

An Indian-Australian research partnership

Project Title: **Supply Chain Risk Management In Practice: A Behavioral Study of What Is, And What It Is Thought To Be**

Project Number **IMURA0794**

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Research Clusters:

Research Themes:

Highlight which of the Academy's CLUSTERS this project will address? <i>(Please nominate JUST <u>one</u> T T Niranjan. For more information, see www.iitbmonash.org)</i>		Highlight which of the Academy's Theme(s) this project will address? <i>(Feel free to nominate more than one. For more information, see www.iitbmonash.org)</i>	
1	Material Science/Engineering (including Nano, Metallurgy)	1	Advanced computational engineering, simulation and manufacture
2	Energy, Green Chem, Chemistry, Catalysis, Reaction Eng	2	Infrastructure Engineering
3	Math, CFD, Modelling, Manufacturing	3	Clean Energy
4	CSE, IT, Optimisation, Data, Sensors, Systems, Signal Processing, Control	4	Water
5	Earth Sciences and Civil Engineering (Geo, Water, Climate)	5	Nanotechnology
6	Bio, Stem Cells, Bio Chem, Pharma, Food	6	Biotechnology and Stem Cell Research
7	Semi-Conductors, Optics, Photonics, Networks, Telecomm, Power Eng	7	<u>Humanities and social sciences</u>
8	<u>HSS, Design, Management</u>	8	Design

The research problem

Define the problem

Successful implementation of strategies like lean management, outsourcing and offshoring have reduced inventories and improved efficiencies on the one hand, but on the other hand, due to the resultant low inventory and increased geographic footprint, has increased firms' exposure to risk considerably in recent years. Accordingly, supply chain risk management (SCRM) is a pressing problem for most large corporations today.

Although SCRM is now a fairly well developed area of research and practice, one problem that is overlooked by both practitioners and academics is, what gets managed is not "supply chain risk" but managers' perception of that risk.

Perceptions of risk are affected by emotions and cognitive biases and can be quite far from reality. For example, research has shown that people judge death by accidents to be more than 300 times more likely than death by diabetes, but the true ratio is 1:4. It follows that managers could also suffer from cognitive biases, which affect the way they make decisions at their workplace. It is a moot question whether the supply chain risk that companies are spending millions of dollars managing, is anywhere close to actual risks that the firms face. Clearly, this is a problem that consultants and the higher echelons of large companies need to be concerned about.

Project aims

Define the aims of the project

The study aims to identify systematic deviations of managers' perception of supply chain risk from the real world. The research will be empirical, and will draw upon academic literature on risk perception and decision biases, apart from supply chain management and organizational theories.

Expected outcomes

Highlight the expected outcomes of the project

- A description of how supply chain risk management problems are framed and implemented in large professionally managed corporations.
- An understanding of cognitive biases, affect and emotions and social factors that lead decision makers astray from effective SCRM.
- A toolkit to guard managers against such pitfalls

How will the project address the Goals of the above Themes?

Describe how the project will address the goals of one or more of the 6 Themes listed above.

While the research has immediate application in supply chain management domain, the insights and contributions of the proposed study are also sufficiently basic to be of interest to a large community of practitioners and academics outside supply chain management. In other words, this also contributes to basic research, and is there for relevant to the theme.

Capabilities and Degrees Required

List the ideal set of capabilities that a student should have for this project. Feel free to be as specific or as general as you like. These capabilities will be input into the online application form and students who opt for this project will be required to show that they can demonstrate these capabilities.

Required:

Strong undergrad degree in engineering from a premier institute, with exposure to courses/internships in Operations Management

OR Masters degree with specialization in Operations Management/Marketing/Supply Chain Management, from a premier institute

Desirable:

A few years of work experience in managerial or consulting roles

Awareness of supply chain risk management and of topics in behavioural analysis

Experience in qualitative research and empirical research

Potential Collaborators

Please visit the IITB website www.iitb.ac.in OR Monash Website www.monash.edu to highlight some potential collaborators that would be best suited for the area of research you are intending to float.

Select up to **(4)** keywords from the Academy's approved keyword list (**available at <http://www.iitbmonash.org/becoming-a-research-supervisor/>**) relating to this project to make it easier for the students to apply.

Modelling and Simulation

Miscellaneous/Uncategorised

Humanities