Labuan Bulletin of International Business &Finance

Volume 21 Issue 1 eISSN 2600- 7894

THE RELATIONSHIP BETWEEN STRATEGIC MANAGEMENT PERFORMANCE AND SAFETY: BIBLIOMETRIC REVIEW ANALYSIS

Andirison Misan[a], Suddin Lada[b*], Pg Mohd Faezul Fikri Ag Omar[c]

[a,b] *Faculty of Business, Economics, and Accountancy, Universiti Malaysia Sabah, Malaysia.*
[c] *Labuan Faculty of International Finance, Universiti Malaysia Sabah, Malaysia.*
**Corresponding author's email: suddin@ums.edu.my*

ABSTRACT

Organizations all around the world need a set of strategic management performance and safety that is properly prepared in detail. Past research has shown that properly implementing this set of strategies will increase the performance and safety level in the organization. The goal of this research is to observe the intellectual structure, volume and knowledge development from the previous study to add information and knowledge to the existing information regarding the subject of the study. This research is conducted using bibliometric review analysis on the topic of strategic management performance and safety which was published between the year 2012 to 2021. The source of the database is only Scopus and uses the VOS viewer software and Excel to analyse the extracted information needed to complete this article. The analysis of this paper is to identify the volume of the published article, most influential and most preferred authors, topic, and documents such as article, conference paper and review paper. The result suggests that there is a relationship between strategic management performance and safety and recommends that all companies need to prepare a proper and detailed strategy. Future research is required to provide more knowledge on any unidentified factor to add more resources as well as information and knowledge in this field.

***JEL classification**: M10, D23, L2.*
***Keywords**: Strategic management, performance, safety, bibliometric analysis.*

Received: December 12, 2022
Revised: May 10, 2023
Accepted: June 23, 2023

1. INTRODUCTION

The previous study stated that many businesses or companies either develop company or un-develop companies face difficulties or challenges in maintaining strategies to survive in the competitive market, which makes the company develop new strategies to make sure that their company can stay competitive in the market and overall to increase their performance and also profit-making ability. Performance is one of the most important in strategic management performance to help the organization understand and determine the

current performance with the effect of the economy and also will help the organization to create the best performance suit for the company with the current economic condition (J. G. Combs et al., 2005).

Some study also suggests that high-performance work practice affects organizational performance, however, practice is needed solely to improve the performance of the company (J. Combs et al., 2006). Strategic management performance in the entrepreneurial orientation on the other hand business performance is used as a reference to make a better strategic performance strategy in their performance (Rauch et al., 2009). Many organizations nowadays perform their operation without thoroughly constructing their strategic management, (Cravens et al., 1997), stated that constructing a business perspective allows the company to view the direction of the company while managing the company resources and making sure that all resources are performed in the best interest of the company.

Performance is a concept which focuses on a few perspectives consisting of individual characteristics, situational and performance regulation (Sonnentag et al., n.d.). thus, performance according to the previous study using this perspective to develop new strategic management that will help the organization to be more productive and proactive in managing their performance as well as to make sure the survivability of the company. Performance in strategic management can also be used to develop a cycle that allows the company to create a performance management system to improve its result of the company (Waal, 2007). Safety management in the workplace is necessary to make sure that the well-being of the employee is guaranteed, safety management can be applied to many aspects of the organization, and identifying the initiative to implement and be used is necessary to make sure that there is a continuous improvement in the safety management of the company (Fuller, 1999).

Safety management also can be implemented in a variety of business fields such as in food safety management (Arpanutud et al., 2009), managing the safety of the management system and for the stakeholder (Kevin Loebbaka & Lewis, 2009), ensuring the safety in the safety and health in the work environment(Gibson & Kidd, 1982) and many more. This tells us according to the previous study that safety in strategic management performance is important to the performance of a company. Although much research has been done on the field of safety and the strategies for managing performance for a company there is not much study have been done on the relationship between both fields. This claim is supported by the existing literature or source to find the previous study. When we research the relationship between both parties, there is no past study that documents the relationship between both parties. However, there is a study done for each field of the study.

The safety field of study is more on the constructing outline of which a practical approach that can be used by the employee to stay safe in their line of work in their daily life (Cassinger & Thufvesson, 2022), moreover study about safety is related to the workplace safety depending to the environmental circumstances that they face in performing their task and their response on the protocol used by the company to make sure safety of their employee od guaranteed (Mayer et al., 2022). From this, we can conclude that the safety field of study is mainly the study of the safety of the employee and establishing a protocol that needs to be followed by the employee within the organization.

Strategic management performance on the other hand is a field of study that discusses how can they manage their strategies to enhance their performance to make sure the

performance of the company is moving toward the desired goal of the company (Ledro et al., 2022). This study is also used as a reference model for the company to develop their next strategy to tackle the new emerging challenge in the competitive market (Ribeiro et al., 2021). For sustainability purposes, strategic management performance is used to study its impact on the sustainability in form of strategic use, type of management and the performance of the employee to make sure that the company is sustained in the competitive market (Thaher & Jaaron, 2022). With all the above being said, the limitation of the previous study is the lack of study in the field of relationship between the strategic management performance and safety, how these two different fields coexist in the company to realize the direction or the targeted goal for the company.

1.1 Research purpose

The main purpose of this study is to identify the relationship between strategic management performance and safety in the performance of the company. To realize this study, we will be using a strategic literature review and bibliometric method which allow us to document all information relevant to the field of study of the volume, structure, and knowledge-development structure. Using the combination of methods, we issue the following question:

1. What is the volume of the published article on strategic management performance and safety topics?
2. What are the most influence, journal, author and research papers in the field?
3. What is the most preferred research topic in the field?

To meet the purpose of this research to analyse and observe the relationship between strategic management performance and safety, the first step of the research s to get the data or form the data from previous lectures or studies regarding the related topic. The sample data is mainly extracted through the Scopus database, using the Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) method, with that we extracted 284 journal articles from 1027, this data is the latest 10 years before the year 2022.

The method used in answering the issue for this research is using the bibliometric review analysis (Boyack & Klavans, 2010). This method has the ability and capability to analyse any study related to the field over time and also show us the relationship and knowledge of both fields of study. Using a proper method (Khalid et al., 2015) we can present more information to the new researcher regarding the most cited author and paper within this field. Apart from that using keywords is used to obtain additional data regarding the topic over the year, by the researcher can better reference base and identify the key area that requires conducting more study later.

This section of the study presents a short definition of the concept of strategic management performance and also the concept of safety and its use in the organization. For the next section of this study, we will cover the methodology used, and how we extract data and analyse data, after that we will go to the result and interpretation of the data where we show the result on the data, and lastly, we will end this study on the discussion and conclusion where we disclose the main interpretation and the implication of the research as well as presenting the limitation and the future research regarding this field.

1.2 Conceptual background

In this section of the study, we will provide a piece of basic information regarding the topic of this study which is strategic management performance and safety. The current economic condition is no longer consistent compared to past economic conditions, this belief is caused by the rapid change of the economic condition toward the technological environment, where all companies or organizations chasing of one another to get the latest piece of technology. Therefore, in this section, we will discuss a brief regarding the definition of strategic management performance and safety, also the relationship between these two concepts or keywords.

Strategy can be defined as an action that has been taken by the organization to determine its goal, determination, planning, and organization objective by way of providing rules and plans that need to be executed by the organization (Bracker, 1980). Management on the other hand is the process of planning, organizing, directing and controlling the organization's operation. Performance can be defined as the process of executing an action. With that being mentioned we can define strategic management performance as a process of planning an appropriate approach that can help the organization achieve their goal. The concept of safety is to provide a better and safe environment to perform a task. Safety is needed to exist in the environment of the organization either inside or outside of the organization this is because it is important to guide every person in the organization to stay safe in their line of work (Choudhry et al., 2008). An individual who is working in any sector is not safe from any situation during the performance of their task, thus the existence of safety within the organization helps to reduce or even eliminate the risk of safety that might happen to the employee of the organization.

Planning an appropriate approach to strategic management performance is a critical step in ensuring an organization's success (Chen & Huang, 2018). It involves a series of strategic planning activities designed to develop a comprehensive and effective strategy that is aligned with the organization's goals and objectives (Díaz-Carrasco, et al., 2021; O'Regan & Ghobadian, 2005). This process requires a thorough understanding of the organization's internal and external environment, including its strengths, weaknesses, opportunities, and threats. It also involves developing specific, measurable, achievable, relevant, and time-bound (SMART) goals and objectives and creating a detailed action plan to achieve them. Furthermore, it's crucial to monitor and adapt the plan continually to respond to changes in the internal and external environment and ensure that the organization remains on track to achieve its goals (Vahdati & Soltani, 2018). Ultimately, planning an appropriate approach in strategic management performance helps organizations make informed decisions and take proactive steps to achieve their desired outcomes while ensuring alignment with their mission and values.

Strategic management, performance, and safety - Strategic management is the process of defining an organization's long-term goals and objectives and determining the most effective ways to achieve them. Performance, on the other hand, refers to the effectiveness and efficiency of an organization in achieving its goals and objectives (O'Connor and Papanikolaou, 2019). Safety, in this context, refers to the measures taken by an organization to ensure the well-being and protection of its employees, customers, and other stakeholders. Effective strategic management involves considering safety as a critical component of an organization's performance. A safe workplace is essential for ensuring employees' well-being, reducing the risk of accidents and injuries, and

increasing productivity and performance (Hu, et al., 2021; Yan, et al., 2018). Furthermore, ensuring safety is not only a moral responsibility but also a legal requirement for organizations to operate within their regulatory framework. Organizations that prioritize safety in their strategic planning and decision-making processes are more likely to achieve their goals while reducing the risk of negative consequences such as legal liabilities, financial losses, and reputational damage (Khojastehpour & Afshari, 2016; Wang, et al., 2016).

In conclusion, strategic management, performance, and safety are interrelated concepts that organizations must consider in a coordinated and systematic way. By prioritizing safety in their strategic planning and decision-making processes, organizations can promote a culture of safety, protect employees and stakeholders, and achieve their long-term goals and objectives.

2. METHODOLOGY

Conducting research based on the previous study for the researcher to analyse and extract data, a method such as strategic literature review and bibliometric review method is the one that most common and favourite among the researcher, however in this research, we will be using Excel and bibliometric review to conduct the research. The reason, why we are using bibliometric review, is that this method can provide us with a complete and thorough analysis of the studied subject (van Eck & Waltman, 2017), on top of that we can use this method to site the co-citation made by the previous study to confirm the authenticity of the research (Nerur et al., 2008). Although this software helps the research in many ways such as the selection of the database, filtering and refining the data researcher however needs to determine how to display or present the data in an understandable form to present proper knowledge to the reader.

2.1 Data collection

For this study, we decided to identify any relevant information related to strategic management performance and safety. The main source of data to conduct this study is from the Scopus database within the search area of "article title", and "abstract" and using the following keyword: Strategic, Management, Performance, and Safety. Data search from the database is until 2021, this is because the year 2022 is not complete yet. This research also includes a journal, conference proceedings, a trade journal, and a book published only in English.

Based on the published studies of the previous researcher on the subject of strategic management performance and safety, our primary approach for gathering all pertinent data to finish this study is to conduct more research in the field of strategic management performance and safety. To present proper and correct findings we decided to adopt the PRISMA approach to this study. For the selection criteria, we base on the PRISMA Statement (Moher et al., 2009) to deliver a correct database sample for this paper. Since our search focuses on mapping the existing study on strategic management performance and safety the first step to obtain the necessary information is to key in the keyword "strategic", "management", "performance", and "safety" on the Scopus database. After that, we decide to filter the result to the field of engineering, business management and accounting, and social science with the final publication.

This research encompasses ten years, beginning in 2012 and ending in 2021. Additionally, we restrict the kind of documents we require to articles, conference papers, and reviews. The main reason for this limitation be done on the process of requiring data

is that the reviewed study has good or better scholar quality compared to other sources of scholars. We also perform a quality assessment of the data, since the data is obtained from the article, conference paper and review paper, we perform a thorough inspection to make sure that there is no duplication of data, fortunately, our data did not have any duplication however we have one incomplete document and being excluded in this research, the quality of this research is preserved and will present only the accurate result. The total data receive from the Scopus database before the exclusion is 1027. A total of 284 data has been extracted using the Scopus database.

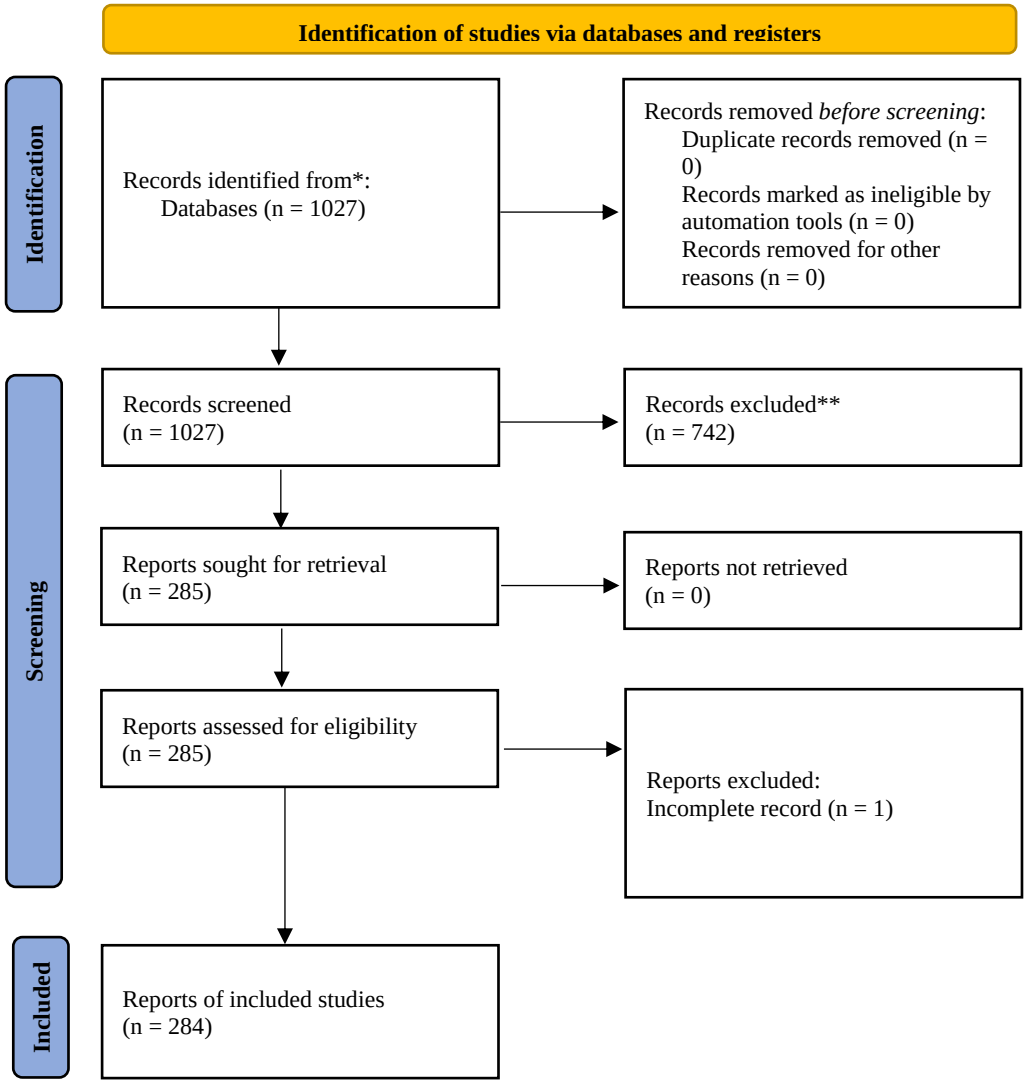

Figure 1: Flow for identification, and screening and included for our bibliometric review analysis using the PRISMA method.

2.2 Data extraction

The collected data consists of 284 articles, we have extracted the data from the Scopus database using the CSV export function on the database to be turned into Excel format. The method chosen to analyse the data is using the VOS viewer software, this software can help us to easily interpret large data in the form of a bibliometric map using its function of bibliometric mapping. To make sure that we standardise the data and have an accurate result, the extraction of the main data needs to have the title of the article, name

of the author, keyword, citation information and the reference of all the data. The data extracted also has the following characteristic:

1. article (Original paper), conference paper and review paper.
2. published in the English language and from the field of engineering, business management and accounting, and social science the final publication.
3. publish between the year 2012 to 2021.

2.3 Data analysis

The first step of data analysis is using descriptive analysis where we will be using Excel to generate a graph to identify the volume of the published article on strategic management performance and safety topics. Then, we will be using the bibliometric method to analyse the data. This method allows us to utilize the citation to identify the most influential, journal, author and research paper in the field by identifying the frequency of that article being cited upon release. This method also can dig deep to find out the influence of that article by analysing the co-citation of that article, *"The frequency with which two units (authors, journals, and documents) are cited together"* (Zupic & Čater, 2015). This analysis can be used depending on the information that we want, method of analysing co-citation also vary, however for this paper we will be using the VOS software to produce the bibliometric mapping of the co-citation, to present the data within our disposal.

3. RESULT AND INTERPRETATION

3.1 The volume of the published article on strategic management performance and safety

To properly contextualize the study on strategic management performance and safety, we created three Excel graphs that depict the kind of document released throughout ten years from 2012 to 2021 based on its volume, publishing stage, and document. Given that the number of document types is varied on the topic of strategic management performance and safety we think and decided that it is important to generate all data related to the published document to better illustrate the number of volumes published an article on the topic compared to another source of the document type. The data used to create the graph includes all kinds of literature produced over ten years in the form of articles, conference papers, and review papers. The outcome is displayed below. Data produced from Figure 2 shows that the stage of publication of the article is equal to the number of the volume throughout the ten-year mark. However, in the years 2015 and 2021, the number of final articles published over the volume is not equal to 20 to 18 and 27 to 26 respectively.

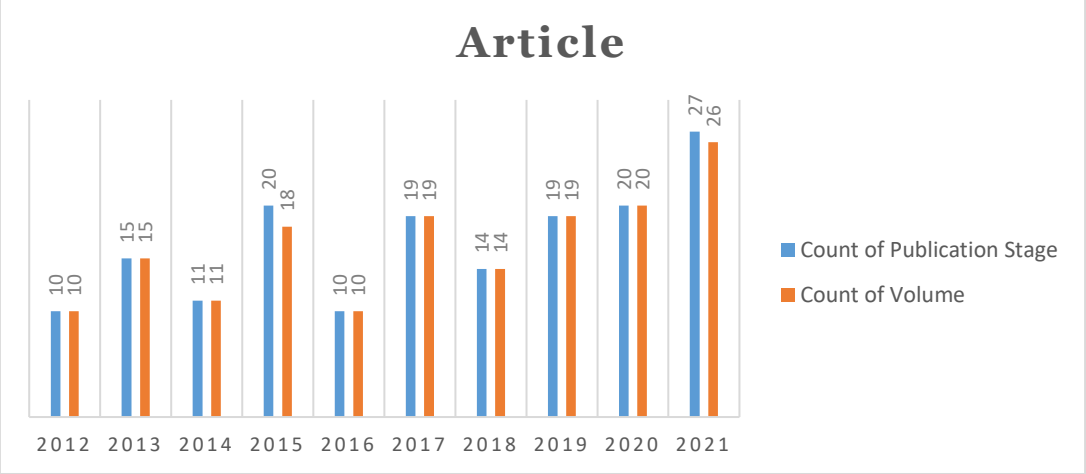

Figure 2: Publish time evolution for an article for 10 years of the topic.

Data produced from the conference paper show that in the year 2013 publication on the conference paper has the highest score of 18 final publications compared to all the years, the second and third that has highest score is the years 2016 and 2014 of which 15 and 14 respectively, another year also has the highest score of publication, however, we will only focus on the top 3 of the highest count of final publication stage. Moving forward to the number of volumes published over 10 years, the year 2013 and 2016 has more volume published with 8 publish an article in the respective year. The second and third highest number of the volume published in the year 2012, 2017, and 2018 have 4 volumes published that year, and in the year 2014, and 2021 only 3 volumes of published conference papers in that particular year.

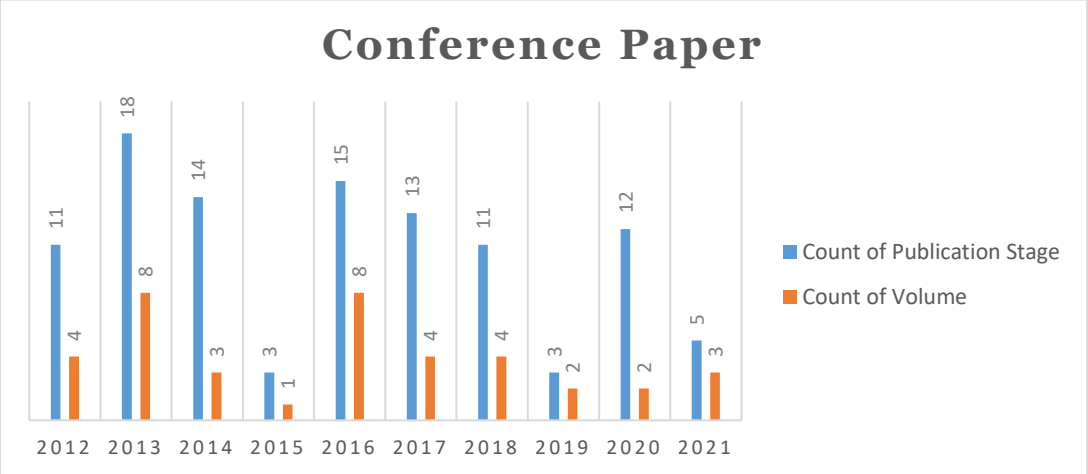

Figure 3: Publish time evolution for conference paper for 10 years of the topic.

In Figure 4, we can notice that the pattern of the final publication is equal throughout the year, on a scale of 3,3 and 2,2 also 1,1. However, when we observe carefully the year 2014, and 2017 – 2018 there is no single publication and any volume of the review paper being published.

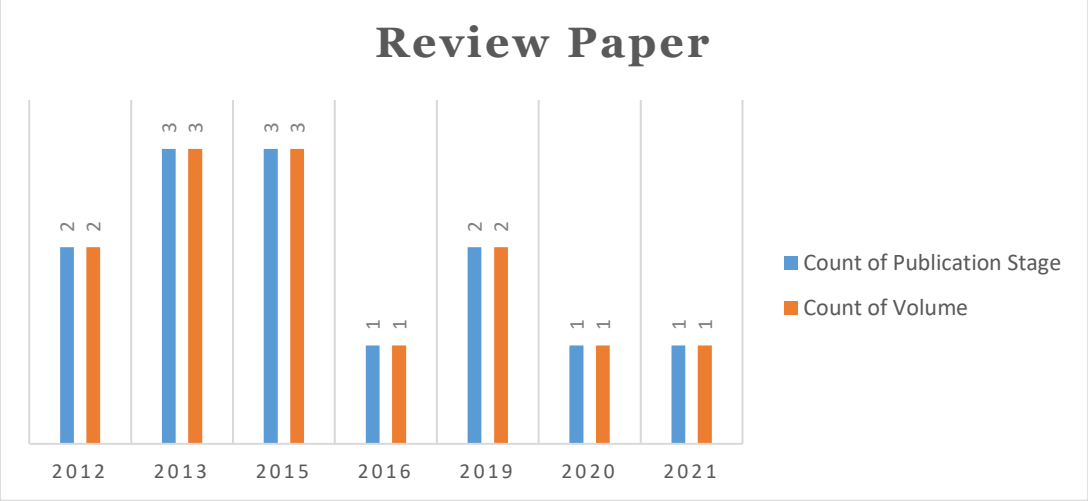

Figure 4: publish time evolution for review paper for 10 years of the topic.

Overall observation in Figure 2 – 4 we can see a pattern of the data regarding the publication over the volume of each type of document in the 10 years and found out that the article is the most published document and remain consistence in its publication compared to the conference paper and review paper.

3.2 Most influence, journal, author and research paper in the field of strategic management performance and safety

Table 1: Top 10 most cited paper.

Rank	Article Title	Author	Year	TC
1	A comprehensive review of lithium-ion batteries used in hybrid and electric vehicles at cold temperatures	Jaguemont J., Boulon L., Dubé Y.	2016	519
2	Collective organizational engagement: Linking motivational Antecedents, strategic implementation, and firm performance	Barrick M.R., Thurgood G.R., Smith T.A., Courtright S.H.	2015	262
3	The future and social impact of Big Data Analytics in Supply Chain Management: Results from a Delphi study	Roßmann B., Canzaniello A., von der Gracht H., Hartmann E.	2018	107
4	A critical review on unmanned aerial vehicles power supply and energy management: Solutions, strategies, and prospects	Boukoberine M.N., Zhou Z., Benbouzid M.	2019	104
5	An assessment of the OHSAS 18001 certification process: Objective drivers and consequences on safety	Abad J., Lafuente E., Vilajosana J.	2013	82
6	A decision support system for integrating manufacturing and product design into the reconfiguration of the supply chain networks	Kristianto Y., Gunasekaran A., Helo P., Sandhu M.	2012	71
7	Development and validation of wheel wear and rolling contact fatigue damage model	Bevan A., Molyneux-Berry P., Eickhoff B., Burstow M.	2013	69
8	Development of an energy management system based on a rule-based power distribution strategy for hybrid	Wang Y., Sun Z., Chen Z.	2019	67
9	Analysis of business safety performance by structural equation models	Hsu I.-Y., Su T.-S., Kao C.-S., Shu Y.-L., Lin P.-R., Tseng J.-M.	2012	61
10	Analysis of business safety performance by structural equation models	Reiner G., Teller C., Kotzab H.	2013	61

*TC = total citation

For us to find the most cited literature in our database, we have conducted the manual analysis using Excel, using the principle mentioned by (Merigó et al., 2016) the higher influence of a paper is determined by the number of citations of that paper. In Table 1 we display the top 10 most cited papers according to their number of citations. From Table 1, the article written by the author Jaguemont J., Boulon L., Dubé Y and Barrick M.R., Thurgood G.R., Smith T.A., Courtright S.H. is the most and second most cited article in the field of strategic management performance and safety in which they have 519 and 262 time respectively in their number of cited citations. The first most cited paper prepared by (Jaguemont et al., n.d.) address the issue of lithium-ion battery in the performance of electric and hybrid vehicle. While the second most cited paper was prepared by (Barrick et al., 2015) addressing the issue of engagement at the organisational level using motivation that represents the practice in the organisation.

Using the VOS software, we can map the co-citation for the author as this is one of the features of the software, hence figure 5 below show the map of author co-citation.

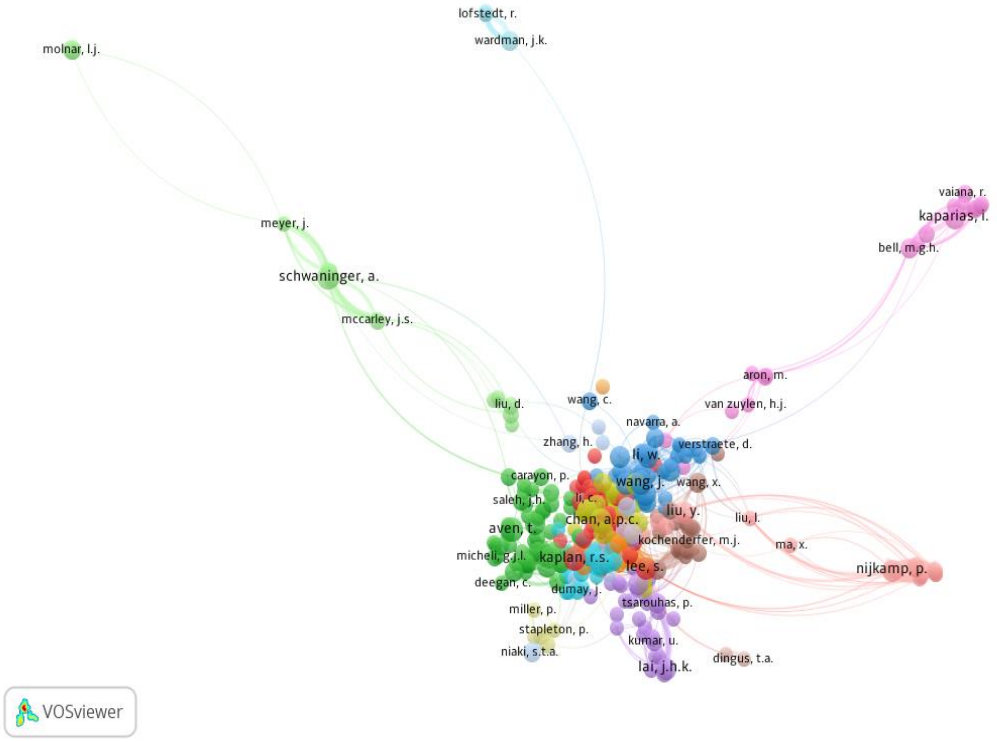

Figure 5: map of author co-citation.

Figure 5 above shows the flow of co-citation of the author, using the VOS software we identify 15,941 authors, with a minimum number of citations of 5, a number of 378 authors that meet the threshold. Within that minimum number of citations, we have identified 17 clusters, however, we will only be focusing on the top 4 big clusters in red, green, blue and yellow for the author co-citation.

The first cluster identified is the red cluster which has a total of 57 authors. With a total link strength of 352 and 18 citations directly on the researcher paper, the article titled *Driving aggressiveness management policy to enhance the performance of mixed traffic*

conditions in automated driving environments by the author Lee S., Jeong E., Oh M., and Oh C (2019) is the most popular among the first cluster. The second cluster by colour is the green cluster, the same as the red cluster this cluster also has 57 authors. Among 4 different authors that are out of the ordinary the author the name of Casadesus, M. has a total link of 45 with a total link strength of 278, however, this article only received a direct citation 11 times.

The author that has most cited paper on the third cluster is the author of *Development of energy management system based on a rule-based power distribution strategy for hybrid power sources* by Wang Y., Sun Z., Chen Z from the Department of Automation, University of Science and Technology of China, Hefei, Anhui 230027, China. who's receiving a total direct citation of 19 times, and has the strongest total link strength of 576 with only 118 links on the paper. Lastly, on the fourth cluster, Zhao, X. has a number of 15 total direct citations with a total link of 85 which granted the author 538 total link strength. Followed by Chan, A.P.C, has the strongest link among its cluster which has 19 direct citations, with a total link of 77 and a total link strength of 574.

3.3 Most referred research topics in the field of strategic management performance and safety

The purpose of analyzing the keyword co-occurrence is to identify the most popular keyword used in the topic of strategic management performance and safety, this analysis also helps us to understand the link and the relationship between the keyword to the field. The higher the number or frequency of words or keywords used in any study, paper, or between papers its concept is practically related, thus the analysis related to this can be represented in the form of a network to understand more regarding the word used in any particular document (Zupic & Čater, 2015).

One important benefit of performing this analysis is that we can perform our research at the macro level by mapping the field of study (Bhattacharya & Basu, 2017). Thus, using this analysis, we can backtrack how an author uses the keyword as their main or reference source to write their paper. With the help of the VOS software, we have produced a map that indicates the mapping of the keyword used by the author in the field of strategic management performance and safety.

From the software, we have created bibliographic data using the extracted data from the keyword strategic management performance and safety to map the co-occurrence of all keywords affiliated with our topic, after keying in the data we counter a total of 2,917 keywords with the minimum number of 5 the co-occurrences of the keyword. Then we filter or decided to have the minimum number of 4 co-occurrences, of the total 2,917 we get 161 papers to meet the threshold.

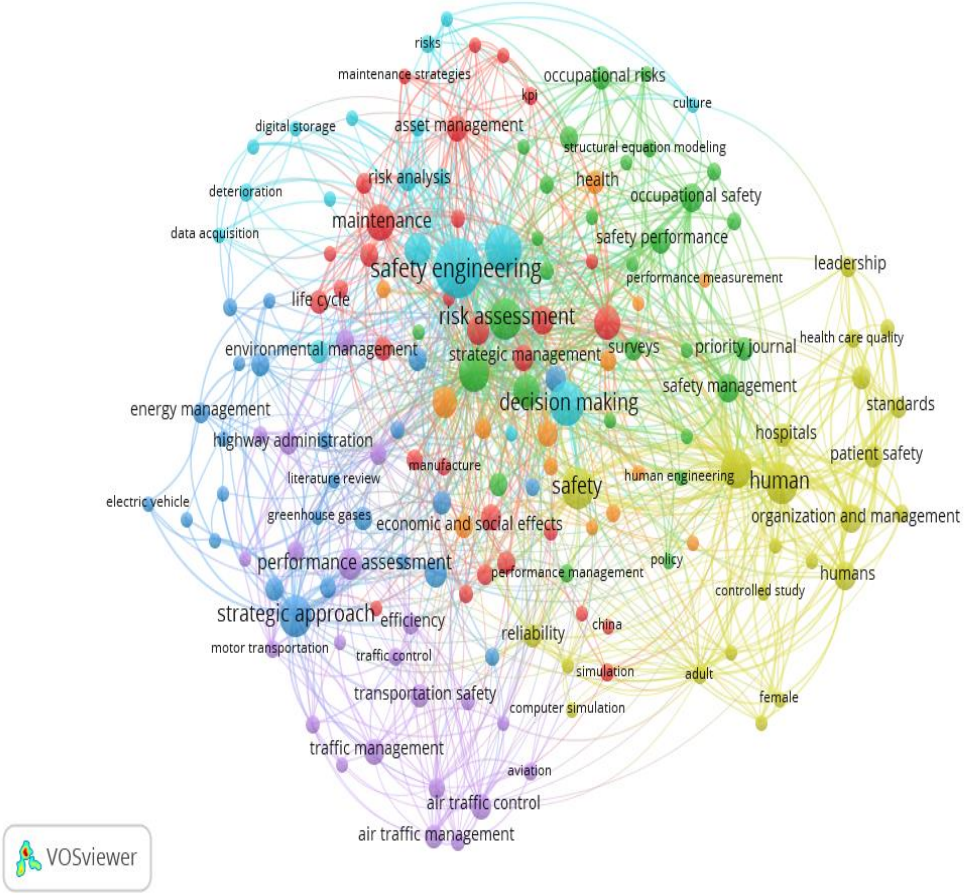

Figure 6: Map of keyword co-occurrence.

From the above figure of the keyword co-occurrence used by the author within the scope of the period in this study, there are 7 clusters generated using the VOS software, and colour codes from 1 to 7 by; red, green, blue, yellow, orchid, sky blue, and orange. In terms of size differences between the top use keyword of each cluster, there are not many differences in size, however, there is some keyword that stands out more compared to the other.

The first keyword that stands out by size is in fact on cluster 6 and colour code by sky blue colour "safety engineering" which has over 177 total links and 336 total link strength with 55 occurrences. Seconded by "human" in the 4 clusters with the colour code yellow, this keyword has over 27 occurrences and 77 total links with 230 total link strength. Within the same colour code of yellow, "safety" is the second most used by an author with 26 occurrences, 94 total links with 180 total link strength.

For the first to the third cluster which is red, green, blue, and in that order, the red cluster "maintenance" keyword is the most used with 22 occurrences, 59 total links with 118 total link strength followed by "asset management" which has 11 occurrences, 37 total links and 59 total link strength. Next is the green cluster with the affiliated keyword of "risk assessment" having a total link strength of 185 with 89 total links and an occurrence of 27 times. Lastly is the blue cluster "strategic approach", the occurrence of this keyword is 27 times, with 69 total links and 150 total link strength. By carefully

observing the relationship of all keywords, and pointing out the most obvious or stand-out keyword among the key used in the field of strategic management performance and safety we have successfully succeeded to analyse the keyword co-occurrence map.

4. DISCUSSION AND CONCLUSION

This paper is conducted to perform an analysis of the common points in the field of strategic management performance and safety and to provide more information for future research by providing all sorts of information relevant to the topic. To realise our intention, we perform this research using the bibliometric approach, with the total extracted data of 284 from the Scopus database, thus in this section of this paper, we will present our result along with the limitation we have faced in completing our research and will be closed with the direction for the future research in this field.

4.1 Interpretation and Implication of the Research

To begin this section of the research, we will start with the question that we have come up with for this research and the result that we got when conducting this research. The first question of this study is to find out the published article in terms of its volume in the field of strategic management performance and safety. In this section, we have limited the year range of our research to the 10 latest years which form the year 2012 until 2021. Limiting the year range of research to the 10 latest years allows researchers to produce findings that are both relevant and up-to-date, while also ensuring that their research is conducted efficiently and with a consistent methodology. Our research was conducted under three different publish documents, the first one is an article, then a conference paper and finally a review paper. Although the concept for this paper is similar to one another however we are keen to find out the actual paper being published in article format. The pattern that we obtained from the gathered data is very interesting, the data itself has many variables that need to be considered, such as the publication stage which is the final stage, the actual volume published in a year and the type of document that publishes, even though we have made solid finding regarding the topic in the scope of the research, however, the conclusion of this result is not practical enough as the analysed year is only 10 years for our topic.

In the year range of the research, we come out with a method that can give us a clear picture of the gap or the differences in terms of volume publishes for each document in their final publication stage. We had to develop a graph for each type of document to separate the result to find out the actual volume publish by the article within the 10 years. Based on each graph created review paper is the least published paper so we will exclude the review paper from discussion within this section and will be focused on the article and conference paper graph only. In a total of 284 papers extracted from the Scopus database, we found out the amount publish by the article is 332,832 while for conference papers is only 211,688. By this result, we can conclude that the article has the most published type of document in the present 10 years excluding the year 2022.

In terms of volumes, from our findings, we find out that the minimum volume publishes by an article is 10 per year while the maximum publishes by a conference paper is 8 per year. Author citation is a pattern, source and norm that can influence the direction of the research, the more information the better the result of their finding. The conference paper is one of many reliable sources to find a piece of information however this type of document is limited compared to the article this is because if the researcher aims to collect or gather ideas for their finding reviewing or citing an article is much better than citing a

conference paper. With more authors relying on the article as their main source of citation thus is only relevant that the number of volumes published article is higher than the conference paper.

Moving on to our second question, where we find out the most influence, journal, author and research paper in the field of strategic management performance and safety. To do that we have implemented the bibliometric analysis method. Based on the 284 articles we have concluded 10 top most cited papers and also run this data using the VOS software to see the most cited author in the outfield of the study. Among our top 10, the most cited papers are from the author Jaguemont J., Boulon L., and Dubé Y. (2016) under the title *A comprehensive review of lithium-ion batteries used in hybrid and electric vehicles at cold temperatures* with 519 total citations, seconded by the author Barrick M.R., Thurgood G.R., Smith T.A., Courtright S.H. (2015) with title *Collective organizational engagement: Linking motivational antecedents, strategic implementation, and firm performance*, having a total of 262 total citations.

Under the co-citation point of view on the other hand, from the result generated from the VOS software, we can correctly map the pattern in the citation of the author and one author is standing out more compared to the other is the article *Development of energy management system based on a rule-based power distribution strategy for hybrid power sources* by Wang Y., Sun Z., Chen Z from Department of Automation, University of Science and Technology of China, Hefei, Anhui 230027, China. This result

Judging from our findings, from the top 10 most cited papers and the result from the bibliometric analysis using the VOS software in the field of strategic management performance and safety we can conclude that any article that has the keyword of "safety", "performance" and "strategic management" is reviewing a lot, this also can give us the information that most author performing or writing research are depending on the keyword to complete their research. We are additionally surprised to discover that there is no single author in our top 10 most cited papers within the co-citation map result. However, we realise that the processes used to generate these results are distinct: for the top 10 most cited papers, we use Excel to summarise all 284 sources extracted from the Scopus database, whereas the co-citation map is generated by analysing a sample of the database.

Now come to the last question of our study which is the most preferred research topic in the field of strategic management performance and safety. Again, using the VOS software, we can map the co-occurrence of the topic by keyword. From the data generated we identify 7 clusters of keywords, the size of that keyword is determined by the link strength, although there aren't many differences in the size differences there are a few that are more obvious than the rest. The identification in this method is not according to the cluster itself but we do it according to the total link strength, thus the first keyword that has the strongest links is from the six clusters with the "safety engineering" example of the article (Bahr, 2014; López-Gómez et al., 2009).

Moving on to the second keyword on the 4 cluster which is the yellow cluster with an example of the article is "human" (Butler & Teagarden, 1993; Suprapto et al., 2021) and "safety" (Vogt et al., 2010). Lastly, in the first to the third cluster, we identify keywords such as "maintenance" (Parida & Kumar, 2006; Simões et al., 2011), "asset management" (Haas & Hensing, 2005), "risk assessment" (Esmaeili et al., 2015; Ramachandran, 2011), "strategic approach" (Honan et al., 2021).

Finally, in this finding, we can conclude that strategic management performance has a relation to safety. From this concept establishing a proper strategic management

performance also say preparing a proper approach or method to ensure the safety of the worker or the employee of the organization and vice versa. Considering the economic condition that rapidly changes according to time passes organizations need to make sure that their operation is meeting the standard and strategy that they have made and at the same time to make sure that the safety of the employee is guaranteed. Within this context, we can conclude that strategic management performance has a relationship with safety.

5. LIMITATIONS AND FUTURE RESEARCH

In the completion of the systematic literature review, we are not turning a blind eye to the possibility that this paper is made without any limitations we have to counter numerous limitations along the way. One of the limitations is the source of data, where we limit our data source to using only the Scopus database. Although the Scopus database is one of the most popular database sources used by the author all around the world to perform their study, however, to get more accurate and reliable results we need to consider obtaining data from different source databases such as Google Scholar, Emerald Insight, ScienceDirect and many more. With the limited source of data, the result of this paper may differ from what we have found if we are using numerous sources of data to find any information regarding strategic management performance and safety.

The second limitation that we identify is the sample data itself, in this paper we have limited our sample data to be extracted from the Scopus database to only 10 years from the year 2012 until 2021, using only the keywords “strategic”, “management”, “performance”, and “safety”, total database extracted is 1027 and reduced to 284. Reducing the number of sources means ignoring another author's perspective that might be valuable to be referred to. Thus, it is better to have a wide sample of data to produce more accurate findings within this field. Next, using trusted mapping software that can help to generate a detailed result for us like VOS software is not always easy to use and also can be very challenging especially if it is the first time using it. Proper understanding and guidance from someone that has experience with this software can be a great help to overcome this situation.

To address the limitations identified in this systematic literature review, future researchers can consider the following suggestions; a). Expand data sources: To obtain more accurate and reliable results, future researchers can consider using multiple databases and sources to gather information. This can include sources such as WOS, Google Scholar, Emerald Insight, and others. Using a wider range of data sources can help to increase the breadth and depth of the data available for analysis. b). Increase sample size: Future researchers can consider expanding their sample size beyond the limitations of this study. This can involve extending the time period covered, increasing the number of keywords used, or including a wider range of literature sources. c). Explore new concepts: As this field has the potential to develop further, future researchers can consider exploring new concepts or combining different keywords to generate more comprehensive results. This can help to uncover new insights and advance knowledge in the field. By addressing these limitations, future research can produce more accurate and reliable findings in the field of strategic management performance and safety.

REFERENCES

Arpanutud, P., Keeratipibul, S., Charoensupaya, A., & Taylor, E. (2009). Factors influencing food safety management system adoption in Thai food-manufacturing

firms: Model development and testing. *British Food Journal*, *111*(4), 364–375. https://doi.org/10.1108/00070700910951506

Bahr, N. (2014). *System safety engineering and risk assessment: A practical approach*. CRC Press. https://books.google.com/books?hl=en&lr=&id=Z2lYBQAAQBAJ&oi=fnd&pg=PP1&dq=safety+engineering&ots=a6EOOxd143&sig=O7bp2AtH8FN6dhLOa840FeuA1Iw

Barrick, M. R., Thurgood, G. R., Smith, T. A., & Courtright, S. H. (2015). Collective organizational engagement: Linking motivational antecedents, strategic implementation, and firm performance. *Journals.Aom.Org*, *58*(1), 111–135. https://doi.org/10.5465/amj.2013.0227

Bhattacharya, S., & Basu, P. K. (2017). Mapping a research area at the micro level using co-word analysis. *Scientometrics*, *43*(3), 359–372. https://doi.org/10.1007/BF02457404

Boyack, K. W., & Klavans, R. (2010). Co-citation analysis, bibliographic coupling, and direct citation: Which citation approach represents the research front most accurately? *Journal of the American Society for Information Science and Technology*, *61*(12), 2389–2404. https://doi.org/10.1002/ASI.21419

Bracker, J. (1980). The Historical Development of the Strategic Management Concept. *Academy of Management Review*, *5*(2), 219–224. https://doi.org/10.5465/AMR.1980.4288731

Butler, M. C., & Teagarden, M. B. (1993). Strategic management of worker health, safety, and environmental issues in Mexico's Maquiladora industry. *Human Resource Management*, *32*(4), 479–503. https://doi.org/10.1002/HRM.3930320405

Cassinger, C., & Thufvesson, O. (2022). Enacting safe places – a study of (im)balancing acts in everyday city centre management. *Journal of Place Management and Development, 16*(1), 1-19. https://doi.org/10.1108/JPMD-07-2021-0075

Choudhry, R. M., Fang, D., & Ahmed, S. M. (2008). Safety management in construction: Best practices in Hong Kong. *Journal of Professional Issues in Engineering Education and Practice*, *134*(1), 20–32. https://doi.org/10.1061/(ASCE)1052-3928(2008)134:1(20)

Chen, Y. J., & Huang, W. C. (2018). The impact of strategic planning on organizational performance: Evidence from Taiwanese firms. *Journal of Business Research, 88*, 260-267.

Combs, J. G., Crook, T. R., & Shook, C. L. (2005). *The Dimensionality of Organizational Performance and its Implications for Strategic Management Research*. 259–286. https://doi.org/10.1016/S1479-8387(05)02011-4/FULL/HTML

Combs, J., Liu, Y., Hall, A., & Ketchen, D. (2006). How much do high-performance work practices matter? A meta-analysis of their effects on organizational performance. *Personnel Psychology*, *59*(3), 501–528. https://doi.org/10.1111/J.1744-6570.2006.00045.X

Cravens, D. W., Greenley, G., Piercy, N. F., & Slater, S. (1997). Integrating contemporary strategic management perspectives. *Long Range Planning*, *30*(4), 474–506. https://doi.org/10.1016/S0024-6301(97)00029-0

Díaz-Carrasco, E., Hernández-Lara, A. B., & Pérez-Mesa, J. C. (2021). Strategic planning and business performance in SMEs: The moderating role of competitive intensity. *Journal of Business Research, 131*, 198-209.

Esmaeili, B., Hallowell, M. R., & Rajagopalan, B. (2015). Attribute-Based Safety Risk Assessment. I: Analysis at the Fundamental Level. *Journal of Construction Engineering and Management*, *141*(8), 04015021. https://doi.org/10.1061/(ASCE)CO.1943-7862.0000980

Fuller, C. W. (1999). An employee management consensus approach to continuous improvement in safety management. *Employee Relations*, *21*(4), 405–418. https://doi.org/10.1108/01425459910285528

Gibson, M., & Kidd, J. (1982). Developing Consultation: Some Managerial Implications of the Health and Safety at Work Act. *Employee Relations*, *4*(3), 21–26. https://doi.org/10.1108/EB054996

Haas, K., & Hensing, D. (2005). *Why your agency should consider asset management systems for roadway safety*. United States. Federal Highway Administration. Office of Safety Research and Development. https://rosap.ntl.bts.gov/view/dot/41645

Hu, X., Kong, X., & Xue, M. (2021). The impact of strategic management on occupational health and safety performance in Chinese manufacturing firms. *Journal of Safety Research*, *78*, 174-182.

Honan, M., Feng, X., Tricarico, J. M., Kebreab, E., Honan, M., Feng, X., Tricarico, J. M., & Kebreab, E. (2021). Feed additives as a strategic approach to reduce enteric methane production in cattle: modes of action, effectiveness and safety. *Animal Production Science*, *62*, 1303-1317. https://doi.org/10.1071/AN20295

Jaguemont, J., Boulon, L., & Dube, Y. (2016). A comprehensive review of lithium-ion batteries used in hybrid and electric vehicles at cold temperatures. *Applied Energy*, *164*, 99-114. https://www.sciencedirect.com/science/article/pii/S0306261915014841

Kevin Loebbaka, J., & Lewis, A. (2009). Live or let die: managing safety management system strategies and stakeholders. *Business Strategy Series*, *10*(4), 193–198. https://doi.org/10.1108/17515630910976334/FULL/HTML

Khalid, R. U., Seuring, S., Beske, P., Land, A., Yawar, S. A., & Wagner, R. (2015). Putting sustainable supply chain management into base of the pyramid research. *Supply Chain Management*, *20*(6), 681–696. https://doi.org/10.1108/SCM-06-2015-0214

Khojastehpour, M., & Afshari, H. (2016). A conceptual model for integrating strategic management and occupational health and safety management systems. *Safety Science*, *82*, 399-407.

Ledro, C., Nosella, A., & Vinelli, A. (2022). How to assess organizational and strategic impacts of customer relationship management: A multi-perspective performance evaluation method. *Expert Systems with Applications*, *199*, 117024. https://doi.org/10.1016/J.ESWA.2022.117024

López-Gómez, A., Fernández, P. S., Palop, A., Periago, P. M., Martinez-López, A., Marin-Iniesta, F., & Barbosa-Cánovas, G. V. (2009). Food safety engineering: An emergent perspective. *Food Engineering Reviews*, *1*(1), 84–104. https://doi.org/10.1007/S12393-009-9005-5

Mayer, B., Helm, S., Barnett, M., & Arora, M. (2022). The impact of workplace safety and customer misbehavior on supermarket workers' stress and psychological distress during the COVID-19 pandemic. *International Journal of Workplace Health Management*, *15*(3), 339-358. https://doi.org/10.1108/IJWHM-03-2021-0074

Merigó, J. M., Cancino, C. A., Coronado, F., & Urbano, D. (2016). Academic research in innovation: a country analysis. *Scientometrics*, *108*(2), 559–593. https://doi.org/10.1007/S11192-016-1984-4

Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., Altman, D., Antes, G., Atkins, D., Barbour, V., Barrowman, N., Berlin, J. A., Clark, J., Clarke, M., Cook, D., D'Amico, R., Deeks, J. J., Devereaux, P. J., Dickersin, K., Egger, M., Ernst, E., … Tugwell, P. (2009). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *Annals of Internal Medicine*, *151*(4), 264–269. https://doi.org/10.7326/0003-4819-151-4-200908180-00135

Nerur, S. P., Rasheed, A. A., & Natarajan, V. (2008). The intellectual structure of the strategic management field: An author co-citation analysis. *Strategic Management Journal*, *29*(3), 319–336. https://doi.org/10.1002/SMJ.659

O'Connor, P., & Papanikolaou, N. (2019). The impact of safety management practices on organizational performance: Evidence from the maritime industry. *Transportation Research Part A: Policy and Practice, 124*, 194-206.

O'Regan, N., & Ghobadian, A. (2005). Evaluating the effectiveness of strategic planning within the Irish healthcare sector. *Health services management research, 18*(3), 135-149.

Parida, A., & Kumar, U. (2006). Maintenance performance measurement (MPM): Issues and challenges. *Journal of Quality in Maintenance Engineering*, *12*(3), 239–251. https://doi.org/10.1108/13552510610685084/FULL/HTML

Ramachandran, G. (2011). Quantitative risk assessment in fire safety. *Quantitative Risk Assessment in Fire Safety*, *9780203937693*, 1–369. https://doi.org/10.4324/9780203937693/QUANTITATIVE-RISK-ASSESSMENT-FIRE-SAFETY-GANAPATHY-RAMACHANDRAN-DAVID-CHARTERS

Rauch, A., Wiklund, J., Lumpkin, G. T., & Frese, M. (2009). Entrepreneurial orientation and business performance: An assessment of past research and suggestions for the future. *Entrepreneurship: Theory and Practice*, *33*(3), 761–787. https://doi.org/10.1111/J.1540-6520.2009.00308.X

Ribeiro, J. de A., Ladeira, M. B., Faria, A. F. de, & Barbosa, M. W. (2021). A reference model for science and technology parks strategic performance management: An emerging economy perspective. *Journal of Engineering and Technology Management - JET-M*, *59*. https://doi.org/10.1016/J.JENGTECMAN.2021.101612

Simões, J. M., Gomes, C. F., & Yasin, M. M. (2011). A literature review of maintenance performance measurement: A conceptual framework and directions for future research. *Journal of Quality in Maintenance Engineering*, *17*(2), 116–137. https://doi.org/10.1108/13552511111134565/FULL/HTML

Sonnentag, S., & Frese, M. (2002). *Performance concepts and performance theory*. Wiley Online Library. https://doi.org/10.1002/0470013419.ch1

Suprapto, V. H., Pujawan, I. N., & Dewi, R. S. (2021). Effects of human performance improvement and operational learning on organizational safety culture and occupational safety and health management performance. *International Journal of Occupational Safety and Ergonomics*, *28*(4), 2455-2467. https://doi.org/10.1080/10803548.2021.2002571

Thaher, Y. A. Y., & Jaaron, A. A. M. (2022). The impact of sustainability strategic planning and management on the organizational sustainable performance: A developing-country perspective. *Journal of Environmental Management, 305*, 114381. https://doi.org/10.1016/J.JENVMAN.2021.114381

Vahdati, H., & Soltani, E. (2018). The effect of strategic planning on organizational performance in Iranian companies. *Journal of Business Research, 91*, 58-66.

van Eck, N. J., & Waltman, L. (2017). Citation-based clustering of publications using CitNetExplorer and VOSviewer. *Scientometrics*, *111*(2), 1053–1070. https://doi.org/10.1007/S11192-017-2300-7

Vogt, J., Leonhardt, J., Köper, B., & Pennig, S. (2010). Human factors in safety and business management. *Ergonomics*, *53*(2), 149–163. https://doi.org/10.1080/00140130903248801

Waal, A. A. (2007). Successful performance management? Apply the strategic performance management development cycles. *Measuring Business Excellence*, *11*(2), 4–11. https://doi.org/10.1108/13683040710752698

Wang, J., Zou, P. X., & Li, J. (2016). Safety management practices and safety behaviour: assessing the mediating role of safety knowledge and motivation. *Journal of Cleaner Production, 113*, 996-1005.

Yan, X., Liu, Y., & Bai, Y. (2018). The effect of safety management practices on safety performance in Chinese construction industry. *Safety Science, 101*, 160-170.

Zupic, I., & Čater, T. (2015). Bibliometric Methods in Management and Organization. *Organizational Research Methods*, *18*(3), 429–472. https://doi.org/10.1177/1094428114562629.