Editorial Preface

Environmental Conservation and Operations Research:
Retrospective versus Prospective Models

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In this issue of the *International Journal of Risk and Contingency Management* (IJRCM), we proceed from the qualitative to the quantitative data analysis and conclude with a philosophy reflection article. Our featured industries for this issue's manuscripts include government public safety, financial investment, strategic management and information technology (enterprise software development).

We selected the first manuscript because, in addition to it being a topic relevant to IJRCM and society (e.g., a retrospective study of accidents - environmental conservation), it demonstrated a collaboration of scholars from three countries: Netherlands, Italy and USA. We selected the next two articles to illustrate that good empirical research using operations research techniques may be done on a sole author basis, and we have no constraints on how many studies we will look at here. Thus, we were able to accept two solid studies from the same author and synchronize their publication to the same issue. We selected the fourth manuscript because of the methodology: In that manuscript, the author developed a model based on a gamma distribution analysis followed by a theoretical validation using quantitative data collected from 19 projects. The final article was a philosophical reflection about how we perceive ethics and risks in society.

The first article is a retrospective critical analysis by Zamparini, Reniers and Ziolkowski. They analyze 21 years of data related to unintentional hazardous materials accidental releases into the air, water, and rail transportation modes reported in the USA. The key risk factors they focused on were material losses, carrier damages, property damages, response costs, and remediation costs. They found that there has been a reduction in the frequency of hazardous material accidents during the last 21 years and they attribute this to an increase in public awareness of environmental protection along with an increase in government regulations. Nonetheless they assert gaps still exist in hazardous material handling practices and they suggest several areas of government policy improvement. We encourage other researchers to contribute qualitative data analysis studies related to risk or contingency management such as this one.

In the second manuscript, Kumar points out that portfolio managers often make the mistake of using decision making tools that rely on past market behavior, which we all know from the 2008 global financial crises is not reliable. He develops a predictive model to estimate the performance of stock market companies based on a genetic algorithm (GA) which is a conditional search and branch operations research technique. He embeds an exponential weighted moving average formula to calculate the value at risk for the price of Taiwan mutual funds in his sample. He was to show several links between stock risk and yield but the model did not perform well in both bull and bear market

periods. Therefore, more research is needed to strengthen this model. This was an interesting empirical study that used a very large stock market sample of 31 firms. We encourage other researchers to use actual data (including case studies) rather than submit wholly theoretical models.

In the third article, this time Kumar take a different approach by applying an operations research nonparametric technique called data envelopment analysis (DEA) to analyze the performance of a cross-sectional group of India-based companies. He used retrospective stock market data to investigate if technical efficiency was an important predictor of business failure. His sample included performance metrics from textiles, wood production, computers and related technology manufacturing industries. The DEA model measures if several deterministic inputs are matched with performance outcomes as a group rather than an index to index comparison. This is the advantage of a DEA model as compared to traditional portfolio management analysis techniques. He embedded an interesting distance constraint function driven probit and logit regression models. We encourage other researchers to submit applied articles or case studies using operation research techniques such as DEA, Linear Programming, Network Analysis and Payoff Tables.

The fourth article by Denas is an empirical manuscript that addresses how to estimate project risk using a novel approach based on certainty rather than uncertainty. Denas first briefly reviews the literature, pointing out as many of us know that 73% of enterprise projects fail due to insufficient risk management (sometimes we see the figure 85% stated but which ever figure you cite, it is larger than we would prefer to see in this industry). Denas then builds a model based on several algebraic equations and a Gamma distribution (that latter is what provides the estimates for the uncertainty). He then applies the model to 19 enterprise software projects to illustrate it is accurate. Three things make this a best-practice article for our journal. First it surveys the relevant literature, and cites any assertions to subject matter experts (e.g., during the model construction). Second it provides a verification or validation of a proposed model using a simulation from a distribution. Third it collects actual data from real projects to apply the proposed model. We encourage other researchers to use this methodology for empirical studies.

Our final article by returning author Korstanje discusses how we perceive ethical risks in society. He reviews the book with passion that seems equal to its author. He discusses how human knowledge and imagination intersect with ethics. Perhaps the most provocative issue that he uncovers from the book is that performance is a theory of competence driven by sociocultural and disciplinary perspectives. This makes me wonder if I am really performing as judged by other cultures? It is certainly a debatable topic (the socio-cultural perspective, not my performance!). This topic opens up many doors of future research where risk, uncertainty, ethics and morality underlie all studies – we encourage prospective authors to consider examining these dimensions to human behavior.

Thank you to all IJRCM reviewers and to IGI-Global staff for helping us make this journal a success. Readers and prospective authors please see our multi-year call for papers (http://ijrcm.multinations.org/) because we have some exciting new conference and special issue announcements.

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