SUPPLY CHAIN RISK MANAGEMENT– STRATEGIES PRACTISED IN DELL COMPUTERS INC

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ABSTRACT

BACKGROUND

Supply chain management is the key operation that helps to increase the ability of connecting the needs and demands of the customer with that of the company’s produced or manufactured products, goods and materials. This article focuses on evaluating the effectiveness of supply chain risk management at Dell computers relating to the role and importance of risk management in supply chain management process. It also reveals the current trends of risk management practices and explores major constraints that could risk the supply chain management of Dell computers. Research methods of this study have been based on equal proportions of quantitative and qualitative data. The researcher has made use of the questionnaires to collect the data across the employees. On collecting the qualitative data, the researcher has made use of the direct interview with the managers and the staff across the supply chain management.

KEYWORDS
Risk Management, Supply Chain Management, Supply Chain Risk Strategy.


BACKGROUND

The study focuses on assessing the effectiveness of risk management practices that are followed in Supply chain departments of Dell. The core objective of the study is to evaluate the current trends of risk management in line with supply chain management by exploring the barriers of supply chain operations in Dell computers. The study also analyses the need and importance of risk management. The projected outcome of the study is focused on assessing the newer trends to beat the competition and to improve competitive edge in market rivalry towards risk management practices.

Objectives

- To assess current trends of risk management policies adopted by Dell for smoothening its supply chain operations.
- To critically analyse the major constraints that could risk the supply chain management of Dell.

Rationale of the Study

The interest of research towards risk analysis and newer trends to beat the competition and to improve competitive edge in market rivalry towards risk management practices.

It would greatly help the company to save time, cost and resources for the company and will effectively help strategize plans that could improve quality, reliability and time effectiveness in line to supply chain management and employee, stake holder, supplier co-ordination (Alexander, 2010).

Review of Literature

Risk and threats are part of a process and strategic planning stages in line to every business entity. Risk elevates or depreciates due to change in trends, internal factors associated to the product, brand and the company, external factors associated to suppliers, vendors, distributors and retailers, human resources associated to the organisation and business processes, threat from new entrants and change in customer attitude and demand towards products, quality, time effectiveness and brand value. The variation and volatile nature infused into recent trends and technologies had made the overall risk to be increased to higher concentrated levels (Butcher, 2009). This had made organisations reduce the replication of process management which are imposed by other competitor groups. Supply chain risk management reduces the difference between the opportunities and the risk associated with the business (Brännback, 2009).

Dell, being the global leader in producing and distributing computers and its related parts to all segmented clients and customer segments across different parts of the globe, will have to analyse its current practices of supply chain risk management with that of the futuristic changes and demands from side of customers, the organisation, suppliers, distributors and stake holders. Increasing the node of reduced risk and improving the capabilities of contingency planning will be the core objective for Dell to increase and withstand its market value among the other leading competitors in the global market (Butcher, 2009).

It includes a strategic approach towards implementing change on practices of risk management which could enhance the process of supply chain management in a risk free and continuous manner (Beardwell, 2010). This could help Dell attain the future demands and expectations aimed by the customers. The reduction of risk and increased protection and control on planning the process of supply chain will
enhance the overall growth, profitability, brand value and standards of Dell in an international perspective (Clegg, 2010).

Dell – Company Profile

Dell, a leading multinational company, manufactures PC and related products to all segmented customers and distributors across the globe. India and United States are the key points where the company owns its departments of research and development, finance, manufacturing, customer care and market analysis in order to serve its customers to the best standards of quality and cost in an effective manner (Branch, 2009). The company had approached various strategies that could reduce the rate of time, cost and human efforts in line to supply chain management. The company had acquired many partners, such as Perot, expanding its control over local and global markets which in turn helps to increase the rate of customer purchase, brand value, profitability and overall sustainability in a significant manner (Cohen, 2010).

Dell had manufactured products such as notebooks, desktops, printer, server, scanner, storage devices, smart phones, peripherals and net books in order to extend its capabilities towards reaching the expectations of the customer segments in local and global locations. It had greatly focussed to infuse its brand name in all the technical parts and devices that are associated to the computer. The company had also focussed its compete supply chain process enhancement through increasing accuracy terms in line to supplier management, distribution management, technology management, operations management, disaster management, strategic process management, customer relationship management, transportation management, cost and time management, human resource management and sales management (Thompson, 2008). This had made Dell more innovative and versatile towards achieving global recognition and standards in terms of profitability, brand value and customer satisfaction in a much more effective manner.

Role and Importance of Risk Management in SCM

Supply chain management is the key operation that helps increase the ability of connecting the needs and demands of the customer with that of the company’s produced or manufactured products, goods and materials (John, 2010). Increasing efficiency and flow of continuity in supply chain process will improve the rate of time, cost and resource utilisation (Covent, 2010). Deviations of work schedules and deviations of strategies will lead to uncertainties and risks for the company, which could reduce the trust ability and reliability of customers towards the company (Stewart, 2011). Managing risk and uncertainties is more vital for an organisation to stabilise the standards of growth and continuity in business processes.

The role of risk management in an organisation is more vital in order to reduce the deviated cost and time. The supply chain management will include three levels of process flow such as material flow, financial flow and information flow. Calculating risk under these segments will increase strategic approach towards increasing stability and plan towards uncertainties in an effective manner. In order to identify and analyse the key risk factors, the process of supply chain will have to be segmented in terms of supply chain structure, technology and strategy (Sople, 2009).

By effectively analysing and segregating the key components such as suppliers, manufacturing, logistics, technology, inventory control, warehouse, distribution, cost, time, human resource management, political, economical, social, geographical, dealer management, competitors, demand for products and supply availability, the company could effectively improve its standards of supply chain and will also help to reduce the rate of risks and uncertainties in a significant aspect (Butcher, 2009).

Focus towards development, enhancement and implementation of new strategies is vital for the company’s growth. Analysing risk and threats that are involved in the development process will save more time, cost and resources for the company and could elevate the standards of brand value and customer satisfaction in line to time and cost effectiveness (Covent, 2010).

Controlling the process in terms of appropriate standards and regularities will reduce the rate of risks and uncertainties in the supply chain management. Balancing the process and analysing the risk factors that could occur in the near future will help the management to take necessary steps in order to prevent, reduce or deviate from the risks (John, 2010). This could reduce the harm towards managing supply chain process (Butcher, 2009).

Source: (Butcher, 2009)

The above picture represents the top supply chain risk concerns that could reduce the effectiveness and value of supply chain management in the company. Assessment of risk and uncertainties will help reduce the rate of fluctuation in process and could increase the rate of growth and profitability in an aligned elevated manner (Draft, 2010). The analysis of risk factors could be made in areas of strategic planning, tactical planning and operational planning levels. The strategic planning level will include the design of supply chain management and procurement of raw materials and sources from suppliers. Tactical planning will include the production and distribution process and resource allocation on appropriate standards (Cohen, 2010). The operational environment will include the scheduling and planning of transportation, shipment and human capital management. Communication acts to be an essential factor that has to be analysed based on the effectiveness and quality of production attained. Communication link will have to be checked and enhanced in order to collect appropriate information from the customers, suppliers, distributors, logistics team and other vital departments of the supply chain management (Hine, 2010). The check of risk and uncertainty will have to be made in terms of comparing the current function versus
the process, customer demands versus products produced and sold, revenue attained and performance achieved, managed inventory versus information transacted, relationship versus business achieved. The importance of analysing the supply chain process in terms of all the above mentioned is high due to growing economic status, customer volatility towards new products and comparison between prices, quality and brand, new competitive forces, innovative approach towards customer satisfaction and increased technological advancement (Invalid source specified). On the internal advent, the company could be benefited by reducing the risk phases that could impact the whole gamut of supply chain process in the near future and will also increase the rate of fluctuation in terms of competitive value and customer satisfaction. Effective analysis and assessment of supply chain risks will help elevate the standards, stability and sustainability of the company to global standards (Taylor, 2009).

Factors that are considered to Risk the Supply Chain Process

Analysing the effective risk platforms that might scale back the steadiness and growth of the corporate can got to be unintegrated supported the amount of impact and levels of loss. The firmness of risk and the number of risks are to be calculated in order to identify the priority risk platform that has to be managed (Sople, 2009). Analysis of the risks could be made strategically by effectively involving all stages of supply chain management and the external factors that revolve around the process. By effective analysis of internal and external factors, the company could manage to analyse, predict, resist and reduce the risk opportunities that could impact the stability and continuity of the supply chain process in the company (Ronkainen, 2011).

Analysing the essential factors such as competitors, customer demands, market potential, cost, time, environment, political, economic, social, and technological and operations will help the company to reduce risk rates to greater extents. Risks could be in the areas of procurement, quality, cost, demand, environment, innovation, competency level, and globalisation, power of growing retail, managing dealers, technology and suppliers. The risk could be evaluated based on the rate of impact and the loss attained in selected period of time (John, 2010). Prioritising the elimination of risk factors will be based on the risk management strategy. Below are some of the potential risks that could deviate the supply chain capabilities in an effective manner:

Cost and time spent due to increased transportation, Cost and time spent due to over production, Cost incurred on increased inventory management, Elongated lead times, Volatility in quality management, Instability in supply demand analysis, Instability in customer analysis, Extended time on product development life cycle, Time spent on supplier, distributor and retailer, Cost on environmental disasters, Improper scheduling and duty allocation of resources, Improper technology adaptations, Instable time and cost management on supply chain process, Improper report generation and statistical analysis, Risk on improper time management Risks related to delivery or service.

Source (Brown, 2010)

In today's trend of industrial adaptations, the companies face more risks and challenges from various factors. The risks could mitigate the complete gamut of method management and provide a chain within the organisation in line to client dependableness, satisfaction and trust on the brand, product and services (Edward, 2011). There are many factors that risk the organisational growth and performance standards which include the increase in globalisation, regulations and compliance enforced by the government bodies towards transportation, exports, products and quantity. Uncertainty attained due to economic downturn, volatility in demand and supply forecast, increased rate of technology upgradation, customer demand analysis, market analysis, supplier analysis, distribution capability analysis, external environmental disasters and natural calamities and competitor analysis (Sople, 2009). Analysing these risks will help the company ensure appropriateness on supply chain management. Risks are categorised into supply risk, demand risk and operational risks. The major risk factors that are associated with the supply chain management are listed below (Brännback, 2009).

Current Trends of Risk Management Practices

Lean Management

Lean management system is the process in which the order could be managed based on the demand made by the customer. Lean management system follows just in time strategy in which the order will be fulfilled based on the customer demand (Brown, 2010). The flow of supply chain is managed according to the number of orders. This could reduce the rate of risk in terms of over production, transportation, human resources, cost, time and overall operational expenses. Managing risks under these circumstances will also help increase the quality, time effectiveness, and cost control and customer satisfaction in an effective manner.

Third Party Logistics

Due to reasons such as managing time, cost and resources on supply chain management, the companies practised the trend of making the third party logistics handle the supply chain process. Third party logistics will handle the complete transportation process and so will be able to deliver the products in a precise and time effective manner. This could reduce the risk of managing the overall supply chain and could reduce the risk of dissatisfaction among customers and retailers in the local and global market (Brännback, 2009).
Internal Communication Technology

Internal communication technology and change in technology adaptation had turned the supply chain process to resist more complex situations in supply chain management. Variation of methods and process of data segregation, communication interface and accessibility towards all departments of supply chain had intensified the risk in managing supply chain disagreeableness (John, 2010).

Contingency Planning

Contingency planning is the method of analysing risk and uncertainties prior to occurrence. Contingency planning could be made by effectively analysing and strategizing the current supply chain process (John, 2010). Assessment made on individual departments and sections of supply chain will help improve the contingency planning and in turn will prove effective in avoiding errors, deviations and risks towards supply chain process and continuity in managing overall process. Contingency planning helps reduce cost, time and resources on handling risks and uncertainties (Schönsleben, 2010).

E-business

E-business is the method that could improve the rate of communication, transactions and sales between the customers and the company (Butcher, 2009), though e-business has some risk when it is implemented without proper base and study. Hence, e-commerce requisition can give an opportunity for that state of workmanship and new innovations for majority of the information. Creating business online will help in reducing the cost of operation as well as acting as an environmental friendly initiative. Through the online ordering portal option, the level of demand can be easily retrieved which reduces the risk connecting with the findings of demand pattern. Through the online business, the storage space cost and the level of inventory cost also gets reduced which reduces the financial risk associated with the business (Clegg, 2010).

Current Risk Management Practices followed by Dell

- Lean management.
- Disaster management.
- Supply demand analysis.
- Order management system.
- Transportation management.

RESEARCH METHODS

Research design is selected for the research is qualitative research and quantitative research. As per the qualitative research surveys conducted through the selected employees of supply chain departments. The study mainly relies on Primary data and also Secondary data. Questionnaire method is used to collect the data sources from the respondents and Comparative observation method has also been made between the departments of supply chain in line to risk analysis and risk prediction. Secondary data such as company website, magazines and research articles are used to collect the information about Dell computers supply chain risk management practices. The sample size of the study is 150. Stratified sampling technique is used to select the respondents among the population from various departments. Percentage analysis is used to analyse the collected data from the respondents.

Data Analysis

Supply chain management at Dell Computers has been influenced by the state of reinforcing methods and processes that best address the potential challenges and risks. In assessing the current trends and practices that are being adopted by Dell Computers, the researcher has involved in the task of collecting the primary data across the employees of Dell Computers who have been associated with the supply chain management department. The analysis of the primary data has been performed by taking in to account application of statistical tools such as percentage analysis which is portrayed with the help of charts and tables. The assessment will lay the foundation for arriving at possible recommendations and suggestions that will aid Dell Computers in gaining more credit on time, cost and resources. The assessment focuses on interpreting the primary data which is essential in making more comparisons over the qualitative data collected over the published and unpublished resources.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Category</th>
<th>Executive Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td>No. of Respondents</td>
</tr>
<tr>
<td>18-24</td>
<td>30</td>
<td>20</td>
</tr>
<tr>
<td>25-35</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>36-45</td>
<td>48</td>
<td>32</td>
</tr>
<tr>
<td>&gt;46</td>
<td>63</td>
<td>42</td>
</tr>
<tr>
<td>Experience (in Years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-2</td>
<td>33</td>
<td>22</td>
</tr>
<tr>
<td>2-5</td>
<td>45</td>
<td>30</td>
</tr>
<tr>
<td>5-8</td>
<td>63</td>
<td>42</td>
</tr>
<tr>
<td>More than 8</td>
<td>9</td>
<td>6</td>
</tr>
</tbody>
</table>

Table 1. Age and Experience of the Respondents

Inferences

Table 1 explains that most of the respondents (42 percent) are in the age of above 46 years and 42 percent of respondents are having the experience between 5 to 8 years.

<table>
<thead>
<tr>
<th>Risk Management Variables</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continuity of supply</td>
<td>33 (22)</td>
<td>72 (48)</td>
<td>6 (4)</td>
<td>18 (12)</td>
<td>21 (14)</td>
</tr>
<tr>
<td>Reliability of delivery</td>
<td>63 (42)</td>
<td>30 (20)</td>
<td>12 (8)</td>
<td>24 (16)</td>
<td>21 (14)</td>
</tr>
<tr>
<td>Inventory Management</td>
<td>18 (12)</td>
<td>36 (24)</td>
<td>6 (4)</td>
<td>48 (32)</td>
<td>42 (28)</td>
</tr>
<tr>
<td>Service Level</td>
<td>15 (10)</td>
<td>21 (14)</td>
<td>12 (8)</td>
<td>63 (42)</td>
<td>39 (26)</td>
</tr>
<tr>
<td>Supply Chain Cost</td>
<td>36 (24)</td>
<td>42 (28)</td>
<td>15 (10)</td>
<td>36 (24)</td>
<td>21 (14)</td>
</tr>
</tbody>
</table>

Table 2. Factors affecting Risk Management

Note: Values given in the parenthesis indicate Percentage of the respondents.

Inferences

As shown in the above table, 48% of them agreed that factor of continuity of supply affects the effectiveness of Risk management variables. 42% of them strongly agreed that factor of reliability of delivery affects the effectiveness of Risk management variables. 32% of them disagreed that factor of inventory management affects the effectiveness of Risk Management variables in Dell computers. 42% of the
respondents disagreed that factor of service level affects the effectiveness of Risk Management variables. 28% of the respondents agreed that factor of supply chain cost affects the effectiveness of Risk Management variables.

<table>
<thead>
<tr>
<th>Strategies to Overcome Risk Management</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experts Meeting &amp; Discussions</td>
<td>63 (42)</td>
<td>33 (22)</td>
<td>15 (10)</td>
<td>12 (8)</td>
<td>27 (18)</td>
</tr>
<tr>
<td>Partnering with Suppliers</td>
<td>57 (38)</td>
<td>33 (22)</td>
<td>18 (12)</td>
<td>18 (12)</td>
<td>30 (20)</td>
</tr>
<tr>
<td>Conduct Assessment and Audit across suppliers</td>
<td>21 (14)</td>
<td>33 (22)</td>
<td>18 (12)</td>
<td>72 (48)</td>
<td>6 (4)</td>
</tr>
<tr>
<td>Integration between upstream and downstream of SCM activities</td>
<td>45 (30)</td>
<td>78 (52)</td>
<td>9 (6)</td>
<td>9 (6)</td>
<td>9 (6)</td>
</tr>
</tbody>
</table>

Table 3. Strategies Followed to overcome Risk Management Variables

Inferences
The above table 3 depicts that most of the respondents (42 percent) strongly agree that experts meeting and discussions help to resolve risk management issues and 57 respondents (26 percent) agree that partnering with suppliers help to overcome risk management. 48% of them disagree that conduct assessment and audit across suppliers are not useful towards overcoming risk management. 52% of the respondents agreed with the integration between upstream and downstream of SCM activities which resolve the strategies to overcome risk management.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Sources of Risks for SCM at Dell Computers</th>
<th>No. of Responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Risks across economic environment</td>
<td>27</td>
<td>18</td>
</tr>
<tr>
<td>2</td>
<td>Dependence of Single sourcing</td>
<td>63</td>
<td>42</td>
</tr>
<tr>
<td>3</td>
<td>Impact of poor suppliers over brand image of Dell computers</td>
<td>48</td>
<td>32</td>
</tr>
<tr>
<td>4</td>
<td>Risks across technological environment</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>150</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 4. Sources that Multiply Risk across Supply Chain Management of Dell Computers

Inferences
It might be inferred starting with the over table that 28% of the respondents stated that allotment danger administration over those supply chain oversee economy to upgrade execution will be a prescribed action, 40% stated advertising preparing and improvement of the suppliers about dell to wrist bindings hazard Likewise recommended action, 26% expressed that dell workstations must put resources into directing danger governance during standard intervals. 6% stated dell must execute every last one of over recorded intercessions on deliver hazard crosswise over supply chain oversee economy.

Findings
The findings highlight the poor state of risk management intervention of Dell Computers across the inventory management which has resulted in increased exclusion of the inventory and has not supported the ability to cut costs across the supply chain operations. It is evident from the assessment that production process at Dell computers is highly driven by the risk management process and this offers more confidence to the value chain of Dell Computers. On the other hand, the continuity of supply of materials and its state of risk management is of equal importance and this has been on the positive note for Dell Computers. Reliability of the supply chain process focuses on offering more flexibility and efficiency across the supply chain management process. Hence, the findings highlight the poor state of risk management intervention of Dell Computers across the inventory management which has resulted in increased exclusion of the inventory and has not supported the ability to cut costs across the supply chain operations. Service level attributes do influence the state of managing risks across the supply chain management as any pitfall in service level will lead to delayed lead time and poor delivery of service to the customers. It is also evident from the findings that the ability of current supply chain management systems at Dell Computers to promote risk management has been on the lower note and this has reflected across the lack of
integration with corporate social responsibility initiatives. Hence, it would be inferred from the study that systematic analysis of the risks and reinforcement of counter measures are of sheer importance to Dell Computers. Assessing the crucial limitations of this supply chain risk management method, Dell Computers Delay in Delivery time due to lack of Quality from suppliers.

**Suggestions**

Dell has not been able to increase the communication across the internal and the external stakeholders in reinforcing the supply chain risk management interventions. Hence, it may be recommended to enhance the performance of communication between the internal and external environments. It is also suggested that to promote the integrated activities of Supplier Relationship Management System, Dell computers should focus on conducting risk governance at regular intervals.

**REFERENCES**