

Chapter 58

An Empirical Take on Qualitative and Quantitative Risk Factors

K. Madhu Kishore Raghunath

National Institute of Technology, Warangal, India

S. Lakshmi Tulasi Devi

National Institute of Technology, Warangal, India

Chandra Sekhar Patro

Gayatri Vidya Parishad College of Engineering, India

ABSTRACT

Companies face a great challenge of balancing both risk and return on par. In today's volatile economic environment, success depends on strategically managing risks. All organisations accept risk in every decision that they take and risk management is therefore it is strategic when done proactively. Some risks are financial or quantitative and others are associated with behavioral factors or qualitative. Effective strategic risk management must address both quantitative and qualitative factors. Some factors are difficult to quantify or even identify. This study develops a framework from a literature review to identify most relevant quantitative and qualitative risks affecting public as well as private organisations. Risk planning, analysis and mitigation techniques are then proposed along with guidelines for matching each to a specific contest. Surveys are used to collect evidence from educational institutions, hospitals, banks, and manufacturing organizations to build the model. Non-parametric statistical methods are used to validate the most significant combination of risk factors.

INTRODUCTION

'Success lies beyond risk' is an old saying which all have seen and heard about, but now-a-days the new mantra is 'Marginal success lies beyond risk' based on how an individual manage it tactfully, and of course now a day's marginal risk is no risk when compared to the returns obtained. Risk is ubiquitous and people are acquainted of the damage that it can cause if a decision goes wrong. People are being

DOI: 10.4018/978-1-5225-5481-3.ch058

optimistic never than before with their ventures and are ready to go that extra step to delineate the difference between success and failure. Heinz-Peter Berg (2010) believes that, Risk is unavoidable and present in every human situation. It is present in daily operations of the public and private sector organizations. Depending on the context (Insurance, Stakeholder, Technical causes), there are many accepted definitions of risk in use. Risk has become a part and parcel of our lives whether or not one is engaged in economic activities or any other activity. Risk event is recorded by incidents/accidents leading to serious economic loss or loss of life. Avoiding such situations has brought the necessity for the analysis and risk assessment activities in different projects and companies.

In the competitive business environment, organizations are seeking to get and stay ahead of the competition by making significant advances in the products and services, and operating as efficiently as possible. Many businesses use projects as vehicles to deliver that competitive advantage and when companies deal with projects there is always a collateral risk involved and this is where the need arises to distinguish the risk and find a way to mitigate it. The common concept in all definitions is uncertainty of outcomes. Where they differ is in how they characterize outcomes. Some describe risk as having only adverse consequences, while others are neutral. Risk can be broadly defined as the probability of variation surrounding an anticipated outcome (Carter and Rogers, 2008). Jaffari (2001) observed risk as the exposure to loss, gain, or the probability of occurrence of loss/gain multiplied by its respective magnitude. Kartam (2001) has presented his views of risk as the probability of occurrence of some uncertain, unpredictable and even undesirable events that would change prospects for the probability on a given investment. Risk has been examined across multiple disciplines including economics and management. Wiseman and GómezMejía (1998); Stultz (1996); Zsidisin (2003) analysed that within the project management context, the important thing is not keep risk out projects, but to ensure that the inevitable risk associated with every project is at a level which is acceptable, and it is effectively managed. Every organization is exposed to many types of risk; and organizations should develop a risk management culture. All types of risks have to be identified, assessed and managed. This approach gives the organization the ability to understand the sum of risks and their interdependence (Berg, 2010). Bahar and Crandall (1990) defined the risk management as a formal orderly process for systematically identifying, analyzing, and responding to risk events throughout the life of a project to obtain the optimum or acceptable degree of risk elimination or control. According to Cheng et al. (2012) Risk management is the process whereby decisions are made to accept a known or assessed risk or the implementation of action to reduce the consequences or the probability of occurrence of an adverse event. In the same way, Alhawari et al. (2012) reviewed that Risk management refers to strategies, methods and supporting tools to identify and control risk to an acceptable level. Simmons (2002) provided a definition for the risk management as the sum of all proactive management-directed activities, within a program that is intended to acceptably accommodate the possibly failures in elements of the program. For quite some time now, researchers have had a common interest in the area of risk and uncertainty in IT projects.

Njogo & Bibiana (2012) reviewed Risk management as the process of identifying risks, assessing their implications, deciding on a course of action, and evaluating the results. Risk Management is the identification, assessment, and prioritization of risks followed by coordinated and economical application of resources to minimize, monitor, and control the probability and/or impact of unfortunate events. Risks can come from uncertainty in financial markets, project failures, legal liabilities, credit risk, accidents, natural causes and disasters as well as deliberate attacks from an adversary. Risk management ensures that an organization identifies and understands the risks to which it is exposed. Heinz-Peter Berg (2010) viewed that Risk management is applied to issues predetermined to result in adverse or unwanted

15 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

www.igi-global.com/chapter/an-empirical-take-on-qualitative-and-quantitative-risk-factors/202270

Related Content

Maximizing the Percentage of On-Time Jobs with Sequence Dependent Deteriorating Process Times

Alex J. Ruiz-Torres, Giuseppe Paletta and Eduardo Perez-Roman (2015). *International Journal of Operations Research and Information Systems* (pp. 1-18).

www.irma-international.org/article/maximizing-the-percentage-of-on-time-jobs-with-sequence-dependent-deteriorating-process-times/127329

Docking Two Models of Insurgency Growth

Michael Jaye and Robert Burks (2013). *International Journal of Operations Research and Information Systems* (pp. 19-30).

www.irma-international.org/article/docking-two-models-of-insurgency-growth/93066

The Usage of R Programming in Finance and Banking Research

Ceyhun Ozgur, Sanjeev Jha, Bennie B. Myer-Tyson and David Booth (2019). *Modeling Methods for Business Information Systems Analysis and Design* (pp. 34-47).

www.irma-international.org/chapter/the-usage-of-r-programming-in-finance-and-banking-research/219162

Project Sustainability Profile

(2017). *Managerial Strategies and Green Solutions for Project Sustainability* (pp. 160-177).

www.irma-international.org/chapter/project-sustainability-profile/178350

Modeling the Skunkworks Technology: Sharing Experience to Make the Difference

Sylvia C. Mupepi, Kuda B. Mupepi and Tatenda Mupepi (2019). *Strategic Collaborative Innovations in Organizational Systems* (pp. 80-99).

www.irma-international.org/chapter/modeling-the-skunkworks-technology/218702