

Review Article

EVOLUTION OF RISK MANAGEMENT

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Abstract

In modern science risk management is one of the major trend in academic research. The study approaches had been changed in years affecting many major academic areas. The purpose of the study mainly to examine risk management development and risk management pattern over the past 20 years. The major challenges involve in the study of medicine and engineering. Other field includes management, accounting, sociology, economics, finances, computer sciences and environmental sciences.

In the year of 2011 major change is observed in company control and accounting. Recently innovation in enterprises risk management, environmental management and industry management in close connection. Risk management involve to enterprise to economic and competitive context to new subject followed in work.

Keywords: risk management, business. Risk.

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Introduction

In the area of risk management, the expertise gained over time became increasingly complex and multidisciplinary. Risk management issues are researched from a wide range of scientific backgrounds (e.g. social sciences, psychology, and computer science). Multidimensional aspects in risk management make it difficult to recognize leading research patterns. For starters, we will find several different approaches, strategies and analytical techniques inside danger for decision-making processes only in management science. Risk management, especially corporate risk management (ERM), is an important business practice aimed at ensuring the organization's structured and controlled approach to risk evaluation and management. Global experience demonstrates that risk management is now an important part of the company's business activities, creates value for the enterprise and influences the efficacy of the actions taken. The establishment of performance of companies were taken as large interest for risk management

Some studies also say that risk management is the main factor in creating competitive advantages, particularly in the context of ERM. The goals of this report were to analyse global risk management analysis patterns. Temporary dissemination of risk management-related reports was calculated along with the most widely employed keywords and the most frequently picked regions. In addition, the use of bibliometric mapping tool was used to create maps of developments in knowledge in research on risk management. While concentrating on coexistence, the research results were discussed. Findings were examined to better understand shifts while patterns or to recognize current trends in risk management research. Risk has become a regular feature in the life of the person, whether engaged in economic activities or otherwise. Risk events are reported by incidents / accidents resulting in severe economic damage or death. Preventing these circumstances as a tool for studying and evaluating the risk of programs or businesses. Over recent years, the industry has been severely affected by violent incidents, environmental crises and natural disasters.

Risk assessment is an important research subject nowadays because the threats in the industrial activity have always been there. There are several research articles on risk management, these studies concentrate only on downstream threats or upstream risks or development risks. This distinction is not significant when we think about the logistics chain and the possibility of logistics.

Literature survey

In awareness the shifts in perception of risk and response to danger is noted. Among other features, the current perception of hazard has its origins in the statistical system of Indo-Arabic, with the first major risk analysis carried out in the Revitalisation. Nevertheless, the principle of risk management is the world-shattering idea which was an isolating line between modern times and earlier chronological periods. Combined with a tendency to take dicy undertakings and making provident decisions, the ability to governor danger is the vital element of the dynamic force of the pecuniary system.

The fundamental differentiation between risk and uncertainty is based on the study of the first of these books. The final work emphasizes the importance of interpretation and the implementation of various law-related issues. The principle of strategy games proposed by J was another study that affected the understanding of the danger problem. In 1926, von Neumann. He points out in this theory, among other aspects, that certain losses come from each technique aimed at winning rather than preventing loses. That argument is ground-breaking in the way that the probability of failure was understood as an important factor for the first time and associated with risk management. J's work. Von Neumann, co-operated with O. Morgenstern's work was published in 1953. During the same time (1952) H. In "Journal of Finance," Markowitz presented his thesis called "Portfolio Choice." The key element of his creation is the theoretical function of the diversification of investments and the selection of so-called efficient strategies with volatility and risk as variances. Organization may make decisions that may lead others to make decisions that may have unwanted effects on it.

The method proposed by H to monitor the amount of arrival and jeopardy. Markowitz is commonly referred to as the mean and alteration optimization. For this cause, researchers and professionals have devoted their energies to identify and develop new solutions to risk management, one of which is Enterprise Risk Management (ERM), which allows organizations to handle a wide range of risks from an interconnected and systemic viewpoint in a comprehensive and consistent manner.

The success of the method of risk management in a holistic framework relies on its clear definition and coordination at all levels of an enterprise and organizational danger. Over the past ten years, risk management has changed substantially, especially in the financial sector. Managing non-financial risks has become more relevant as enforcement and conduct requirements have been strengthened. Stress testing has arisen as a significant compliance method. Organizations have also engaged in maintaining their environments of risk.

### Methodology

Literature review and quantitative approach (bibliometric analysis) were the testing tool used. A literature review was performed on the basis of a study of risk management academic sources. Bibliometric review defining the research areas within the risk management framework was carried out at identified study stages. This article draws on the use of bibliometric data to analyse the information system in the field of risk management and academic progress in this region based on analysis over the last 20 years. Knowledge maps were produced to classify trends in risk management science, reflecting the co-existence of topics addressed over the last 20 years (in 5-time intervals) along with risk management. The resulting data set was minimized by selecting only those words that occurred at least twenty times and excluding characteristic phrases for each article, such as meaning, patterns, principle and scope. The chosen study duration was split into 5-time periods to reflect improvements in the approaches to risk management. The keywords of writers and their co-occurrence were the components reflecting the papers' material.

This paper reflects on those words that appeared in a collection of chosen publications at least twenty times to present a clear representation. The study did not take into account the words "risk management" and other general interest. Approximately the gap between things in the graph demonstrates their interaction in the co-occurrence network. Generally speaking, the closer two objects are placed, the greater their relation in terms of incidence ties in an examined community of publications. Paper selection resulted in the denunciation of objects not firmly related to RM in SMEs, which were linked to the ensuing topics: clinical risk, risk of disaster and risk of engineering. Classification and analysis of various defined types. The articles collected from the literature review and collection were categorized and tailored to the field by taking different viewpoints into account. The data was integrated with the environmental basis of the articles and the time of publication in order to complete the analysis. The traditional definition of danger is calculated by two mixture variables: a) degree of risk frequency (probability) This means that the number of times the dangerous event occurs is repeated in the defined period and b) the extent of the consequences (magnitude) triggered by the accident, i.e. all the outcomes of the incident. Due to an inherent uncertainty surrounding the action taken, the possibility of financial and commercial loss or physical material damage is a risk. Given the complexity and scale of the threats posed by companies, researchers acknowledge two main categories of a macro-risk classification. With respect to categories of threats, the table above indicates that researchers have studied organizational risks mainly.

When predicted, in almost all situations, the articles devoted to operational risks belong to the ERM source, which is the function responsible for an enterprise's global risks such as political, business, social, human, technical and operational

risks. SMEs engaged in everyday manufacturing experience internal and external threats to their activities that pose challenges and affect company performance in terms of productivity, manufacturing volume, social incomes, marketplace share and economic losses.

### Limitation

While this work adds to both literature, there are certain drawbacks that open the way for further studies. Second, risk management is definitely a multidimensional topic (not just in management science), and only leading advances in this area are discussed in this study. There are many other aspects of risk management issues and the interactions between other elements of this definition should be explored in future research. Third, the purpose of this study was to identify designated difficulties in an tentative technique only over the past 20 years. Forthcoming investigation might encompass this exploration notion to supplement it with specific areas such as business aspects. Finally, based on this study, these findings could be used in organisation practice by future research.

### Conclusion

In summary, the review of knowledge maps in the study literature and the rising form of risk management experience make it clear that work on the impression of risk management is a multidisciplinary research area. Based on the method of network analysis used in the last 20 years to assess a change in the concepts of risk management, it can be concluded that this theory is still widely defined.

There is no question that this region remains a major challenge for modern institutions. The ambiguity and multidimensionality of factors that influence existing decision-making processes enable decision-makers to examine the role of risk management in organizational processes from different perspectives.

### References

1. Bernstein P. L. (1997). *Against the Gods: The remarkable story of risk* [Przeciw bogom. Niezwykłe dzieje ryzyka]. Warszawa: WIG Press.
2. Bertinetti, G. S., Cavezzali, E., Gardenal, G. (2013). The effect of the enterprise risk management implementation on the firm value of European companies. Working Paper. Department of Management, Università Ca'Foscari Venezia, 10.
3. Kim, Y., Vonortas, N. S. (2014). Managing risk in the formative years: Evidence from young enterprises in Europe. *Technovation*, 34 (8), 454-465.
4. Kraus, V., Lehner, O. M. (2012). The nexus of enterprise risk management and value creation: A systematic literature review. *ACRN Journal of Finance and Risk Perspectives*, 1 (1), 91-163.
5. Barry W. Boehm, "Software risk: management principles and practices", reprinted from vol-8, No. 1, Jan 1991.
6. Paul L. Bannerman, Risk and risk management in software projects: A reassessment, *The Journal of Systems and Software* 81 (2008) 2118-2133).
7. Edwards, L., 1995. *Practical risk management in the construction industry*. London: Thomas Telford Publications
8. Gould, F.E, and Joyce, N.E, 2002. *Construction project management*. Upper Saddle River: Prentice Hall