

Management Control System and Organization: A Bibliometrix Approach Analysis

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Abstract. This research is to see an overview of the management control system (MCS) associated with the organization using a bibliometrix analysis approach. The research method used is bibliometrix analysis approach using Vosviewer and Publish or Perish software. The total sample data observed from Scopus sources is 200 sample data from 2010-2021 related to MCS and Organizations. Findings – MCS and the organization of a company complement each other in operational processes and from the metadata results it can be seen that the number of studies that are linked between the Organization and MCS is still being carried out and increasing from year to year. This proves that MCS and organizations have an important role for the sustainability of an organization. Limitations – only use research metadata mapping with Vos Viewer Software.

Keywords: Management Control System, Organization, Bibliometrix, Vos Viewer.

1. Introduction

The current business phenomenon with the development of artificial intelligence technology is changing very quickly[1], thus demanding that the organization is always changing to adapt to changes in its surroundings[2].

Previous research related to organization and MCS has researched such as; Organizational innovation is a non-technological innovation. It's dealing with people, not with technology. It is about implementing and reshaping the company [3]. Organizational ideology as important, but still scientifically explored, dimensions of management control systems (MCS). Organizational ideology is defined as an overarching system of ideas that provides the fundamental justification and legitimacy for what employees believe to be the established order.[4]. Organizational change and success appears to be a strategic function of responding to organizational pressures on sustainability rather than operating organizations by ignoring sustainability challenges. The ability of organizations to use MCS in responding to institutional sustainability strategically has the potential to create long-term value.[5].

The first time "organizational ambidexterity" was used byDuncan(1976), who argue that organizations need to change their structures over time to allow for innovation and efficiency. Although the simultaneous achievement of exploitation and exploration was considered impossible in early research, proposed that organizations need to balance exploitation and exploration to achieve long-term survival and success. Organizational ambidexterity means the simultaneous pursuit of exploratory and exploitative activities within an organization.[6]

The impact of management control systems on cost efficiency and organizational performance using structural equation modeling. Our results suggest that management control

systems improve organizational performance and that this effect is mediated by cost efficiency. For the relative importance of each component of the management control system we find statistical differences between the weights. Five elements are important for the establishment of a management control system, but the two groups can be separated. Creating a cost conscious culture and appropriate management control methods has the highest impact on establishing a management control system.[7].

Significant organizational, economic and social change is needed to ameliorate the most severe impacts of climate change and move towards more sustainable environmental, social and economic systems. At the organizational level, it has been established in previous research that the management control system (MCS) is an important internal mechanism for influencing change, especially strategic change. The role that MCS plays in organizational change towards sustainability.[2].

Organizational change cannot be separated from organizational culture which includes shared values and norms of collective organizations, which are important building blocks and the main determinants of organizations.'s success, and is also an important tool for improving the understanding and implementation of sustainability practices within organizations.[8].

A recent study found that investment in innovation in family business in an organization is no greater than that in non-family businesses in an organization; but they proved to be more efficient in the process. Investments in research and development (R&D) in family businesses are conducted differently from non-family businesses, whose strategy is to look at resources to prevent socioemotional characteristics and financial wealth.[9].

Organizational resilience is considered to be also influenced by the enabling perception of MCS, which is understood as the organization's ability to prepare for, respond to, and recover from unexpected events in times of crisis and in complex, uncertain and threatening situations. environment, while trying to maintain the desired function and results in the midst of tension.[10].

There were differences regarding the relationship between MCS and organization between one researcher and previous studies regarding the variables used in the study. To clarify the relationship between the variables used, the author provides an overview using a bibliometrix analysis approach using Vosviewer and Publish or Perish software. So that it can raise questions in this analysis; how the relationship between MCS and the organization relates to; variables, citations, number of articles, books, book chapters, conferences, reviews.

2. Method

Review of the research method used is the bibliometrix analysis approach. Data was collected using the Publish or Perish software looking for the source of the data needed from Scopus with the title management control system and the keyword organization from 2010 – 2021 with the results of 200 sample data, then the sample data was processed using Vosviewer software to map the data and then explained on the results of the bibliometrix analysis.

3. Result

The following is an overview of the results of the bibliometrix analysis from the Vosviewer software as follows:

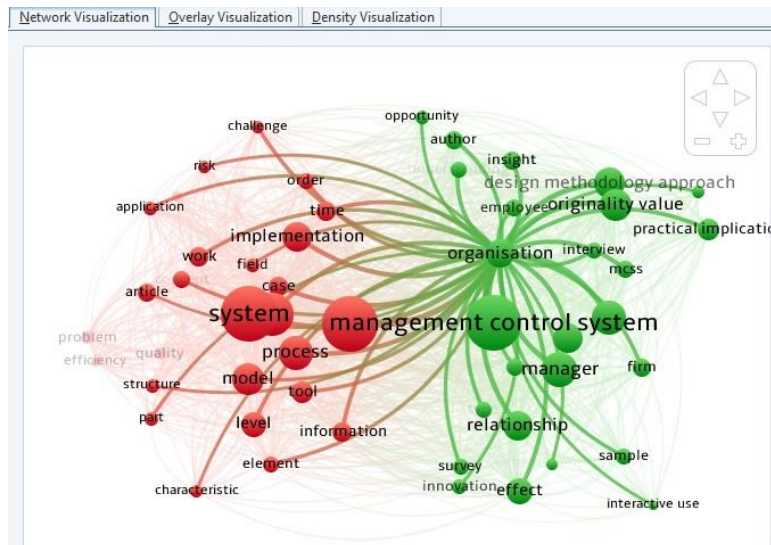


Fig. 1. Network Visualization of MCS and Organization and its relationship with other variables.

The position of the management control system and organization variables is on the right. And organizational variables are still a little researched. This could be an opportunity for researchers to conduct further research.

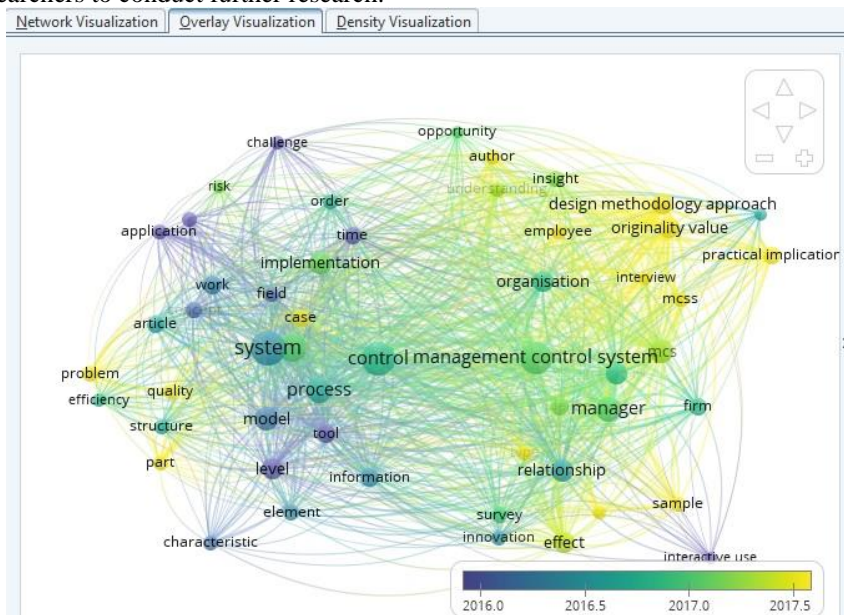


Fig. 2. Overlay Visualization

Overlay visualization displays traces of research history, looks in more detail for each existing variable and the relationship between variables is seen, including the most

marginal variables. Yellow color indicates that the research is the most recent or recently published because from the year of publication the last seen.

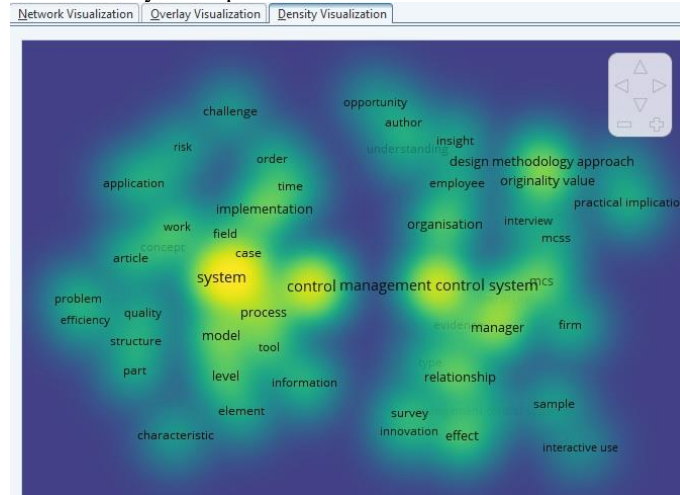


Fig. 3. Density Visualization of MCS and Organization

Density visualization sees that research that is rarely carried out provides an overview of the thickness and brightness of the number of variables studied, the brighter it means that there are more variables being studied, and vice versa if the color is a little less bright, it means that not many have researched.

Table 1. Total 10 Most Citations and Authors

No.	Cites	Authors
1	226	JP Gond
2	210	J. Mundy
3	184	DL Arjaliès
4	123	RH Chenhall
5	108	I. McCarthy
6	79	R. Lueg
7	66	WW Smari
8	66	J. Dillard
9	55	S. Boyson

The results above provide an overview of the number of citations from authors in the top 10 of the 200 published scientific journals. A maximum of 226 citations by authors JP Gond related to MCS titles.

Table 2. Number of books

No.	Cites	Type
1	1	Book
2	0	Book

It can be seen that the number of books that take the title of MCS and organization is only 1. This proves that there is only a small interest in writing books, there is an opportunity to write books related to MCS and organizations.

Table 3. Number of Book Chapters

No.	Cites	Type
1	4	Book Chapter
2	2	Book Chapter
3	2	Book Chapter
4	2	Book Chapter
5	2	Book Chapter
6	1	Book Chapter
7	1	Book Chapter
8	1	Book Chapter

There are 8 bookchapters related to MCS and organization, this provides an opportunity for further research to create more up-to-date bookchapters related to this theme.

Table 4. Number of Conference Papers

No.	Cites	Type
1	12	Conference Paper
2	12	Conference Paper
3	8	Conference Paper
4	5	Conference Paper
5	4	Conference Paper
6	4	Conference Paper
7	3	Conference Paper
8	3	Conference Paper
9	3	Conference Paper
10	2	Conference Paper
11	2	Conference Paper
12	2	Conference Paper
13	1	Conference Paper
14	1	Conference Paper
15	1	Conference Paper

16	1	Conference Paper
17	1	Conference Paper
18	1	Conference Paper
19	1	Conference Paper
20	1	Conference Paper
21	0	Conference Paper
22	0	Conference Paper
23	0	Conference Paper
24	0	Conference Paper
25	0	Conference Paper

The number of articles included in the conference is quite a lot, MCS topics and organizations, but there is still an opportunity to become a conference participant with the topics mentioned above.

Table 5. Number of Reviews

No.	Cites	Type
1	8	Review
2	5	Review
3	5	Review
4	3	Review
5	2	Review
6	2	Review
7	0	Review

It can be seen that there are still a number of topics that are still in the process of being reviewed by reviewers. This happens because the researchers have not provided feedback on the improvement results from the reviewers.

4. Discussion

The implications of this analysis bibliometrix review are expected to spur researchers to conduct further research. In terms of MCS practices and organizations, they can provide input that MCS and organizations are very important and have a relationship so that company operations can be carried out with maximum profit for the company.

Table 6. List of Past Researcher

Name	Title	Result
F. Klashanov	Artificial Intelligence and Organizing Decision in Construction	AI bisa memberikan dukungan optimal keputusan organisasi
V. Narayanan and G. Boyce	Exploring the transformative potential of management control	Peran MCS dalam keberlanjutan dan transformasi organisasi

	systems in organisational change towards sustainability	belum relevan.
E. Lopez-Valeiras, M. B. Gonzalez-Sanchez, and J. Gomez-Conde	The effects of the interactive use of management control systems on process and organizational innovation	The role of iMCS in organizational processes and innovation, extending previous literature.
K. Kraus, C. Kennergren, and A. von Unge	The interplay between ideological control and formal management control systems – A case study of a non-governmental organisation	Need to distinguish between professional and organizational identity when analyzing MCS in organizations
X. H. (2018) Yap, J. B. H., & Ng	Strategic responses to institutional pressures for sustainability: the role of management control systems	MCS can provide improvement and change to the organization.
S. Gschwantner and M. R. W. Hiebl	Management control systems and organizational ambidexterity,” <i>J. Manag. Control</i>	The use of a combination of opposing management controls to support the achievement of organizational ambidexterity.
U. Diefenbach, A. Wald, and R. Gleich	Between cost and benefit: investigating effects of cost management control systems on cost efficiency and organisational performance	CMCS improves organizational performance and this effect is mediated by cost efficiency
T. S. Ong, H. B. Magsi, and T. F. Burgess	Organisational culture, environmental management control systems, environmental performance of Pakistani manufacturing industry	OC, EMCS and EP provide integration between environmental and organizational cultures.
I. M. Oro and C. E. F. Lavarda	Interface between management control systems and strategy and performance measures in a family business	Family management provides can provide special control over MCS and organizational strategy.
I. M. Beuren, V. dos Santos, and D. C. Bernd	Effects of the management control system on empowerment and organizational resilience,” <i>Brazilian Bus.</i>	MCS provides support to managers when the organization encounters difficulties or problems so that they can be handled properly.

From the table above, the results of the study show that the role of MCS in the organization has many conflicts and contributes to the company. For future organizations, the role of artificial intelligence is very much needed considering the development of technology and the needs of organizational development, it will be even better for further research on the topic of organizational development associated with artificial intelligence (AI).

5. Conclusion

The results of the research MCS with the Organization are visualization of the network, overlay and density visualization, it seems that there is still an opportunity to do research, then it can be seen that the number of books issued is still small and there are still research results in the review process that have not been completed yet. In research, there are limitations to the bibliometrix analysis approach using only the Vosviewer and Publish or Perish software, so it is less comprehensive. For future research, it is expected to use a combination of other software so that the research is more comprehensive.

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