

A Biblio-Informatics of Risk Management in Aspect as a Subject for Twenty-Two Years

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Abstract

Original Research Article

This study aims to observe the importance of risk management as a subject with an evaluation of research through publications, published in prestigious journals. Scopus-Elsevier database provides data on file format with comma-separated value (CSV) of twenty-two years from 2002–2019 as regularly and four articles randomly with a maximum 11 years gap and minimum three years. Total of 137 documents written by 363 authors in collaboration with an average of 16.5 authors. Seventy-two articles, followed by 13; 9% conference papers, 02 books, 05 book chapters, and 02 letters, show the status of risk management as an issue. Prominent subjects areas like; business, management, and accounting with 56; 40.8% publications, followed by computer science, economics, finance, civil and other fields of engineering sciences. The United States stands on a top slot with 15; 11% manuscripts, United Kingdom 12; 8.7%, and Germany 11; 8% in sequence. This study reveals that the term risk management is still awaiting its real admiration because this subject is an essential part of the safety of human health and wealth. Risk managers have always been full of beans for safe and sound of the best water for society.

Keywords: Bibliometric, risk management, risk assessment, health and safety, civil engineering, business activity and construction industry.

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INTRODUCTION AND LITERATURE REVIEW

Risk management is art for utilizing various operational and financing procedures to identify risks, evaluate the category of loss, and minimize the portion of misfortune with the application of efficient coordination among the human, financial, technical, and informative resources [1]. A sound organization developed risk management policies as a critical practice to handle the problems arises continuously can cause different shapes and harms to progress [2]. Urbański, M *et al.*, surveyed that project planning had a statistically significant impact on project success in the construction businesses. The purpose of that survey contributes to the enhancement of the body of knowledge intended for global companies and academicians aiming to implement risk management frameworks to enhance project success and ensure the effectiveness of project planning in a competitive business environment [3].

Yilmaz, A. K., Flouris, T. G wrote a book. This book debates the successful integration of values, ergonomics, and risk management to achieve corporate strategic goals because managing ergonomic based risks

remain a challenge. Companies are starting to focus on risk management and corporate sustainability, but also value-based approaches by managers to stay competitive [4]. In Jordan Tarawneh, S.A., Abdulrahman, A. A, distributing a questionnaire to 30 private companies in Iraq and discuss the role of cloud computing, how this role affected in our performance on a daily business and social life with the recent advancement of the technology and its applications [5].

Alzeaiden, K elaborated recent developments in statistical techniques, and promise tools for data mining and data processing in loan sanction assessment for decisions by Jordanian banks. The current study attempts to develop an artificial neural network model, to support credit evaluation [6]. Kortana, T, compose and advised to the executives of business organizations with the implementation of the risk management strategies in their company's strategical, financial, operational, compliance risks, and the balanced scorecards as variables to test the effectiveness of the performance and implications of Small Medium Enterprises (SMEs) in Bangkok, Thailand through self-administered questionnaires for a risk management model [7].

A long ago, Stein, K., Elias, M emphasizes that risk managers in the engineering and construction fields as an integral part of engineering business. Recognition of the discipline of risk management is very relevant for development [8]. In 2006, Kangari, R. supported Stein, K, that the decline in the quality of production is negligence of the assessment of risk managers in the construction industry and counted as the main cause of business failure. The constant approach in monitoring, evaluating and characteristic’s decision making with the best options can eradicate the losses [9].

Zabidin, N. S *et al.*, analyses and mapped the literature on construction industry 4.0, which commonly famous as adoption and adaption of data in automation, manufacturing technologies, machine-to-machine communication and self-monitoring with ultimate results of diagnosis and its solutions without the help of a human, that enables the spark of new ideas for future technological transformation in construction industry [10]. Very before of Zabidin, N. S *et al.*, Hyun, CT develop performance extent for the construction industry, some restrictions on land utilization, the eruption of conflicts with people residing in surrounded to make delay project approval, and traffic impact assessment under the considerable project cost made an impact, on project period, to complicate the interests of stakeholders [11].

For support to Zabidin, Langenhan, M. K., Leka, S., Jain raised questions on strategies towards continuous change in policies of psychosocial risk assessments of volatile markets, work intensification, downsizing of organizations and validation of resources within the field of occupational health and safety. In the study, researchers focus on experts, policymakers, employers, and other stakeholder perspectives, which incorporated into strategic risk management practices to understand the gap between the policy and level of preparation in organizations [12]. Zhang, Y *et al.*,

examine the research published in journals indexed in Web of Science Core Collection scientific databases on micro-plastic pollution. The study shows that policymakers' attention diverts to understand the danger of this issue as global environmental issues with increasing ecological toxicity day today. The consumption of food chains changes the eating dynamics reflects the hotspot of micro-plastics, potential danger for human health. On the other hand, same research elaborates the role of risk managers in eradication of noxious environment for workers, employers, and consumers of micro-plastic [13].

MATERIAL & METHODS

The data in risk management published in the journals indexed in Scopus-Elsevier Database from 2019 - 2002, and randomly 1998, 1995, 1991 and 1980 years, downloaded in August 2020, for tabulations in MS Office Excel Sheet 2010. The comma-separated value (CSV) file and an abstract on Note-paid techniques used, typed “risk management,” in the Boolean operator AND appeared by default. Six objectives were set to explore:

1. To calculate year-wise publications
2. To identify the document type
3. To estimate the position of authors
4. To figure the affiliation of the first author with country
5. To evaluate the relationship of topic with subject classification
6. To analysis pattern of language with keywords used in publications

RESULTS

Figure-1, shows that, 137 documents published with an annual average of 6.2 documents written by 363 authors and with an average of 16.5 authors participated in published documents, maximum 15 and minimum 1 research were included yearly and through-out from year 2019-2002, and randomly four other years.

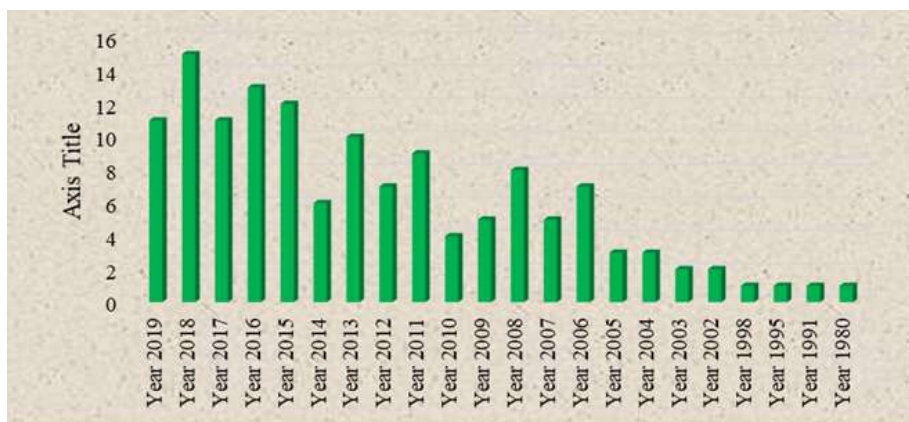


Fig-1: Research published in risk management in twenty-two years

Figure-2 reveals that, the information of 137 publications divided in six segments were extract from the Scopus databases, the majority 72, 53% research

existing on research “Articles” followed by 42, 31%, conference papers, 13; 9% book chapter, 5; 4%, review, 2; 1%, book, 2; 1%, and 1; 1% letter. The consumption

of 1577 papers; a) articles 739; 46.8%, b) conference papers 169; 70.7%, c) book chapters 256; 16.3%, d)

editorials, letters, and review 28; 1.7%, and f) book 385; 24.4% were consume in this research productivity.

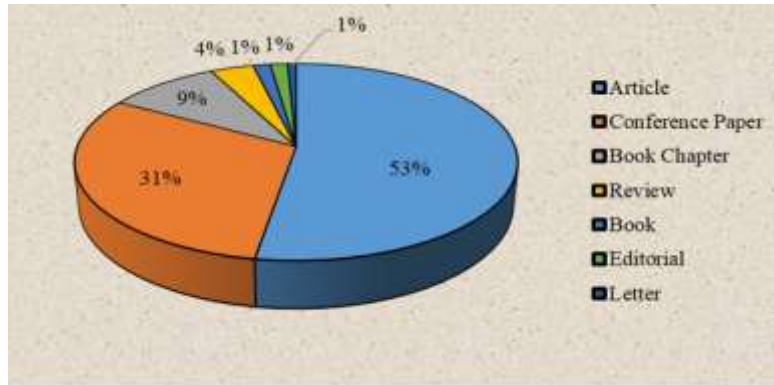


Fig-2: Document types

The extract data of study reveals 16 subject ranges, but then again we distributed into fine main categories due to requirement of the study. Table-2,

shows the influences of Business, Management and Accounting in hierarchy of subjects.

Table-1: Subject areas in risk management in research productivity

S. No	Subject Areas	Publications	%
1	Business, Management and Accounting	56	40.8%
2	Computer Sciences	31	22.6%
3	Economics and Finance	19	13.8%
4	Civil and other Engineering Sciences	17	12.4%
5	Agricultural Sciences	14	10.2%
Total documents		137	

Table-2, categorized authors into eight basic slots to comprehend the classification of document producers. The majority 104 documents written by 330;

91% authors collaboratively, instead of 33 documents written by single or solo authors.

Table-2: Breakdown of contributed authors in documents

S. No	Years	Single author	Two authors	Three authors	Four authors	Five authors	Six authors	Nine authors	Twelve authors	Total	%
1	2019	4	2	2	2	1				11	8%
2	2018	4	4	2	2	2	1			15	11%
3	2017	2	4	2	2			1		11	8%
4	2016	1		5	4	2	1			13	9.4%
5	2015	2	3	2	4	1				12	8.7%
6	2014		2	3					1	6	4.3%
7	2013	3	4	2	1					10	7.3%
8	2012	1	2	3		1				7	5.1%
9	2011		7		1	1				9	6.5%
10	2010	1	1		2					4	3%
11	2009		3	2						5	3.6%
12	2008	3	2	2			1			8	5.8%
13	2007	2		3						5	3.6%
14	2006	3	2	2						7	5.1%
15	2005	2			1					3	2.1%
16	2004	1	1	1						3	2.1%
17	2003	1	1							2	1.4%
18	2002	1	1							2	1.4%
19	1998	1								1	0.7%
20	1995		1							1	0.7%
21	1991		1							1	0.7%
22	1980	1								1	0.7%
Pattern of authorship		33	41	31	19	8	3	1	1	137	
Total authors		33	82	93	76	40	18	9	12	363	
%		9%	22.5%	25.6%	21%	11%	5%	2.4%	3.3%		

Figure-3 summarised the affiliations of first author with institutes operating in countries. Total 44 countries felt the significance of the subject risk management. Three countries contribute publications in

double figures. Australia, China, Russian Federation, Canada, Italy, and Romania participated with 5–8 documents. Thirty-five countries contributed maximum 05 and minimum 01 document in all twenty-two years.

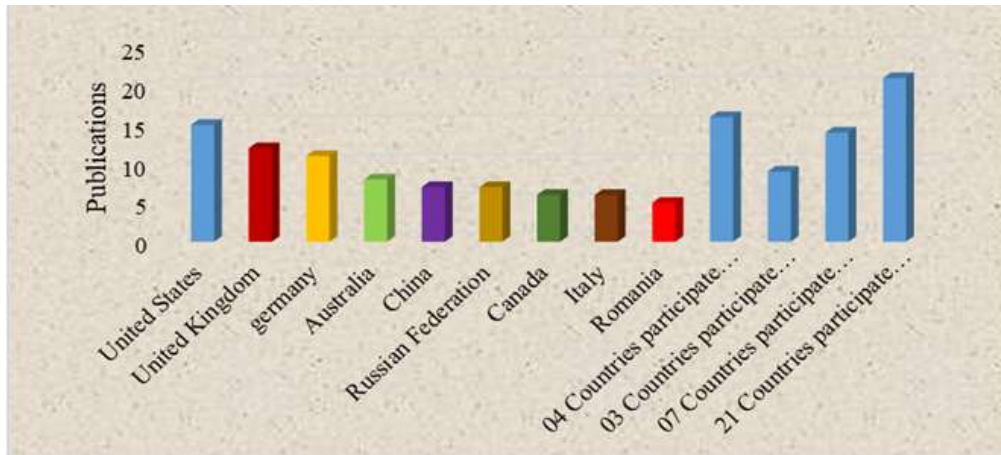


Fig-3: Affiliation of first author with countries in research productivity

Table-4: The usage of key words and languages in research productivity

S. No	Key-words	Words	Language	Documents	%
1	Risk Management	79	English	126	92%
2	Risk Assessment	24	German	6	1.3%
3	Business Process	11	Romanian	2	1.4%
4	Risk Analysis	11	Russian	2	1.4%
5	Risk	10	Spanish	1	0.7%
6	Decision Making	8			
7	Business Process Management	7			
8	Economics	7			
9	Electronic Commerce	7			
10	Enterprise Resource Management	7			

DISCUSSION & CONCLUSION

Risk management is a constant practice of managing unexpected issues in critical areas before they happen. It can deal with the right strategies, action plans, and motivations among the human resource of an organization. The risk manager can assess the level of losses, create a model of practical frameworks, and observe activities of loading and unloading pieces of machinery, large equipment, and small gadgets with the size of danger. Risk management is a ceaseless, forward-looking procedure that is a significant piece of business and specialized administration forms. Visionary executives fully understand the capacity and value of human and financial assets of a company or an organization.

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Disclaimer: The data downloaded from Scopus-Elsevier Database to evaluate the literature published on risk management.

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