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Michigan State University, USA

4th International Research Seminar on Risk and the Supply Chain at Michigan State University, October 19-21 2004

The fourth annual ISCRIM seminar held at Michigan State University from October 19-21, 2004 was a resounding success. After starting the meeting on Sunday evening with a welcoming reception to help soothe the jet lag of many of the participants, we had two full days of presentations and discussions. There were many of the familiar faces that were able to attend, plus some new friends and colleagues, both academics and practitioners, from the U.S. and Europe. In addition, this is the first meeting in which we were able to show some of the tangible results from the network, specifically the book "Supply Chain Risk" edited by Clare Brindley. After the meeting sessions ended late Tuesday afternoon we discussed some of the future directions for the network and enjoyed our traditional end-of-seminar dinner, held at the Henry Executive Development Center. On Wednesday evening, Lars, Jukka and Simon took time to have dinner at George's house and experience the U.S. perspective of semi-rural living (and yes, the sheep now finally have their shelter constructed). We all look forward to our next meeting, which will be hosted by Cranfield University in 2005.

I would like to personally thank all of those individuals able to attend, especially those individuals who had to travel great distances "across the pond." As always, we had some very insightful presentations and constructive feedback. It is all of your work and efforts that allows us to have a successful and enjoyable network. Thank you again.

George A. Zsidisin

PS from the editor: In an appendix to this newsletter you will find abstracts for all presentations at the seminar! /Ulf



Back Row from left: Thomas Kull, Representative from *Stout, Risius and Ross*, Robert Lindroth, Arne Ziegenbein, Jukka Hallikas, Lars Sørensen.

Middle row: Veli-Matti Virolainen, Andreas Norrman, Ron Cloyd, Michael Smith, Simon Burtonshaw-Gunn, Laird Burns, Mark Pagell.

Sitting: Sheryl Toby, George Zsidisin, Helen Peck, Dina Ribbink.

Articles, reports and literature

Printed articles

Agrell, Per J.; Lindroth, Robert & Norrman, Andreas (2004) "Risk, Information and Incentives in Telecom Supply Chains", *International Journal of Production Economics*, Vol. 90(1), pp.1-16.

Barry, Jack (2004) "Supply chain risk in an uncertain global supply chain environment", *International Journal of Physical Distribution & Logistics Management*, Vol. 34(9), pp. 695-697.

Giaglis, G.M.; Minis, I; Tatarakis, A; Zeimpekis, V (2004) "Minimizing logistics risk through real-time vehicle routing and mobile technologies: Research to date and future trends", *International Journal of Physical Distribution & Logistics Management*, Vol. 34(9), pp. 749-764.

Giunipero, Larry C. & Eltantawy, Reham Aly (2004) "Securing the upstream supply chain: A risk management approach". *International Journal of Physical Distribution & Logistics Management*, Vol. 34(9), pp. 698-713.

Mills, John F. & Cemek, Vojta (2004) "The risks, threats and opportunities of disintermediation: A distributor's view". *International Journal of Physical Distribution & Logistics Management*, Vol. 34(9), pp. 714-727.

Svensson, Göran (2004) "Key areas, causes and contingency planning of corporate vulnerability in supply chains: A qualitative approach". *International Journal of Physical Distribution & Logistics Management*, Vol. 34(9), pp. 728-748.

Forthcoming papers produced by ISCRIM members

Zsidisin, George A., Ragatz, Gary L. & Melnyk, Steven A. "An Institutional Theory Perspective of Business Continuity Planning for Purchasing and Supply Management," under review at the *International Journal of Production Research*.

Zsidisin, George A., Ragatz, Gary L. & Melnyk, Steven A. "Managing the 'Dark Side' of Supply Chain Management," forthcoming in *Supply Chain Management Review*.

Zsidisin, George A., Ragatz, Gary L. & Melnyk, Steven A. "Principles of Supply Continuity," *Inside Supply Management*, January, 2005, pp. 21-26. (This is the lead article in this issue)

Zsidisin, George A., "Supply Risk in a Sensitive Business Climate," in *The Purchasing Handbook*, Joseph Cavinato & Ralph Kaufmann, (ed), forthcoming.

Reports

Two reports from the Cranfield Supply Chain Resilience project can now be downloaded via the web page: www.som.cranfield.ac.uk/som/research/centres/lscm/risk.asp

- "Creating Resilient Supply Chains: A practical Guide" (Peck et al 2003)
- "Understanding Supply Chain Risk: A Self-assessment Workbook"

The full reports in paper format can be ordered from the same web page.

Special issues

International Journal of Physical Distribution & Logistics Management, Vol. 34(5) is a special issue on "Logistics and Supply Chain Risk and Uncertainty". Guest editor is Professor Joseph L. Cavinato.

Coming special issue of *International Journal of Operations & Production Management* on "Supply Management: The Emergence of an Academic Discipline?". This Special Issue will cover a range of issues focusing on the development of and future trends for SCM. Guest Editor is professor Paul D Cousins. More information: <http://isacco.emeraldinsight.com/vl=1955733/cl=62/nw=1/rpsv/journals/ijopm/call2.htm>

Literature

Brindley, Claire (ed) (2004) *Supply Chain Risk: A Reader*, Ashgate Publishing Limited, UK.

Pfohl, Hans-Christian (ed) (2002) *Risiko- und Chancenmanagement in der Supply Chain: proaktiv - ganzheitlich – nachhaltig*, Erich Schmidt Verlag, Berlin.

Coming conferences

IPSERA 2005. Archamps, France. March 20-23, 2005. "Supply risk management" is among the topics. www.ipsera.org

Supply Chain World-Europe 2005. Copenhagen, Denmark. May, 26-27 2005. Conference theme: "Exchanging knowledge: Coping with Supply Chain Risks". Hosted by the European chapter of the Supply Chain Council. www.supply-chain.org

NOFOMA 2005. Copenhagen, Denmark. June 9-10, 2004. Deadline for abstracts January 7; full papers February 28. Supply chain risk management is among the topics. www.nofoma.org

ISL 2005. Lisbon, Portugal. July 3-5, 2005. www.ISL21.org

The 5th International Research Seminar on Supply Chain Risk Management. Centre for Supply Risk and Resilience, Cranfield University, UK. Preliminary date: 12-13 September, 2005. The seminar is normally only open to ISCRIM members and invited guests.

International journals on risks

Enterprise Risk. Informa Professional, London.

Journal of Risk and Uncertainty. Kluwer.

Journal of Risk Research. (The official journal of the society for Risk analysis Europe and the Society for Risk Analysis Japan). Carfax Publishing.

Risk Analysis – an international journal. Blackwell.

Risk Transfer Magazine. Ark-group Publishing. London.
www.risktransfermagazine.com

Risk Transfer E-bulletin. Ark-group Publishing. London. (Free)
www.risktransfermagazine.com/newsletter.asp

Risk Management. Gale Group. Thomson Corporation Company.

Security Management

Treasury & Risk Management

Conferences during 2004

Zaragoza International Logistics Summit. Zaragoza, Spain. March 25-26, 2004.
www.mit.edu/zlcl/summit2004.htm

IPSERA 2004. Catania, Italy. April, 4-7. www.ipsera04.dica.unit.it

NOFOMA 2004. Linköping, Sweden. June 7-8. www.nofoma.org

ISL 2004. Bangalore, India. July 11-14. Deadline for papers: 16 April.
www.ISL21.org

RIRL 2004. Fortaleza, Brazil. August 13-25. www.rirl2004.com.br

LRN 2004. Dublin, Ireland. September 9-10. Deadline for abstracts: March 8.
www.iolt.org.uk/pages/lrnetwork

Research Methodologies in Supply Chain Management. University of Oldenburg, Germany. September 27-28, 2004.
www.uni-oldenburg.de/produktion/1647.shtml

North American Cargo Security Forum 2004. 3rd eye for transport conference and workshop. Washington DC, USA, October 18-19, 2004.

The 4th International Research Seminar on Supply Chain Risk Management. Michigan State University. East Lansing, MI. USA. October 18-20, 2004.

ICLS 2004. Tokyo, Japan. November 22-24.
<http://166.104.245.94/jogboard4/content.asp?board=kscm&num=35&page=1>

Performance and Risk Measurement: Operation, Logistics and Supply chains. Workshop Bocconi University, Milan, Italy. December 8-10, 2004.
<http://critom.unibocconi.it>

Interesting Internet links

ASIS – An almost 50 year old organisation for the security profession with 33'000 members worldwide. www.asisonline.org

CAPS - Centre for Advanced Purchasing Studies.
www.capsresearch.org

Centre for Supply Risk and Resilience at Cranfield
www.som.cranfield.ac.uk/som/research/centres/lscm/risk.as

Globalcontinuity.com - A portal for business continuity and disaster recovery.
www.globalcontinuity.com

The Institute of Risk Management
www.theirm.org

IRMI.com - The homepage for International Risk Management Institute, Inc. A database over risk management articles and other useful information.
www.irmi.com

Procurement Strategy Council
www.psc.executiveboard.com

Risk Transfer Magazine - Useful links to organisations, conferences, books and articles. To get full access to the articles you have to subscribe to the Risk Transfer Magazine
www.risktransferejournal.com

SCOR - Supply-Chain Council.
www.supply-chain.org

SOLE - The International Society of Logistics.
www.sole.org or www.soleurope.org (European partner organisation)

SURVIVE - The Business Continuity Group. An international, industry-wide group for business continuity practitioners with 3000 members.
www.survive.com

Wharton School, Risk Management and Decision Process Centre
Working papers and newsletter to download.
<http://grace.wharton.upenn.edu/risk>

ISCRIM News

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Download old issues from
www.iscrim.org

There you will also find some information about the ISCRIM Network.

ISCRIM – The International Supply Chain Risk Management Network

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Issue plan for 2005

Issue	Deadline for Contributions	From Print
2005:1	March 1	March 10
2005:2	September 1	September 10
2005:3	December 1	December 10

Anyone interested in being added to the distribution list for the Newsletter will be so. Just send an e-mail to newsletter@iscrim.org and express your wish. There is no fee. The newsletter is free.

Appendix

Abstracts of presentations at
the ISCRIM 2004 seminar
at
Michigan State University

ISCRiM 2004
4th Annual International Research Seminar on Supply Chain Risk Management

Risk Management and Theory Development: Methodologies for Triangulation

Laird Burns
September 17, 2004

Abstract

Recent research into the study of risk in supply chains has provided the foundation for a body of knowledge in this area. Research into financial risks and the sharing or pooling of aggregate risks is not new; financial and insurance companies have been managing financial risks for a long time. The initiation of research into non-financial areas of business risk, such as natural supply disruptions from weather, human-induced disruptions from poorly designed supply chains (e.g. recent power network failures), labor work stoppages, and intentional acts is more recent. Assessing the effects of these risks on dynamics supply chains is particularly challenging.

As the body of literature continues to develop, mostly developed from case research, the field is maturing. We now can begin to extend our research from primarily qualitative approaches to include the employment of additional methodologies such as system dynamics, discrete event simulation, and autonomous intelligent agent modeling. This presentation is intended to highlight opportunities to employ these methodologies, and to provide insights into the benefits and restrictions of these additional approaches. These modeling approaches are particularly useful for gaining insight into non-linear and complex interrelationships among various risk factors and their effects on dynamic supply chains. The presentation concludes with an invitation to integrate the current literature with modeling approaches to study these dynamics.

4th International Research Seminar on Risk and the Supply Chain, Michigan State University, October 2004

The Management of Risk in Private funded International Infrastructure Projects

Dr S A Burtonshaw-Gunn,

Hon Research Fellow, Department of Business and Management, Manchester Metropolitan University, Crewe, Cheshire, UK

Abstract

This paper discusses the relationship between risk management and one of the choices of procurement systems available to the UK construction industry encouraged by developments over the last decade. These developments have arisen from two principle UK Government supported industry reviews reported which have supported an almost universal client requirement in both the private and public sectors to achieve the benefits of increased value in infrastructure projects from both facilities management (FM) and ergonomic perspectives. As a first step many clients have moved away from competitive tendering to favour the use of contracts with closer supply chain management through advances in both project and long-term strategic partnering arrangements between clients and their facilities providers, constructors, designers and in a few cases with some of their second-tier suppliers. In parallel with these 'partnering' initiatives have been an increase in construction procurement based on supply chain integration – 'Prime Contracting'.

Whilst the successful management of construction projects presents a challenge in any environment, the topic of this paper is to present an understanding the importance of risk in such PFI infrastructure projects and then to examine those specific risks appropriate to international projects. As such the paper looks at the role of Prime Contracting which endorses the focus on a single point of responsibility for design, building, operation and, sometimes, maintenance of the facilities until the ultimate delivery of the project to the client and presents a model showing the relationship between the attributes of a single point responsibility of Prime Contracting and Risk Management considerations.

A number private finance types are covered and whilst in some cases there are advantages for clients to offer projects using a Private Finance Initiate approach including risk sharing or even risk transfer, the paper ends by presenting a number of conclusions that Prime Contractors will have to consider to determine if the project attractiveness is acceptable to them and then examine the risks of any possible venture.

4th International Research Seminar on Risk and the Supply Chain, Michigan State University, October 2004

Learning across Business sectors: Knowledge Sharing between Aerospace and Construction

Dr S A Burtonshaw-Gunn,
Hon Research Fellow, Department of Business and Management, Manchester Metropolitan University, Crewe, Cheshire, UK

Abstract

This will be a presentation of a two year collaborative research project undertaken by Professor Stuart Green and his team from Reading University in the UK and seven UK industrial partners, funded by the Engineering and Physical Sciences Research Council. (My involvement in this over this time has been as a member of the project steering committee).

The work, which covers four main topic areas, was published earlier this year at a launch in London. One of the topics covers Supply Chain Management and it is this that will be the main focus for the presentation.

(Please note that I will provide a number of copies of the full research publication to members of ISCRiM)

4th International Research Seminar on Supply Chain Risk Management

Supply Chain Protection of Consumer and Bottom Line – Needs and Solution Overview

David J. Closs and Ed McGarrell, Michigan State University
O. Keith Helferich, Integrated Strategies, Inc.

Abstract:

At this session, you'll receive an overview of the need for supply chain networks to protect service to customers throughout the system while also protecting the bottom line. This must be achieved while concurrently addressing the key performance measures of velocity, visibility, variability, and value. After a brief overview of the defined supply network, the presenters will provide perspectives on the research and solution needs for consumer and bottom line protection.

Risk Management of Digitalization in Supply Networks

Jukka Hallikas¹ & Veli-Matti Virolainen²

Lappeenranta University of Technology

¹Department of Industrial Engineering and Management

²Department of Business Administration

P.O. Box 20, FIN-53851 Lappeenranta, Finland

Abstract

The effectiveness of an organization is ever more dependent on its ability to co-operate with its external suppliers, customers and other partners. Furthermore, information technology has the capability of making radical differences to the inter-organizational structure and practice. Modern supply chains and networks are ruled with information where the ICT-solutions are in a critical role. Technology has enabled new organizational structures to emerge. This change has brought also new challenges to business practitioners, because of new dependencies and more complex environment from the increased number of needed partners.

While the traditional ways of dealing with risks and failures in information technology are greatly related to bottom-up technological analysis of risks like security issues, it is becoming important to explore the topic also from the business perspective. This is especially essential in the cases where the functioning of business processes is greatly dependent on the effectiveness of the information systems. This is likely to be predominant when business processes are decentralized to the many organizations in the supply network, and when organizations are increasingly dependent on the information assets of other organizations. Further, the identification and categorization of different types of information risks in co-operation are important in order to develop sufficient and robust supply chain designs, as well as backup systems for the recovery and business continuity.

This discussion is based on the initial findings of the research project conducted on the topic of risk management of digitalization in supply chain management.

Investigating a relationship between resource dependency and supply risk

Thomas Kull, Michigan State University, 517-353-6381 x 276, kull@bus.msu.edu

ABSTRACT:

As organizations are pressured to decrease their inventories, a potential concern is the resulting increased probability of a supply disruption. But do higher inventories truly reduce an organization's exposure to supply risk? This paper examines the supply risk issue within the context of a second-tier supply failure, and is grounded in inventory and resource dependency theories. By demonstrating the use of a simulation risk assessment tool, exploratory findings suggest that how organizations raise inventory can increase supply risk instead of decrease it. Managerial insights into the benefits of supply chain coordination are provided. By taking a systems perspective of supply risk management, it appears that organizations will be better able to manage supply risk concerns.

Keywords: Supply risk, simulation, resource dependence, supply chain management

4th International Research Seminar on Supply Chain Risk Management

Title: Risk sharing contracts in practice: issues and experiences

Presenters: Robert Lindroth & Andreas Norrman, Lund University, Sweden

Abstract

Many researchers argue that risk sharing is a key factor for successful implementation of SCM (e.g. Cooper & Ellram 1993; Cooper et al 1997; Motwani et al. 1998; Mentzer et al. 2001; Lee 2004). However, it is still uncommon to see elaborate schemes on how to really achieve this; most authors stop once they have identified the problem area. In more quantitatively oriented research, supply chain contracts for risk sharing has been a topic (Tsay et al. 1998 and Cachon 2002 provide good reviews of this research), but most of the models suggested are limited to a two-tier setting or discussed in a rather simplified context (e.g. a single supplier, customer and product, known demand distribution, zero lead-times, etc.).

In this presentation we will present insights and preliminary findings from two ongoing research projects. The first is a major “supply chain case study” that is focusing on how risk is shared (or not) in a three-tier supply chain involving a telecom company, some of its contract manufacturers and 2nd tier (component) suppliers. The second project is a multiple case study with companies in different high-tech industries. These companies have implemented various risk sharing contracts with suppliers (and sometimes 2nd tier suppliers). Points discussed will e.g. be the different perspectives that companies have on risk sharing contracts, their issues and experiences from implementing risk sharing contracts, and finally a more theoretical reflection based on agency theory.

Agency theory addresses problems of information asymmetry and self-interest by focusing on the contract and its incentive properties. Stock (1997) pointed out that agency theory had not been used so far within business logistics, but that it has potential to be applied. Since 1997 a handful of business logistics papers have used this framework (e.g. Logan 2000, Zsidisin & Ellram 2003, Xu & Dong 2004), but so far only in a dyadic setting (i.e. not dealing with a “whole” supply chain - three or more tiers).

References

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Using a Pollution Prevention Capability to Reduce Supply Chain Risk

Mark Pagell, Oregon State University; Steven Walton, Emory University, Michael Wasserman, Clarkson University & Robert Handfield, North Carolina State University

Supply chain managers are increasingly aware of the risks of negative environmental impacts. Poor environmental management in the supply chain can lead to increased risks of fines, supply disruptions, changes in regulation and the loss of customers. In addition, the supply chain's end customers are likely to hold the chain's primary member responsible for the impacts caused by the entire chain. In other words, the primary member of the chain is likely to assume the environmental risk of the entire chain.

Managing environmental issues properly not only reduces risk, but can lead to increased competitive advantage through lower costs and or increased innovation. In this presentation we argue that the best way to deal with environmental risk is to build a capability in pollution prevention. Such a capability requires three main skills; the ability to make continuous improvements, the ability to make disruptive innovations, and most importantly managers with the ability to determine when to mitigate a risk with continuous improvement and when risk mitigation will require disruptive innovation. The presentation will describe a pollution prevention capability and the cognition processes supply chain managers need to use to apply such a capability to reduce environmental risk and increase competitive advantage.

ABSTRACT

RISK MANAGEMENT IN PURCHASING AND SUPPLY: A STUDY OF CURRENT PRACTICE IN THE UK

Dr. Helen Peck
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Only three or four years ago the notion of openly discussing the fact that organisations might be vulnerable to supply chains failures would have been an anathema to many purchasing and supply chain professionals. Times have changed. In the light of high profile corporate failures, supply chain collapses and the changing security environment, regulators and insurers are demanding a far more stringent approach to the management of supply chain risk. New corporate governance legislation, regulations on international trade, an emergent business continuity standard and civil contingencies legislation all carry explicit implications for the management of purchasing and supply. This paper provides an introduction to a proposed study - to be undertaken by CLSCM, in conjunction with the UK Chartered Institute of Purchasing and Supply - into the impact of new legislation and other 'external' factors on the management of supply chain risk in UK industry.

Methods, Tools and Processes Used to Manage Supply Base Risk

**Kimberly D. Rodriguez, Managing Director and Peter Stenger, Director
Stout Risius Ross, Inc.**

Abstract:

Supply Chain Risk Management ("SCRM"(tm)) identifies, quantifies and manages the risk associated with a company's supplier base. Effective SCRM requires tools, systems and processes that support the on-going endeavor to minimize supplier based risk. Supplier based risk includes, but is not limited too, technology, geography, performance, financial health, quality, cost and capacity. We will discuss the methods and tools used by SRR to assist its clients in managing their supplier risk. Additionally, we will discuss effective containment strategies when an incident occurs that threatens supply stability

Using Conditional Probabilities in Diagnosing Supply Risk

Michael Smith

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Abstract

In evaluating supply risk, the magnitude of risk includes both the probability of a negative event and the magnitude of harmful results should the negative event materialize. Current research has extensively studied ways to reduce the magnitude of negative events, but has largely failed to address the probability of occurrence, other than as gauged through supply managers' perceptions. Such probabilistic assessments can be rendered more precise through the recognition of conditional probabilities. Conditional probabilities, particularly through the application of Bayesian inference, have been applied to establishing and assessing probabilities of the likelihood of adverse outcomes in a number of situations, including medical diagnosis and risk of carcinoma and other forms of illness, the risk of hurricanes, the risk of insurance losses, economic risk in commodity markets, and the risks for both producers and consumers associated with quality failures. The value of incorporating conditional probabilities in risk assessment can readily be illustrated by considering medical practice. In the medical realm, as research accumulates, certain conditions become reliably linked to some instances of certain disease processes, allowing the clinician to move beyond aggregated probabilities and modify risk assessments and treatment options based upon the conditions present in the individual case. Such is the situation when reliable genetic factors are identified that affect the likelihood of specific forms of cancer. When such risk factors are present, more monitoring is appropriate than is the case for the general public. In other cases, medical tests can be developed to indicate the presence of disease, but all such tests have associated risks of false positives and false negatives. Logic that factors in the probabilities of incorrect diagnostic information can dictate the appropriateness of additional tests or invasive treatments, and this logic can be extended to include patient information, for example, information on race, genetic, and health history conditions along with test results in determining the course of action.

In supply management, the challenge often is to diagnose the organizational health of our suppliers, and the extent to which they can meet specific supply needs. For example, the probability of business failure for a given supplier is a function of the way that an individual company is managed, but it is also a function of the current financial status, industry, location, customer base, supply base and size of the company. A small supplier facing financial challenges presents risk both because it is small, and because of the financial condition. By developing reliable indicators, and incorporating conditional probabilities for each in risk assessment, it is likely that supply managers can move beyond subjective probabilities in quantifying supply risk. In this presentation, Bayesian statistics will be discussed as a way to better incorporate experience and knowledge into assessment of the probabilities of specific sources of supply failure.

Theories used within Supply Chain Management - where's Risk Management ?

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Abstract

Since its introduction (Oliver & Webber, 1982) the development of Supply Chain Management (SCM) has resulted in an expansion of the vocabulary within the logistics area. Complex concepts such as vendor managed inventory (VMI), efficient consumer response (ECR), automated replenishment programmes (ARP) etc. has become common language. The concepts have been implemented in the race for market shares trying to get a competitive advantage over competitors, or simply in an attempt to keep up. Whatever the reason, both the operations at each company and the total system (the ultimate supply chain) have become more complex over the last decades. Combined with e.g. higher clock speeds (Fine, 2000) this complexity is becoming a problem for companies.

Lately a trend on developing a theoretical foundation for SCM can be identified (Halldorsson et al., 2004; Chen & Paulraj, 2004; Williams, Maull, & Ellis, 2002) at the same time as Risk Management in the Supply Chain is receiving increasing attention (e.g. Zsidisin et al., 2004; Zsidisin, 2003; Agrell, Lindroth, & Norrman, 2004; Ritchie & Brindley, 2000). A few theoretically founded contributions on Supply Chain Risk Management exist (e.g. Zsidisin & Ellram, 2003) but by far the larger part are strictly empirical.

In this article the author proposes a risk matrix combining intent/non-intent with the two system theoretical elements structure and process. From this matrix selected theories routinely used within SCM are investigated and evaluated as to their relevance in integrating Risk Management into SCM.

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AVOIDING AND ADDRESSING TROUBLED SUPPLIER SITUATIONS

I. Avoiding Troubled Supplier Situations

A. Introduction

Any supplier to a company that provides critical product and faces financial difficulty could interfere with a company's supply chain and production.

B. Drafting Strong Purchase Orders

The purchase order becomes the first line for action or defense.

C. Prescreening Suppliers

Avoid conducting business with companies that are likely to face financial challenge.

II. Identifying Troubled Suppliers/Early Warning Signs.

Identifying trouble at its earliest sign will give the company the greatest options for addressing the situation and avoiding having to deal with the situation in a crises context.

III What to do When a Supplier is Facing Financial Trouble

Conduct a legal and factual analysis of available options and related costs, including resourcing, bankruptcy, litigation to retrieve tooling, and injunctive relief.

IV. **Conclusion**

Having an experienced team to address troubled supplier issues and an established plan of action is critical to maintaining a strong supply chain and manufacturing process.

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Rx for Troubled suppliers

Coping with Supply Risk

- Supplier Selection Considering Supply Risk -

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Keywords

Supply Chain Risk, Supply Risk, Supplier Selection, Material-Supplier Risk Portfolio

Abstract

As a result of the increasing uncertainty in the procurement and sales markets, supply chains face rising risks. A company as a part of a supply chain perceives risk for example from unreliable supply (supply risk), machine failures in its own operations (process risk), unexpected demand changes (demand risk), forecast inaccuracy (planning & control risk) and political instabilities (environmental risk). Case studies from different industries point out that supply chain risks often negatively affect the financial result of the whole supply chain. Considering these risk issues in supply chain management gets more and more essential for companies' business success.

Afterwards, the presentation focuses on supply risk. The mechanism how sources of risk induce supply risk at the focal company is illustrated in a descriptive model. Up to the present, there is a lack of a systematic approach to cope with supply risk in research as well as in practice. Therefore, an overview of techniques how to reduce supply risk structured by the tasks of supply management is given. The technique of the material-supplier risk portfolio that considers risk issues in the supplier evaluation and selection process is discussed in more detail. The method assesses the risk that is perceived by the purchased material and the capability of suppliers to cope with risk. Hence, companies are enabled to select appropriate suppliers for each material, so that the supply risk is systematically reduced. Finally, the successful application of the method at a semiconductor equipment manufacturer is described.

A Contingency Approach to Commodity Risk Management

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ABSTRACT

Purchasing organizations encounter supply uncertainty from many different sources, and the risk that exists in those firms' upstream external environments differ by their characteristics of probability and impact. This presentation will provide initial insight and questions for consideration for implementing various risk management techniques, using a contingency approach, that are appropriate under supply risk conditions characterized as 1) being identifiable, 2) having a high degree of probability of occurrence, and 3) resulting in some extent of financial losses. Managerial implications and suggestions for further study are presented.