Public Policy and Administration Research
ISSN 2224-5731(Paper) ISSN 2225-0972(Online)
Vol.12, No.5, 2022

Critical Analysis of Risk Management: A Narrative Literature Review

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Abstract
The objective of this study is to analyze available literature on the subject of risk management in business. Risk happens in all business functions and in every kind of activity. Risk management study commenced after World War II. The study has long been connected with the use of market insurance to guard entities and businesses from numerous losses linked with coincidences. Other methods of risk management, alternatives to market insurance, surfaced during the 1950s when market insurance was alleged as expensive and imperfect for defense contrary to clean risk. Knowing how to identify risks, attribute a value and a priority scale, design actions and mechanisms to minimize risks, and continuously monitor them, are essential to guarantee companies' survival and create sustainable value. Risk management is the process of minimizing or mitigating the risk. It starts with the identification and evaluation of risk followed by optimal use of resources to monitor and minimize the same.
Keywords: risk management, risks
DOI: 10.7176/PPAR/12-5-04
Publication date: July 31st 2022

1. Introduction

Risk is from uncertainty. In organizations risk can come from uncertainty in the market place (demand, supply and Stock market), natural disasters failure of projects, accidents, world pandemics etc. Risk can be defined as the chance of loss or an unfavorable outcome associated with an action. Uncertainty is not knowing what will happen in the future. All business and investors manage risk, whether consciously or not, in the choices they make. At its core, business and investing are about allocating resources and capital to chosen risks. Risk is of paramount importance to organizations. Businesses must identify, evaluate, manage and report many types of

risk for improved external decision making. The greater the uncertainty, the greater the risk. Risk is what makes it possible to make a profit. If there was no risk, there would be no return to the ability to successfully manage it. Risk management is a process that's defines risk tolerance and measures, monitors, and modifies risk to be in line with that tolerance.

2. Methodology

The author used narrative literature review because of its capability to investigate more than one research question. It is effective in collecting topic-related literature with the aim to summarize, synthesize, and draw literature-based conclusions. This literature review approach is effective in contributing to academia by presenting an extensive report about the available literature, highlighting gaps and, accordingly, the future direction of research.

Accordingly, the researchers started searching several keywords, such as "risk management" and "risks and uncertainty," using Web of Science, Google scholar, Scopus. The keywords and concept search resulted in sourcing many articles. Following this, the researchers evaluated each article and excluded irrelevant research articles. Based on that, a second level of article filtration started with the aim to highlight the main patterns in the literature and the research trends.

3. Literature review

3.1 Definition of Risk and Risk Management

Risk management is defined as the process intended to safeguard the assets of the company against losses that may hit it in the exercise of its activities, through the use of instruments of various kinds (prevention, retention, insurance, etc.) and in the best cost conditions (Urciuoli and Crenca,1989).

The first definitions of risk are attributed to Bernoulli, who in 1738 proposed measuring risk with the geometric mean and minimizing risk by spreading it across a set of independent events (Bernoulli, 1954). Accordingly, the traditional definition of risk is measured by two combined variables: a) frequency of occurrence (probability) of the "risky" event, i.e., the number of times the risky event is repeated in a predetermined period and b) extent of the consequences (magnitude) that the event generates, i.e., all the results of its occurrence.

According to ISO 31000:2009 describes risk management as a systematic and logical process, during which organizations manage risk by identifying it, analysing and then evaluating whether the risk should be modified by risk treatment in order to satisfy their risk criteria.

The ISO 31000 is the international standard for risk management originally issued in 2009 by the ISO (International Organization for Standardization). It provides a detailed framework for the design, implementation, and maintenance of risk management on a company-wide level. It only aims to be used as a guide to help businesses compare their existing practices with international standards.

Risk management can be defined as a strategic business process, whereby management have to assess whether the business activities are consistent with its stated strategic objectives and how risk management is linked to investment and growth decisions.

Another definition is Risk Management refers to the process of planning, organizing, directing, and controlling resources to achieve given objectives when unexpectedly good or bad are possible (Head, 2009). Nadeen Ehsan etal 2012 defined risk management in a project involves the identification of influencing factors which could have negative impact on the cost, schedule and quality objectives of the project quantification of impact of potential risk and implementation of mitigation measure to minimise the potential impact of risk.

Risk management is the process of identifying, evaluating, and prioritizing risks followed by integrated and economical application of resources to reduce, observe, and control the probability or impact of unfortunate events or to maximize the realization of opportunities (Sushanta Maiti, 2021). Furthermore, According to Bahamid etal 2017, Risk Management is defined as organized and comprehensive method tailored towards "organizing", "identifying" and "responding" to risk factors in order to achieve project goal. Following Chapman and Cooper (1983), risk is the possibility of suffering economic and financial losses or physical material damages, as a result of an inherent uncertainty associated with the action taken. In a later definition developed by management literature, the concept of risk comprises positive and negative consequences of an event, which may affect the achievement of strategic, operational and financial objectives of a company (BBA, et al., 1999).

Cleden defined Risk as exposure to the consequences of uncertainty. In a business context, it is the chance of something happening that will have an impact upon business aims and objectives. It includes the possibility of loss or gain, or variation from a desired or planned outcome, as a consequence of the uncertainty associated with following a particular course of action. Thus, risk has two elements: the likelihood or probability of something happening, and the consequences or impacts if it does.

Given the complexity and magnitude of the risks that companies face, scholars recognize a macro

classification of risks into two main categories (Mowbray, et al., 1979). First, pure or static risk is the risk that only causes damage without the opportunity of earning from its occurrence. Always negative, it is characteristically unexpected because it is determined by accidental events. This risk falls perfectly under the insurance policy. Second, speculative or dynamic risk is the risk that can cause either damages or earning opportunities. These are the typical entrepreneurial risks, consequences, for example, of an investment that has not generated a profit. They are normally related to planning and managing the different businesses and functions of the enterprise, such as production, product, marketing and sales. Risky events can be caused by external factors (economic, environmental, social, political and technological aspects) or internal factors (infrastructure, human resources, process and technology used by a company) (COSO, 2004). Risk management is defined as the process intended to safeguard the assets of the company against losses that may hit it in the exercise of its activities, through the use of instruments of various kinds (prevention, retention, insurance, etc.) and in the best cost conditions (Urciuoli and Crenca, 1989). Another definition is Risk Management refers to the process of planning, organizing, directing, and controlling resources to achieve given objectives when unexpectedly good or bad events are possible (Head, 2009).

The International Organization for Standardization (ISO 31000, 2009) identifies the following principles of RM that should: create value; be an integral part of the organizational processes; be part of decision making that explicitly addresses uncertainty; be systematic and structured; be based on the best available information; be tailored; take into account human factors; be transparent and inclusive; be dynamic, iterative and responsive to change; and be capable of continual improvement and enhancement. The adoption of an RM methodology can lead firms to reduce the uncertainty in enterprise management, to ensure continuity in production and trading in the market, to decrease the risk of failure, and to promote the enterprise's external and internal image. Therefore, RM creates business value, maximizing business profits by minimizing costs (Urciuoli and Crenca, 1989).

3.2 Risk management Principles

The purpose of risk management is the creation and protection of value. It improves performance, encourages innovation and supports the achievement of objectives. The principles outlined in Figure 1 provide guidance on the characteristics of effective and efficient risk management, communicating its value and explaining its intention and purpose. Adhering to the risk management principles at a high level was found to be a significant factor in better reaching cost, schedule, technical and customer targets, in addition to achieving a more stable project execution. The principles are the foundation for managing risk and should be considered when establishing the organization's risk management framework and processes.

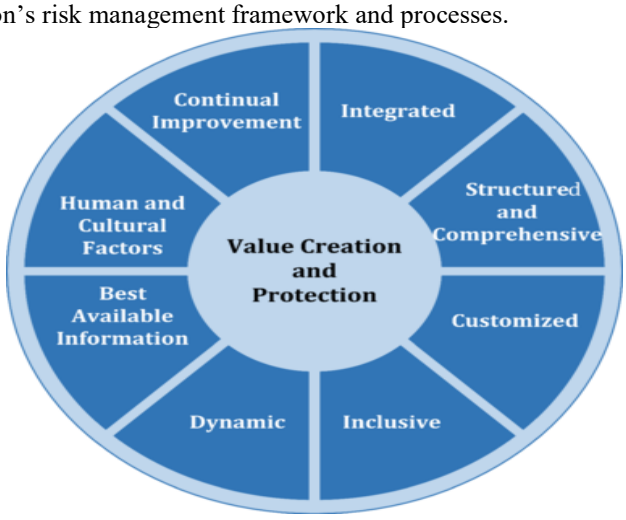

Figure 1 Risk Management Principles

Effective risk management requires the elements of RM principles and can be further explained as follows.

a) Integrated

Risk management is an integral part of all organizational activities. Risk management is not separated from the main activities and processes of the organization; it is a part of decision-making in every department. Risk management is embedded into the organization's processes and is a part of management's responsibilities.

b) Structured and comprehensive

A structured and comprehensive approach to risk management contributes to consistent and comparable results. Risk management is structured with guidelines and procedures to follow in order to maintain productivity and efficiency.

c) Customized

The risk management framework and process are customized and proportionate to the organization's external

and internal context related to its objectives. When the context is established in both internal and external environments, objectives can be captured and risk management can be customized to the unique organization.

d) Inclusive

Appropriate and timely involvement of stakeholders enables their knowledge, views and perceptions to be considered. This results in improved awareness and informed risk management.

e) Dynamic

Risks can emerge, change or disappear as an organization's external and internal context changes. Risk management anticipates, detects, acknowledges and responds to those changes and events in an appropriate and timely manner.

f) Best available information

The inputs to risk management are based on historical and current information, as well as on future expectations. Risk management explicitly takes into account any limitations and uncertainties associated with such information and expectations. Information should be timely, clear and available to relevant stakeholders.

g) Human and cultural factors

Risk management is influenced significantly by human behaviour and culture at each level and stage.

h) Continual improvement

Risk management is continually improved through learning and experience and ensure resiliency PDCA is a risk management process: plan, do, check, adjust. This is a cycle that keeps the organization continually improving while factors change over time.

3.4 Risk management process

Risk management (Fig. 2) follows a stage-gate process (Henschel, 2009; ISO 31000, 2009; Urciuoli and Crenca, 1989;).A preparatory step requires defining the RM plan to be consistent with strategic business objectives, and conducting a context analysis. Most organisations follow a risk management cycle it can be diagrammatically presented as below:

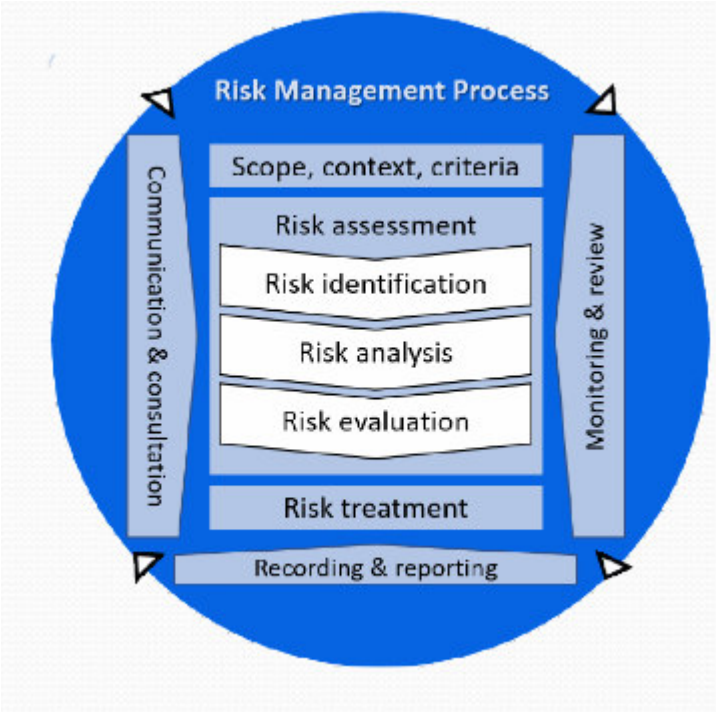

Figure 2 Risk Management Process

The Risk Management steps need to be taken consistently within the organisation. Merely undertaking these steps once is not enough. These steps need to be taken repeatedly and routinely with risks being reviewed periodically so that mitigation strategies are always up-to-date. Over time, the risk management process needs to be imbibed in the culture of the organization. The risk management process should become a part of the annual or biannual cycle of the organization. This will ensure that the process is iterated at different points in time.

The first step in risk management begins with the organization identifying its risks and systematically noting down the results. The risk can be identified through feasibility study brainstorming and business reports. Any organization can face different risks based on the business that it is in. There are some common risks such as risks of natural disasters. However, there are other risks such as technological risks. Companies that do not upgrade their technology risk being left behind. At the same time, companies that do upgrade their technology

face the risk of not being able to manage the change appropriately. Many organizations also face "key person" risk. There are certain tasks in the organization which can only be performed by such key people. Alternatively, these are certain key people who bring in all the clients. Once a list of all the possible risks has been made, the next step is to categorize the risks. There are various frameworks that help in the classification of risks. Some of these frameworks have been mentioned in this paper. However, the basics remain the same in all the models. Risks are classified by considering the probability of the risk materializing as well as the impact it would have if it did materialize. Once the risks have been listed, the next step consists of conducting a **risk assessment** and analysis which aims at assessing the risk level, thus sorting risk according to quantitative and qualitative criteria. The next step is to create a priority list of risks.

It is important for the senior management of the company to be clear about the risk profile that they want to keep. Some organizations don't mind keeping a lot of risk on their books. This is particularly true of start-ups, who use risks in order to grow. On the other hand, there are other companies who want to keep their risk profile as close to zero as possible. The worst situation is when there is no unanimity about the risk profile. In such cases, some people in the senior management want to take risks whereas others do not want to do so creating ambiguity and leading to suboptimal outcomes. At this stage we can categorise risk according to high moderate or low according to impact in terms of costs and scope.

IMPACT	**ACTIONS**		
SIGNIFICANT	Considerable Management Required	Must Manage and Monitor Risks	Extensive Management essential
MODERATE	Risk are bearable to certain extent	Management effort worthwhile	Management effort required
MINOR	Accept Risks	Accept but monitor Risks	Manage and Monitor Risks
	LOW	**MEDIUM**	**HIGH**
	LIKELIHOOD		

Tab 1

The next stage is developing risk management plan. The risk management process in all companies is not the same. There is no single best way to undertake risk management activities. Instead, risk management can be undertaken using several different strategies. Some of the common ones are Risk avoidance, Risk reduction, Risk sharing and Risk bearing. Different departments within the company may choose different strategies. Also, some departments may choose different strategies at different points in time. The details about the different types of risk management strategies have been mentioned in a different article in this module. The risk management strategy chosen should be congruent with the risk management philosophy stated in the previous step. This is the reason that the process must be followed exactly in the order that has been mentioned.

The next step in the process is to implement the chosen strategy. The implementation must be well defined and the results must be closely monitored to validate the effectiveness of the methods being used.

After the risk management process has been implemented by the team, the next step is to review the new risk profile. There are ways and means which have been designed using which the risk can be measured after the implementation. The new risk profile should be compared with the desired risk profile in order to determine whether the strategy has been successful. If the new risk profile is also beyond the limits of risk tolerance of the company, then the same process needs to be repeated in iterations till the organization is comfortable with the risk leftover. This type of risk is called residual risk since it is the one that is left over after the strategy has been implemented by the firm.

According to ISO 31000 2018-Process, the process has remained the same except addition of recording and reporting which was inherently assumed under communication.

As mentioned above, this process needs to be done in an iterative manner. This is because the risk an organization has, is relative to its environment. If the external environment changes, then so does the risk profile. Therefore, it is important to keep scanning the environment and keep adjusting the policy accordingly.

Risk management Framework

According to ISO 31000, a risk management framework is a set of components that support and sustain risk management throughout an organisation. Principles of risk management have been reviewed in 2018, as these

are the key criteria for successful risk management. Framework development encompasses integrating, designing, implementing, evaluating and improving risk management across the organization. Figure 4 illustrates the components of a framework.

Figure 3 Risk Management Framework ISO 31000:2018(en), Risk management — Guidelines

The risk management framework's main objective is to empower the organization to integrate and align risk management into important activities and processes.

Figure 4 shows Risk management framework, risk management principles and risk management process how they are correlated in managing risk.

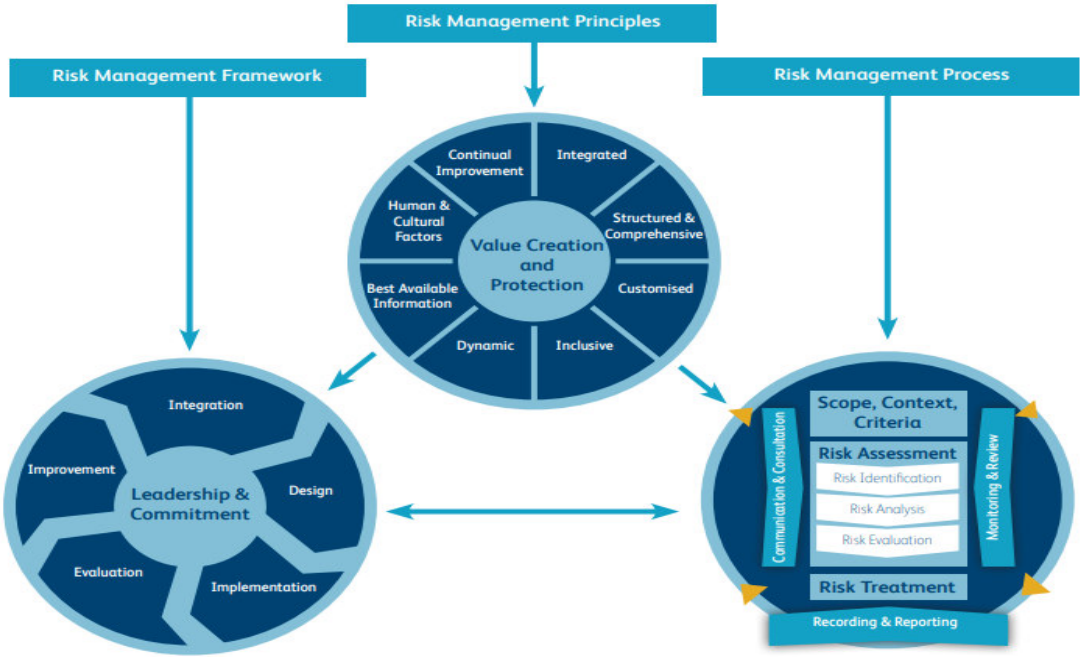

Figure 4: Risk management framework, risk management principles and the risk management process

3.5 Risk Management Application

In the last decades, we have witnessed an increasing vulnerability of the industrial and social systems (e.g., related to clinical risks, natural risks, safety of workers, etc), leading to a growing social concern about this phenomenon. An increase of theoretical and empirical developments of RM has taken place during the same period in many fields, with specific methodologies, models and techniques, coming from different cultural contexts.

According to Verbano and Venturini, 2011, the Risk Management applications have been classified into nine different streams:

- Strategic risk management (SRM): an integrated and continuous process of identification and assessment of

strategic risks (human, technological, brand, competition, project and stagnation risks), which are considered obstacles that prevent reaching an organization's financial and operational goals (Chatterjee, et al., 2003).

- Financial risk management (FRM): a process of creating economic value in a firm by using financial technique and methodologies to manage exposure to risk (credit, exchange rate, inflation, interest rate, price and liquidity risk) (Crockford, 1986).
- Enterprise risk management (ERM): a process applied across the enterprise, designed to identify potential events that may affect the organization, and manage risk (strategic, market, financial, human, technological and operational risks) to be within its risk tolerance, to provide reasonable assurance for achieving enterprise objectives (COSO, 2004).
- Insurance risk management (IRM): a pure risk management process in a firm (where pure risk can be of environmental, social, personal and technological types), based on the observation of damaging events that have already occurred, the application of a premium and the subjective assessment based on the assessor's experiences and competencies (Gahin, 1967).
- Project risk management (PRM): a process integrated into the project's life cycle, which involves defining objectives, identifying sources of uncertainty, analysing these uncertainties and formulating managerial responses to develop an acceptable balance between risks and opportunities (Thevendran and Mawdesley, 2004). Project risks can be of technical, operational, organizational, contractual, financial, economic and political types.
- Engineering risk management (EnRM): a complex and continuous process that involves managing the planning, design, operation and evolution of an engineering system. This is aimed to identify and choose appropriate responses to problems related to different risk factors (technical/operational risks) through the use of a systemic and proactive approach (Regan and Patè-Cornell, 1997).
- Supply chain risk management (ScRM):a shared RM process, developed in collaboration with the partners in the entire supply chain, to deal with the risks (logistics, financial, information, relationships and innovation risks) and uncertainties resulting from logistic activities and resources (Norman and Lindroth, 2002). With the diffusion of the open innovation phenomenon (Petroni et al., 2012), many companies are building strong supply chain partnerships with business partners, such as manufacturers, distributors, suppliers and customers, and consequently risks deriving from these relationships have to be managed carefully.
- Disaster risk management (DRM): a holistic and flexible approach in governing any community, involving a series of actions (programs, projects and measures) and tools aimed at reducing disaster risks (deriving from natural phenomena, terrorism, epidemics and industrial accidents) and mitigating the spread of disasters, following the processes, structures and rigour typical of RM (Garatwa and Bollin, 2002).
- Clinical risk management (CRM): an approach to improve healthcare quality, which identifies circumstances that put patients at risk of harm, and then acts to prevent or control those risks (related to human and organizational factors or technological aspects) (Walshe and Dineen, 1998). The aim is both to improve the safety and quality of care for patients and to reduce the costs of such risks for healthcare organizations (Verbano and Turra, 2010).

3.6 Risk types

Risk types, following the classification of the Casualty Actuarial Society (2003):

a) "Hazard risks", comprising fire and other property damages, windstorm and other natural perils, theft and other crimes, personal injury, business interruption, disease and disability (including work-related injuries and diseases), and liability claims.
b) "Financial risks", comprising price (e.g., asset value, interest rate, foreign exchange, commodity), liquidity (e.g., cash flow, call risk, opportunity cost), credit (e.g., default, downgrade), inflation/purchasing power, and hedging/basis risk.
c) "Operational risks", comprising business operations (e.g., human resources, product development, capacity, efficiency, product/service failure, channel management, supply chain management, and business cyclicality), empowerment (e.g., leadership and change readiness), information technology (e.g., relevance and availability), information/business reporting (e.g., budgeting and planning, accounting information, pension fund, investment evaluation, and taxation). According to Chiseyengi, Mwange, Manda, Mutambo, Masase, Mashiri & Bwalya (2022) stressed that a servant leader is the one who is able to manage the risks.
d) "Strategic risks", comprising damage to reputation (e.g., trademark/brand erosion, fraud, and unfavourable publicity), competition, customer wants, demographic and social/cultural trends, technological innovation, capital availability, and regulatory and political trends (Mutambo, Mwange,

Manda, Chiseyengi, Masase, Mashiri & Bwalya 2022).

4. Future Directions

Continuous modification is a common principle. The world is infinitely varying and everything in it. What was the recent past is not currently, and what is currently, won't be tomorrow? Therefore, the background of risk and risk management is quickly shifting as well. Consequently, new approaches are regularly essential to measure and control risk.

The literature of risk management embraces the following directions. The primary direction emphases on the theoretical grounding of risk management in terms of correlated theories as well as risks and management literature. This path concentrates on investigating the effective mechanisms that result from theory and measuring their influence on management. At the same time, this research direction also reflects the formation of new models for forthcoming risks in context of organisational sustainability.

The other route focus is partaking an overall theory that covers all features of risk management. It follows a synthetic approach to highlight aspects with significant impact in the evolution of the field. According to this theoretical direction, risks are treated as a system characterized by inputs, processes and outputs that are analyzed. While the third direction focusses on shaping a classification to include all risk management dimensions. The aim of this approach is to summarize in a single definition the whole complexity of risks. For this purpose, the aim is to synthesize the specialized literature without losing sight of the important aspects. With emerging of virtual teams, the risks also needs to be managed using technology thus the Electronic leader need to consider the use of technology to prioritize the risks (Mashiri, Mwange, Manda, Mutambo, Chiseyengi, Masase, & Bwalya 2022).

5. Conclusion

The overall process of creating formal risk management tools in organizations starts by just thinking about and discussing what is ‘‘risky’’ in an organization. This paper describes the risk management, the risk management process, Rm principles, RM framework and the risk management application. The concept of risk management has been increasingly important to organisations in recent years. The process of creating risk management tools in organizations starts by just thinking about what is risky in an organization.

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