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Supply Chain Management Professional Education Review

A monthly e-Newsletter by

Department of Supply Chain Management and Marketing Sciences

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The *Supply Chain Management Professional Education Review* is a monthly e-newsletter published by the Rutgers Center for Supply Chain Management and Marketing Sciences (SCMMS -www.scm.rutgers.edu). SCMMS is a major provider of supply chain education for today and tomorrow's supply chain professionals and executives. The *Professional Education Review* will provide information concerning current and emerging supply chain issues.

We value your input. Please contact us at cscm@business.rutgers.edu **regarding this newsletter or other supply chain issues.**

Upcoming Events

CPSM Bridge Exam Review

- **Feb. 28 (Saturday – full day)**
- **April 9 and 30 (evening)**
- **May 14 and 28 (evening)**

CPSM Exam Review

- **Mar. 7 and 28**
- **June 6 and 27**

Six Sigma Black Belt Training

- **Coming soon**

For more information, please go to www.scm.rutgers.edu and click on our link for Executive Education.

Managing Risks in Global Supply Chains – Pirates ??? Do I really have to think about PIRATES???

Part 1 of 2

Most business leaders agree that the Asia-Pacific region has become a major force in international business-to-business trade, with the dominant country being China. In spite of the recent economic challenges, the forces which drive the globalization of the world's economies continue.

Companies from around the world have located in Asia-Pacific to take commercial advantage of the large, low-cost labor pool and to strategically establish a presence in what is potentially the world's largest marketplace. As a result, the business model and what it takes to become successful has become more complex. With the increased complexities have come increased risks. In order to take full advantage of the global market potential while managing increased business complexity and risk, companies will need to become masters of managing their supply chains. **Are your supply chain professionals trained and ready to manage the risks that your company faces? Some say they are not.**

What the consultants have to say …

According to a survey by the global consultancy, McKinsey and Company, most executives say supply chain risks are increasing. McKinsey says, "The executives most likely to say that their company's level of risk has risen are those in retailing, manufacturing, and energy, while professional-services executives are the least likely to have seen an increase in risk." But even in the arena of professional services, nearly half of the executives reported increased risk. The bottom line is that executives at all levels share the view that risk is on the rise. During the first quarter of 2007, Aberdeen Research surveyed over 200 companies doing business in this region. Two-thirds expect supply risks to increase significantly over the next three years; however, **less than half have begun planning to manage the risks**. Accenture Consulting summarizes the situation in this way, "In their dash to the region, many companies have actually fallen short in the same basic way; they underestimated the importance and complexity of supply chain mastery."

Should business leaders really be that concerned?

What is the impact to the company of a supply disruption? Recently, a study was conducted at Georgia Tech to determine the impact to companies of major supply failures. Nearly 800 instances of supply chain disruptions by publicly traded companies were studied, and **the following was found for firms suffering supply disruptions:**

- **30 to 40% lower stock returns over a three year period**
- **The share price volatility is 13.5% higher**
- **Operating income drops 10%**
- **Sales growth is 7% less**
- **Costs go up by about 10%**

An Aberdeen Group survey in the summer of 2008 reveals that 99% of the 138 companies responding to their survey had experienced a supply disruption, with 58% suffering a financial loss. Yet surprisingly, nearly 60% of respondents have no formal process for assessing and managing supply chain risks. As a result, the questions surrounding what managers should do about risk have never been more pressing. Do you add inventory? Do you build myriad backup plans? Or do you rethink the whole thing and retreat from the cost-saving deals that are driving the global expansion in the first place?

Theoretically, risk management is a prioritization process whereby the risks with the greatest loss and the greatest probability of occurrence are handled first, and risks with lowest loss and lowest probability of occurrence are handled later. In practice this process can be very difficult, and balancing between risks with a high probability of occurrence but lower loss versus a risk with high loss but lower probability of occurrence can often be mishandled.

Business risk managers also face difficulties when it comes to allocating resources. Resources invested on risk management could also be spent on more immediate and profitable activities, such as sales and marketing to grow the company. Management faces the decision on the size of the risks and how much of their limited resources need to be allocated to address the risks.

What are the risks that need to be managed?
4 Categories of Supply Risk

Are there really that many risks in the supply chain? *Supply Chain Management Review* magazine published research about the perception of US and European companies regarding supply risks in the Asia-Pacific region. No doubt some of this perception was driven by the wide publicity in Western Europe and the US regarding a few notable supply failures in pet food, toothpaste and toys. However, behind the headlines are real concerns by US and European companies about quality, supply disruptions, cycle times, information flows and the basic ability to trust your business partners. Broadly speaking, supply risks fall into one of four categories.

The first category is **"operations"** and is the one we often think of first. Logistics route or mode interruptions, such as those seen in the ports of the western United States, or work stoppages by transportation workers are examples of operational risks. Loss of a key supplier or having a key supplier run into financial difficulty is another type of operational risk. If a supplier is providing a critical component for your product and they suddenly can no longer deliver, then your firm's ability to meet customers' needs is severely impacted. Failure of IT systems is another operational risk. Increasingly, supply chains are interconnected by information technology. A system failure might result in not getting customer orders or not being able to issue a purchase order to your suppliers. Companies often look to information technology as the solution to their problems, and many times technology helps. However, what additional risks do we have if and when technology fails?

The second most visible risk is **"financial vulnerability,"** a risk that most companies fully understand today. However, actions by others can change the nature of risks we face. For example, changes in regulation and legislation can significantly impact the financial risk profile of a company. Companies that are heavily dependent upon international trade can see customer access dwindle or costs skyrocket. The Chinese government shut down or significantly curtailed manufacturing in all provinces neighboring Beijing before the 2008 Olympics in an effort to improve air quality. Whose supply chains were impacted by that decision? Was it anticipated? Were contingencies in place?

It can be argued that these first two risk factors are easier to recognize and easier to anticipate. As a result, the CEO can assign accountability to a single individual, and that individual can begin to evaluate, monitor, manage and plan for the risk. Most, if not all, companies have contingency plans that are intended to mitigate these types of risks. However, can we say the same for risks that are not as visible or easy to anticipate?

A third risk factor is **"strategic vulnerability**." It is less visible and less easy to anticipate. One of the largest strategic vulnerabilities is the customer. What if the customer no longer wants or needs our product or service? Can we survive as a company? Do we have a plan to acquire new customers? Have we become too dependent upon a single customer? Consider the situation faced by a global specialty chemical company. Its largest customer decided that it could manufacture the chemical on its own. As a result, the company lost one-third of its annual revenue. A year later, the former customer decided that it could optimize its own production by producing more and began to sell the chemical into the marketplace, further eroding the company's revenue. At no time had anyone asked, "What if … we lost our largest customer?" It just wasn't a vulnerability that was anticipated.   In short, there are no guarantees that our customers will always be there.

Another strategic vulnerability for a company is the protection of its intellectual property. Many companies create a market advantage through unique, difficult to copy technology, processes or knowledge. As we outsource more of our business activities, more and more "outsiders" have the capability to gain access to our intellectual property. As supply chains are extended across national boundaries, our ability to protect that intellectual property becomes even more fragile. Consider the story of a company who had moved production to China and opened a business that produced a certain type of packaging. At first everything went well; however, after about a year, workers stopped showing up for work. The company learned that a "new, domestic competitor" had copied its manufacturing processes and was now employing its trained workers.

Pirates? A real risk?

The fourth risk is "**vulnerability of hazards**." These hazards can be unintentional, such as natural disasters. They can strike at anytime and in any place. They are unpredictable, yet we know that sooner or later they will happen. Natural disasters such as tsunamis, typhoons, earthquakes and tornadoes can have devastating impacts not only to the human beings that are in their way, but also to the supply lines of the companies in those regions. As our supply chains become extended, the potential and probability of this risk increases significantly. Another highly unpredictable risk is that of terrorism. Until recently, who would have had pirates on their list of supply chain vulnerabilities? Terrorism can have both direct and indirect impacts on our supply chains. If the act is directly and physically against our supply chain, then the impact is about the same as natural disaster. However, when the terrorist activity impacts our customer base, we are faced with the loss of customers which as discussed earlier can be fatal for some companies

Next Steps – How do we plan for and manage supply risks?

With all of these risks, why would any of us want to be in a global business? Well, the good news is that we can plan for and manage most of these risks. Processes and tools for managing supply risks will be addressed in our next e-newsletter. Are your supply chain professionals trained and ready to manage the risks that your company faces?