact that they had idle capacity, operating at 40% of installed capacity during normal operations. After the disruption, they ramped-up operations to 70% to meet current and outstanding demand (Jing Jang, 2003).

Conventionally, surplus capacity and inventory have been seen only as “waste” and are therefore not desirable. However, the strategic disposition of additional capacity and/or inventory at potential “Pinch Points” can be extremely beneficial in the creation of resilience within the supply chain (Christopher and Peck, 2004). While this essay is not advocating for a return to the days of buffering every stage in the supply chain with safety stock or excess capacity, it does suggest that the strategic and selective use of “Slack” may be fundamental to supply chain resilience thus, leading to competitive advantage.

4.3 FLEXIBILITY

There is significantly more leverage in making supply chains flexible than there is adding redundancy. Flexibility amounts to building organic capabilities that can sense threats in the supply chain and respond to them quickly. Not only does this bolster the resilience of an organisation, it also creates competitive advantage in the market place (Sheffi and Rice, 2005). Flexibility can be achieved through the essential elements in the supply chain, the elements include:

Suppliers

Conversion Process

Distribution Channels

Control systems

Corporate culture

Firstly, material flows from supplier through the conversion process, then through distribution channels, it is controlled by various systems, all working in the context of a corporate culture. Each of these five elements offers a dimension of potential flexibility and a source of competitive advantage.

For HMC, flexibility can be introduced into the supply chain elements illustrated below.

(Sheffi and Rice, 2005)

Control Systems

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Supply

Conversion

Distribution

Corporate Culture

For HMC, Building in resilience in the supply chain to gain and sustain competitiveness would include:

1)Supply

In Hyundai, it is essential that they develop back up module supplies in countries where they have their plants. This is essential because the CKD plants rely on the Korean factories for their supplies and so production stopped when they exhausted their inventory and supplies were not forthcoming from Korea due to the labour strike. When other manufacturing plants can produce modules of these models, there should be multiple suppliers to the CKD plants and leading to multiple alternatives of supply, therefore creating a source of competitive advantage to less resilience organisations.

a. Local Supplier development: Local and capable suppliers should be developed in countries where Hyundai plants are located so as to ensure timely supplies and in turn be able to eliminate unnecessary costs and risks associated with transporting parts from one part of the globe to another.

b. Standardise Parts: It is essential that Hyundai standardise parts across its model range so as to allow for flexibility in its production and ensure that they do not carry too much inventory for each model.

2)Conversion

Manufacturing flexibility- It allows for the organisation to be able to produce all its product range in its factories. In the case of Hyundai, while total flexibility could be expensive and does not make for good business decisions, process (limited) flexibility could be explored. According to Jordan and Graves (1995), this means each plant is made to build few products configured in the right way.

Korean Plants

Indian Plant

Turkish

Plant

Russian Plant

W. Europe

E. Europe

Indian Market

PROPOSED

Korean Plants

Turkish

Plant

Russian Plant

Indian Plant

W. Europe

E. Europe

Indian Market

BEFORE

In building Manufacturing flexibility into HMC, there should be a deliberate attempt by ensuring less dependence on Korean plants by starting production in its Indian plants, ensuring that it produces for its local markets as well as supplying modules to Turkish and Russian plants. Manufacturing flexibility is key for building in a proactive strategy in a supply chain. Limited flexibility has the greatest benefits when configured to chain products and plants together to the greatest extent as possible. Advantages of having limited flexibility is that it produces domino effect-leading to reduction in transportation cost. Also, it protects organizations against disruptions, this is because changes in the demands can be compensated and satisfied by adjusting production and distribution in other plants- this would mean making small adjustments in the business strategy to gain high returns.

(Sinchi-levi, 2010)

For Hyundai, this then means, that two of its plants in different countries will have the necessary facilities to build the same type of models, so that the Supply base of each model will be increased without necessarily incurring cost to drive for total flexibility. Having multiple capabilities at each plant location adds flexibility to the Supply Chain, as it can supply its country as well as others.

Standardising processes in all the plants will allow Hyundai to operate in any of the other plants when one is disrupted or to replace sick or otherwise unavailable operators.

Other proposed actions in building flexibility in Hyundai's supply chain include

CONCLUSION, RECOMMENDATION AND IMPLICATIONS FOR FUTURE RESEARCH

In conclusion, many companies have increased their security efforts and updated their business continuity plans. Some go as far as regularly conducting risk analysis exercise. Many business continuity plans are based on increasing redundancy in several facets of the supply chain. However, such investment only go a limited way towards reducing vulnerability, they present a cost to the company with a return on investment that can be realized only in case of a major disruption.

Increasing supply chain flexibility can help an organisation not only to withstand disruptions but also better respond to day-to-day vagaries of the market. To build in flexibility for resilience, companies must involve may facets in their supply chain design by:

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Developing the ability to move operations among plants, use interchangeable and generic parts in many products, and cross train employees

Using concurrent processes of product development ramp up production and distribution

Designing products and processes for maximum postponement of as many operations and decisions as possible in the supply chain

Aligning their procurement strategy with their supplier relationships (Sheffi and Rice, 2005)

The most important step organisations can take to increase their resilience fundamentally and efficiently is to increase their flexibility. Flexibility do not only increases resilience in times of disruption but also garners benefits and operational efficiencies in the normal course of business. As organisations moves to build flexibility in order to respond to market volatility, they are also building in resilience and vice-versa. Generally, although the results for increasing flexibility in the supply chain are difficult to measure with conventional accounting and risk management tools, investment in flexibility can be justified in terms of increases sales, reduced cost and increased competitive advantage that organisations can enjoy.

High

Opportunity to cement Leadership

Opportunity to increase Market share

Responsiveness

Danger of losing market Share

Danger of Regulations

Low

Market power

MARKET POWER

Competitive

Company position and responsiveness (Sheffi and Rice, 2003)

Conversely, organisations that are very responsive will have the opportunity to gain market share in competitive environments and solidify their leadership position in areas where they already dominate.