

A Study of Uncertainty and Risk Management in Business Studies

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ABSTRACT

“Never take both hands off the pump. As an entrepreneur, you need to be on constant lookout for opportunity, and that will involve risk. But you minimize those risks by keeping one hand on the pump that is producing for you. (Kenneth E. Behring, Road to Purpose: One Man's Journey Bringing Hope to Millions and Finding Purpose Along the Way) This is accompanied by concern that prescribed industry risk management standards are not effective enough in managing uncertainty and risk, especially in complex project environments. Leading risk and project management researchers have proposed a number of approaches that they consider to have the potential to improve the management of uncertainty and risk in these environments, including the uncertainty management paradigm explicit opportunity management, an improved approach to the evaluation and interpretation of estimates, complexity theory concepts and the explicit management of individual and organizational risk attitudes. Other researchers suggest an even wider approach to managing uncertainty and risk, such as scenario planning or frameworks that include fundamental uncertainty, ignorance and fuzziness. The primary purpose of this research is to contribute to the understanding of the practices used by Project Managers to manage uncertainty and risk on projects of high complexity. The research questions explore the relationship between uncertainty and risk management approaches and processes and perceived project complexity, the prevalence of risk management approaches and processes considered to be in advance, of general prescribed industry risk management standards, and perceptions of project success in relation to uncertainty and risk management.

A post-positivist research approach was taken. The value of phenomenological elements to supplement the quantitative data in this research was considered important. Post-positivism enables this by rejecting the relativist idea of incommensurability of different perspectives. Results obtained from a survey of 71 Project managers revealed that Project Managers implement higher level (in accordance with a framework developed for this research) uncertainty and risk management approaches and processes on projects perceived to be of greater complexity. However, most Project Managers, on projects characterized by high complexity, implement uncertainty and risk management approaches and processes at lower than the ‘optimal’ levels recommended by general prescribed industry risk management standards.

A minority of Project Managers on projects perceived as complex are implementing uncertainty and risk management approaches and processes considered to be ‘in advance’ of general prescribed industry risk management standards. A positive correlation was found between uncertainty and risk management approaches and processes implemented and perceived project success on projects of high complexity. These results support findings in the literature that enhanced uncertainty and risk management approaches and processes appear to be related to project success. The empirical investigation also explores the nature of uncertainty and risk management approaches and processes considered to be ‘in advance’ of general prescribed industry risk management standards, together with qualitative perspectives from participating Project Managers, highlighting issues and recommendations for improving uncertainty and risk management, particularly in complex project environments.

The project management literature is extensive with reference to continued project failures and the notion that over the years projects have increased in complexity.

Keywords: Risk, Management, Uncertainty, Failure, Complexity

INTRODUCTION

Risk management is the identification, evaluation, and prioritization of risks followed by coordinated and economical application of resources to minimize, monitor, and control the probability or impact of unfortunate events or to maximize the realization of opportunities. Risk management's objective is to assure uncertainty does not deflect the endeavor from the business goals.

Risks can come from various sources including uncertainty in financial markets, threats from project failures (at any phase in design, development, production, or sustainment life-cycles), legal liabilities, credit risk, accidents, natural causes and disasters, deliberate attack from an adversary, or events of uncertain or unpredictable root-cause. There are two types of events i.e. negative events can be classified as risks while positive events are classified as opportunities. .

Strategies to manage threats (uncertainties with negative consequences) typically include avoiding the threat, reducing the negative effect or probability of the threat, transferring all or part of the threat to another party, and even retaining some or all of the potential or actual consequences of a particular threat, and the opposites for opportunities (uncertain future states with benefits).

Certain aspects of many of the risk management standards have come under criticism for having no measurable improvement on risk; whereas the confidence in estimates and decisions seem to increase. For example, one study found that one in six IT projects were "black swans" with gigantic overruns (cost overruns averaged 200%, and schedule overruns 70%).



OBJECTIVES

All operations and projects have uncertainties. Without uncertainties, there would be no need for management. Therefore, a disciplined handling of uncertainties would provide projects and operations with the following benefits:

- To use risk as a planning tool
- To force Project Teams to think and plan in Numbers
- To give ICT Units more time to solve the problems
- To reduce “Blame” and improve team spirit
- To avoid missed deadlines and improve predictability.
- To reduce costs resulting from damaging events and prevent budget overruns.
- To avoid projects or operations not delivering their promised functions.
- To achieve higher quality by increased conformance to defined requirements.
- To satisfy stakeholders by avoiding damaging events of direct interest to them.
- To identify areas where contingency plans are needed
- To resolve problems early. Early detection makes risks less expensive to handle.
- To identify options and trade-offs.

TYPES OF RISK IN BUSINESS:



- **Operational risk:** Operational risk refers to an unexpected failure in your company's day-to-day operations. It could be a technical failure, like a server outage, or it could be caused by your people or processes. In some cases, operational risk can also stem from events outside your control, such as a natural disaster, or a power cut, or a problem with your website host. Anything that interrupts your company's core operations comes under the category of operational risk.
- **Financial risk:** Most categories of risk have a financial impact, in terms of extra costs or lost revenue. But the category of financial risk refers specifically to the money flowing in and out of your business, and the possibility of a sudden financial loss. Having a lot of debt also increases your financial risk, particularly if a lot of it is short-term debt that's due in the near future.
- **Reputational risk:** There are many different kinds of business, but they all have one thing in common: no matter which industry you're in, your reputation is everything.

If your reputation is damaged, you'll see an immediate loss of revenue, as customers become wary of doing business with you. But there are other effects, too. Your employees may get demoralized and even decide to leave. You may find it hard to hire good replacements, as potential candidates have heard about your bad reputation and don't want to join your firm. Suppliers may start to offer you less favorable terms. Advertisers, sponsors or other partners may decide that they no longer want to be associated with you.

Compliance Risk: Are you complying with all the necessary laws and regulations that apply to your business? But laws change all the time, and there's always a risk that you'll face additional regulations in the future. And as your own business expands, you might find yourself needing to comply with new rules that didn't apply to you before. In extreme cases; a compliance risk can also affect your business's future, becoming a strategic risk too.

Strategic Risk: Everyone knows that a successful business needs a comprehensive, well-thought-out business plan. But it's also a fact of life that things change, and your best-laid plans can sometimes come to look very outdated, very quickly.

This is strategic risk. It's the risk that your company's strategy becomes less effective and your company struggles to reach its goals as a result. It could be due to technological changes, a powerful new competitor entering the market, shifts in customer demand, spikes in the costs of raw materials, or any number of other large-scale changes.

IDENTIFICATION OF RISK IN THE BUSINESS



Risks are about events that, when triggered, cause problems or benefits. Hence, risk identification can start with the source of our problems and those of our competitors (benefit), or with the problem itself.

- **Source analysis:** Risk sources may be internal or external to the system that is the target of risk management (use mitigation instead of management since by its own definition risk deals with factors of decision-making that cannot be managed).

Examples of risk sources are: stakeholders of a project, employees of a company or the weather over an airport.

- **Problem analysis:** Risks are related to identify threats. For example: the threat of losing money, the threat of abuse of confidential information or the threat of human errors, accidents and casualties. The threats may exist with various entities, most important with shareholders, customers and legislative bodies such as the government.

When either source or problem is known, the events that a source may trigger or the events that can lead to a problem can be investigated. For example: stakeholders withdrawing during a project may endanger funding of the project; confidential information may be stolen by employees even within a closed network; lightning striking an aircraft during takeoff may make all people on board immediate casualties.

The chosen method of identifying risks may depend on culture, industry practice and compliance. The identification methods are formed by templates or the development of templates for identifying source, problem or event. Common risk identification methods are:

- **Objectives-based risk identification:** Organizations and project teams have objectives. Any event that may endanger achieving an objective partly or completely is identified as risk.
- **Scenario-based risk identification:** In scenario analysis different scenarios are created. The scenarios may be the alternative ways to achieve an objective, or an analysis of the interaction of forces in, for example, a market or battle. Any event that triggers an undesired scenario alternative is identified as risk – see Futures Studies for methodology used by Futurists.
- **Taxonomy-based risk identification:** The taxonomy in taxonomy-based risk identification is a breakdown of possible risk sources. Based on the taxonomy and knowledge of best practices, a questionnaire is compiled. The answers to the questions reveal risks.
- **Common-risk checking:** In several industries, lists with known risks are available. Each risk in the list can be checked for application to a particular situation.
- **Risk charting:** This method combines the above approaches by listing resources at risk, threats to those resources, modifying factors which may increase or decrease the risk and consequences it is wished to avoid. Creating a matrix under these headings enables a variety of approaches. One can begin with resources and consider the threats they are exposed to and the consequences of each. Alternatively one can start with the threats and examine which resources they would affect, or one can begin with the consequences and determine which combination of threats and resources would be involved to bring them about.

SOLUTION TO RISK OR UNCERTAINTY:

Risk Management isn't just about foreseeing and preventing losses. It means adopting an attitude, more or less consciously, in order to protect you against negative events (threats) and take advantage of positive events (opportunities). Once you have properly analyzed a scenario, you will be able to identify these threats and opportunities before they even happen.

Ensure that Risk Management is done continuously throughout the lifecycle of a project and not just at the beginning. Measure the impact that risks have on your projects over time to judge the effectiveness of your response plan.

There are four ways of dealing with, or managing, each risk that you have identified. You can:

- Accept it
- Transfer it
- Reduce it
- Eliminate it

For example, you may decide to accept a risk because the cost of eliminating it completely is too high. You might decide to transfer the risk, which is typically done with insurance. Or you may be able to reduce the risk by introducing new safety measures or eliminate it completely by changing the way you produce your product. When you have evaluated and agreed on the actions and procedures to reduce the risk, these measures need to be put in place.

Risk management is not a one-off exercise. Continuous monitoring and reviewing are crucial for the success of your risk management approach. Such monitoring ensures that risks have been correctly identified and assessed and appropriate controls put in place. It is also a way to learn from experience and make improvements to your risk management approach. All of this can be formalized in a risk management policy, setting out your business' approach to and appetite for risk and its approach to risk management. Risk management will be even more effective if you clearly assign responsibility for it to chosen employees. It is also a good idea to get commitment to risk management at the board level.

Good risk management can improve the quality and returns of your business.

CONCLUSION

The key purpose of this research was to investigate the relationship between uncertainty and risk management approaches and processes and perceived project complexity; the prevalence of uncertainty and risk management approaches and processes considered to be 'in advance' of general prescribed industry risk management. An important finding of this research is that on complex projects there is a suggested enhancement of project success with higher 'levels' of uncertainty and risk management implementation. We also got to know the objectives, identification of risk in the management or business, types of risks etc.

REFERENCES

- [1]. Hubbard, Douglas (2009). *The Failure of Risk Management: Why It's Broken and How to Fix It*. John Wiley & Sons. p. 46.
- [2]. Antunes, Ricardo; Gonzalez, Vicente (3 March 2015). "A Production Model for Construction: A Theoretical Framework". *Buildings*. **5** (1): 209–228. doi: 10.3390/buildings5010209.
- [3]. ISO/IEC Guide 73:2009 (2009). *Risk management — Vocabulary*. International Organization for Standardization.
- [4]. ISO/DIS 31000 (2009). *Risk management — Principles and guidelines on implementation*. International Organization for Standardization.
- [5]. Flyvbjerg, Bent & Budzier, Alexander (2011). "Why Your IT Project May Be Riskier Than You Think". *Harvard Business Review*. **89** (9): 601–603.