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Artificial intelligence and management control: mapping an emerging research field.

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Abstract

Objective: This work aims to assess the new trend in the adoption of AI tools in management control practices, based on a bibliometric literature review. This study is relying on a bibliometric mapping of scientific outputs available in the SCOPUS database over the period 2015–2025. Its objective is to map the current state of research, determine the dominant themes, identify research gaps in the literature and identify emerging trends in this field of study. This analysis offers a comprehensive and structured view of the evolution of academic work on the intersection between artificial intelligence and management control practices.

Methodology: This approach is part of a bibliometric analysis of scholarly publications listed in SCOPUS between 2015 and 2025. A search query combining keywords relating to artificial intelligence (AI) and management control and its components was developed in order to collect a relevant corpus and then the use of tools like VosViewer and "Biblioshiny" from the interface of the "Bibliometrix" R package for analysis. This methodology provides a global and structured vision of the current state of research on the use of artificial intelligence tools in the field of management control.

Results: The results of the bibliometric analysis show a significant growth in the volume of scientific production on the use of artificial intelligence (AI) tools in management control since 2015, with a notable peak from 2024. These data demonstrate a growing academic interest and the need for further research to better understand the practical implications of integrating AI into management control.

Originality of the paper: This research this research offers a comprehensive and focused mapping of the recent period (2015-2025), identifying major themes and emerging trends in the field of management control and its interaction with emerging technologies such as artificial intelligence tools, as well as specific gaps in the scientific literature, thus allowing us to track the evolution of themes and issues related to AI in management control in a context of accelerated digital transformation.

Keywords: Artificial intelligence, management control, interaction, bibliometric analysis.

Introduction

The emergence of artificial intelligence (AI) tools, as catalysts for digital transformation, has profoundly has fundamentally altered numerous business disciplines, with management control being particularly affected. This technological revolution challenges traditional tools, methods and the conventional role of management controllers, necessitating a rethinking of management systems to better meet the demands for efficiency and agility of organizations in an environment characterized by ever-increasing competitiveness.

Management control as defined by **Robert Anthony (1965)** as "the process by which managers obtain assurance that resources are obtained and used effectively and efficiently to achieve the organization's objectives". While organizational performance is a central issue, other aspects have gradually emerged in subsequent work. According to the typology proposed by Merchant and Van der Stede (2007), management control systems are made up of four main levers: results control, action, personnel and cultural control **(Razzouki & Benazzi, 2019).** Each lever aims to guide organizational behavior toward enhanced performance.

For this study, the concept of "Artificial Intelligence (AI)" is conceptualized as "*the set of systems capable of simulating certain human character functions, such as learning, reasoning and decision-making, using sophisticated algorithms and software*" **(Russell & Norvig, 2021; IBM, 2024)**. The integration of digital tools and artificial intelligence (AI) within management control systems is challenging the traditional roles of management controllers. This evolution reinforces their contribution to value creation within the organization, by mobilizing the potential offered by AI in predictive analysis, data visualization and decision support **(Dekri, 2024).**

This study this study aims to examine how artificial intelligence impacts on management control practices. The focal research question guiding the present study is: **"How do AI tools impact management control practices, and what are the emerging patterns in academic research addressing this intersection?"**

To address this question, this study adopts a bibliometric analysis utilizing established tools including Vosviewer tool, and the results from the "Biblioshiny" output from the "Bibliometrix" R package, have been used to analyze the data, map thematic connections and determine the main authors and publications in the field of AI in management control. This analysis phase guides the construction of the theoretical framework and specifies the issues around which potential future studies will revolve.

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1. Bibliometric analysis of scientific production on artificial intelligence and management control: Trends, emerging themes, and research perspectives

Bibliometric analysis is "*a quantitative method used to decrypt and map the accumulated scientific knowledge and evolving aspects of well-established fields, by rigorously exploiting vast volumes of unstructured data"* **(Donthu et al., 2021).**

It can be used to explore a scientific field by mapping publications, identifying the most influential authors, visualizing key concepts, and pointing out gaps in the literature. It also helps to justify a research problem and build a relevant theoretical framework, based on the most recognized and current sources in the studied domain.

1.1. Data and Methodology:

Various resources can be mobilized to conduct this type of analysis, from bibliographic search engines to specialized programs for processing and visualizing bibliometric data. Scopus, an academic database well recognized for its broad coverage and the reliability of its publications, was selected as the main data source **(Lavanya & Rajkumar, 2024)**, due to its exhaustive overview and its relevance for quantitative analyses of scientific literature.

According to **Anthony and Govindarajan (2007)**, management control is exercised at the intermediate level of the organization, and its role is to convert strategic objectives into operational action plans, and then to guarantee implementation and monitoring using a set of tools such as budgets, scorecards and performance indicators. By taking a central role in coordinating activities, allocating resources efficiently and managing the company's overall performance.

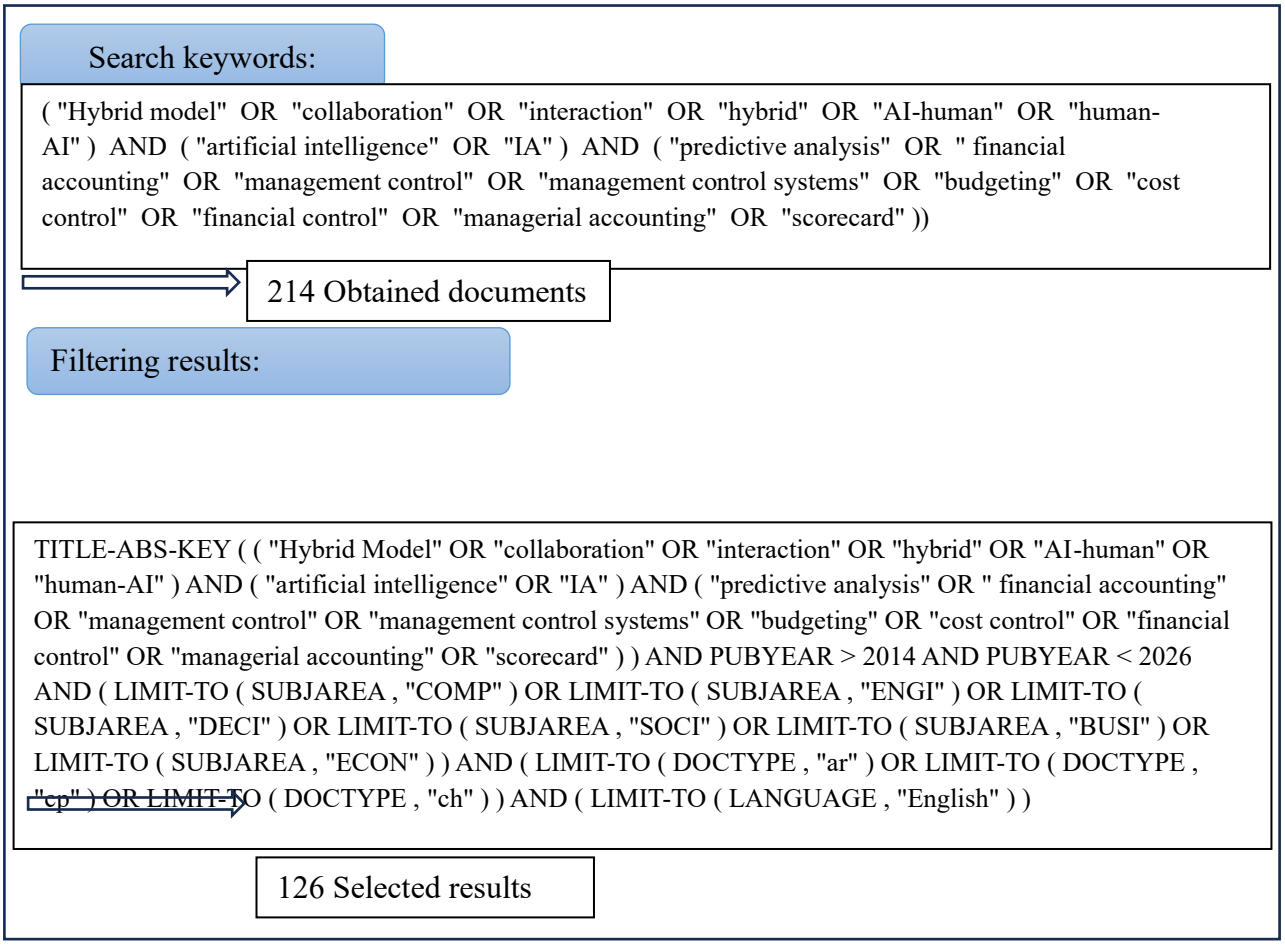
To ensure exhaustive review of the existing scientific literature, the bibliographic search was made using the Scopus database and keywords directly related to our research question, such as : (« Interaction » OR « Hybridation » OR « Collaboration ») AND («Artificial Intelligence » OR « AI»), by decomposing management control according to Anthony and Govindarajan's (2007) model, as well as the synonyms frequently encountered in the literature, the keywords selected for the search are as follows: ("management control" OR "financial accounting" OR "management control systems" OR "budgeting" OR "cost control" OR "financial control" OR "managerial accounting" OR "scorecard" OR "predictive analysis").

This identified 214 documents published between 2015 and 2025. A filtering process was then applied, according to the criteria defined and represented in Figure 1, resulting in a final selection of 126 documents for analysis. The data were extracted in CSV format, then imported

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into VOSviewer. This program has been used for its proven capabilities in data visualization and data mapping **(Bukar et al., 2023)**. And "Biblioshiny" software for bibliometric analysis and visualization of co-occurrence, co-citation and author networks.

Figure 1: Bibliographic data selection and search process



Source: Authors

The keywords strategy was structured around three analytically coherent blocks. The first block targets the literature on human AI hybridization, ensuring that the study captures the socio-organizational dynamics of collaboration and interaction rather than limiting the scope to technological automation. The second block establishes the technological anchoring of the corpus through the core terminology of artificial intelligence. The third block encompasses the principal constructs associated with management control and financial governance, reflecting an expanded conceptualization of management control as a multidimensional system of performance steering, coordination, and monitoring.

The inclusion of *Engineering* and *Computer Science* categories reflects a deliberate theoretical choice. The transformation of management control systems through artificial intelligence

occurs at the intersection of technological innovation and organizational implementation. Since key advances in algorithms and predictive analytics originate in technical disciplines before being adopted in managerial contexts, restricting the corpus to business and management journals would have captured only the adoption phase while overlooking the technological foundations of these transformations.

1.2. Results and analysis:

This study adopts an analytical approach structured around four main axes. First, we will examine the general characteristics of the publications in order to explore the foundations of the field of management control and AI researches. This will be followed by a data analysis, accompanied by visual representations, to highlight the fields, countries and institutions most involved in this discipline.

Thirdly, the study aims to delineate the conceptual structure of the interaction between AI domains and management control practices through keywords analysis. Finally, an in-depth bibliometric analysis, including keyword co-occurrence and bibliographic linkage networks, will identify current trends, future perspectives and key themes in this field of research.

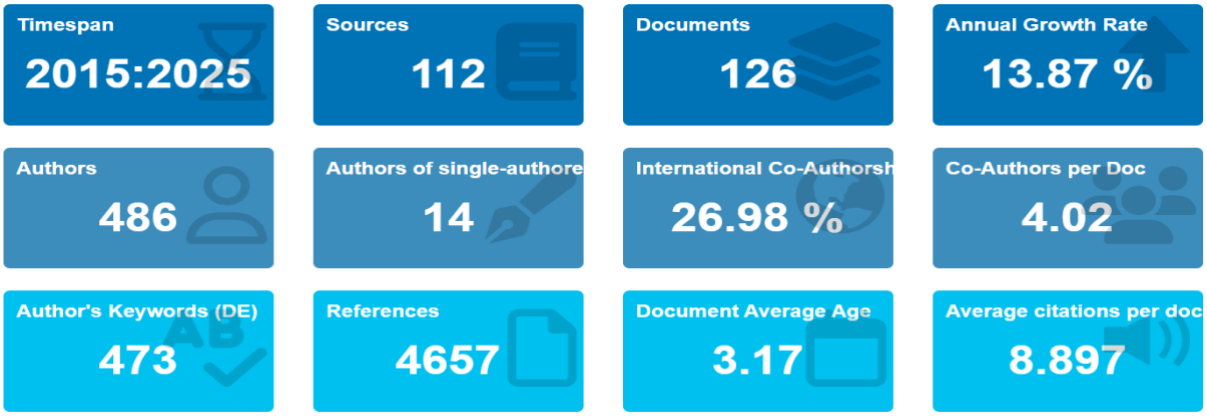
Scientific publications on the theme of integrating artificial intelligence into management control practices have been growing steadily over the years. The first publications in this segment date back to 2015, but it is especially from 2020 onwards that the interest of researchers has strongly increased. The average number of publications per year has risen from 4.8 to 19.75 in recent years. The year 2024 marks a record, with 28 publications, as shown in the **Figure 2**.

1.2.1. Growth and volume of publications in the field:

Figure 2 shows the results of a bibliometric analysis of a corpus of scientific publications published between 2015 and 2025. The database consists of 126 documents from 112 different sources, with an average annual growth rate of 13.87%. Of over 486 authors identified, 14 wrote publications as sole authors. International collaboration is also significant, with 26.98% of papers co-authored by researchers from different countries, with an average of 4.02 co-authors per article. The publications analyzed cited a total of 4657 references and included 473 distinct keywords. The documents are on average 3.17 years old and have received an average of 8,897 citations each.

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Figure 2: Main data on management control and AI research (R-studio)

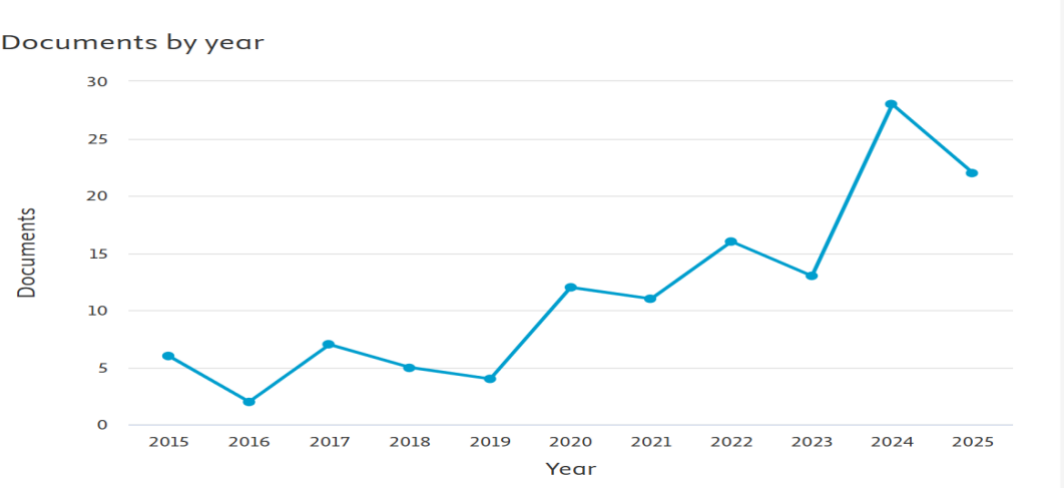


Source: Authors

Scientific production on the theme of integrating artificial intelligence into management control practices has increased steadily over time. The first publications in this field were published in 2015, but it's mainly from 2020 onwards that interest among researchers has increased significantly. The average number of publications per year has risen from 4.8 to 19.75 in recent years. The year 2024 represents a record, with 28 publications, as shown in **Figure 3**.

The growth in scientific production can be attributed to several converging factors. From 2020 onwards, the widespread diffusion of advanced machine learning and data analytics technologies significantly expanded the practical applications of AI in organizational settings. Moreover, the COVID-19 pandemic acted as a powerful accelerator of digitalization processes, reinforcing the need for predictive analytics and real-time control mechanisms within organizations. Together, these structural shifts help explain the intensified academic interest in AI-driven management control systems observed in recent years.

Figure 3: Annual number of publications on AI in management control practices in the Scopus database



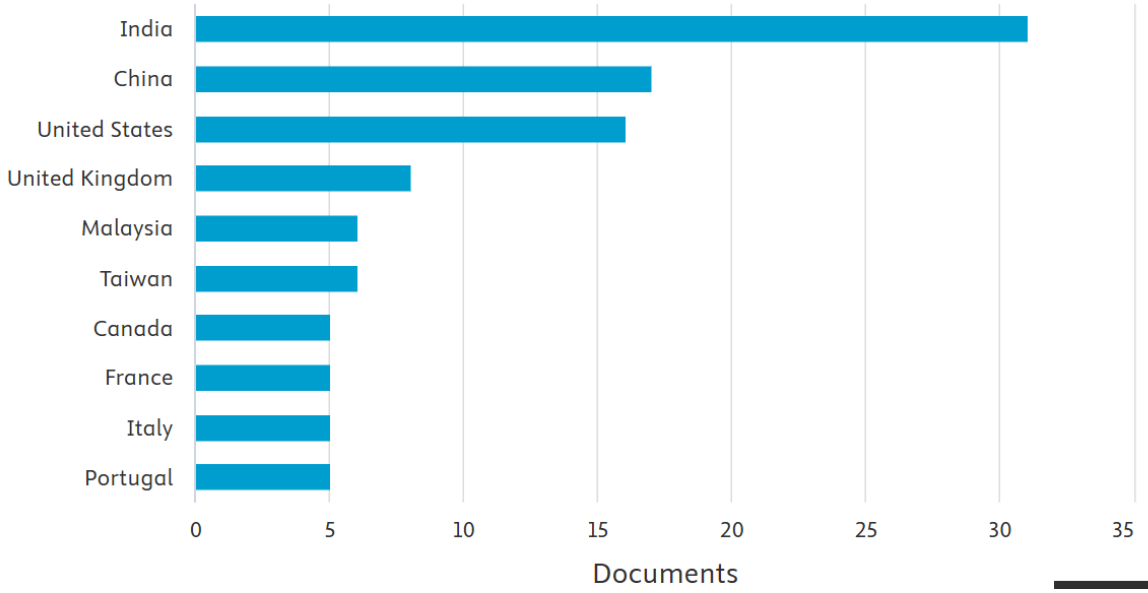
Source: Authors

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1.2.2. Mapping the field: countries, authors and institutions

In **Figure 4**, India stands out as the main contributor of publications on the use of AI technologies in management control practices, with a total of 31 scientific papers. Followed by China and the USA, with 17 papers each, and the UK with 8. Other countries such as Canada, Malaysia, France and Italy are also represented, if more modestly, with between 5 and 7 publications. Morocco, for its part, recorded 3 publications, ranking alongside countries such as Egypt, Nigeria and South Africa.

Figure 4: Geographical distribution of publications (Scopus)



Source: Authors

The prominent contribution of China and India to the observed scientific output reflects the ambitious national AI policies and strategies in the field of artificial intelligence. China, particularly through its 2030 Artificial Intelligence Development Plan **(New Generation Artificial Intelligence Development Plan, 2017)**, positioned artificial intelligence as a central lever for enhancing industrial capacity and strengthening economic and financial competitiveness. Similarly, India's well-established technological and academic ecosystem, in software engineering and data analytics has fostered research at the intersection of intelligent systems and organizational applications. These structural conditions help explain their leading role in shaping scholarly production within this domain.

The bibliometric analysis produced using Biblioshiny in **Figure 5** identifies the most active authors in the field of AI applied to management control. For example, authors HSU M-F., LIN S-J., WANG H. and ZHANG Z. are the most active with 3 publications, showing the relevance

of their contribution to this field of research. Other researchers, such as ANTON B. and FLORESCU A., have also published 2 articles contributing to the development of this theme.

Table 1: Most relevant papers of the productive authors in the field

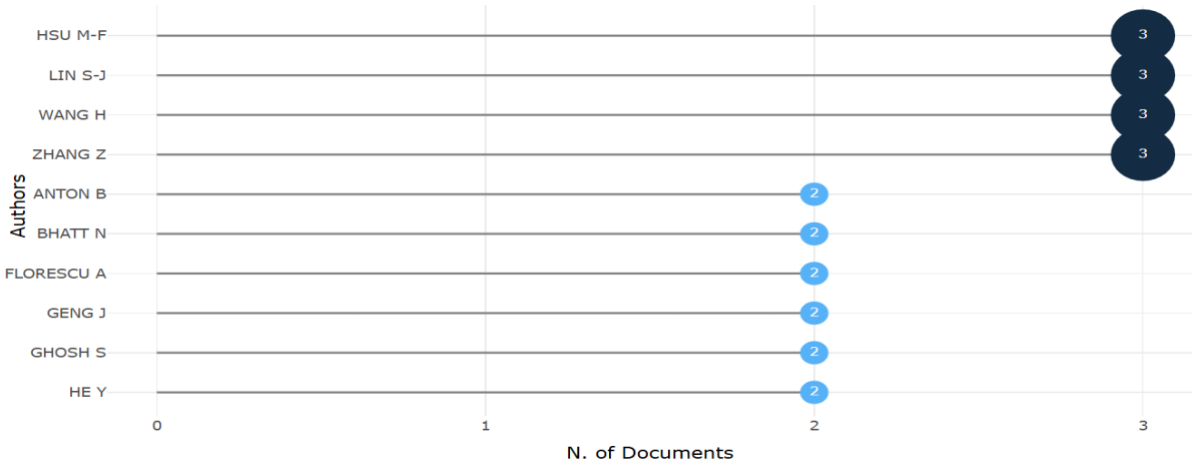
Authors	Example of relevant publications
HSU M-F.	*« Integrating dynamic Malmquist DEA and social network computing for advanced management decisions. »* (Hsu et al., 2018)
LIN S-J.	*« A Hybrid Artificial Intelligence-Based Model for Corporate Sustainability Evaluation and Forecasting. »* (Chang et al., 2024)
WANG H.	*« Model predictive control-based energy management strategy for a series hybrid electric tracked vehicle »* (Wang, H. et al., 2016)
ZHANG Z.	*« Technology progress in mechanical harvest of fresh market apples »* (Zhang et al., 2020)

Source: Authors

In terms of affiliations in Figure 6, the Wrocław University of Economics and Business leads with a total of 14 publications followed by the Hubei Research Center for Big Data Engineering Technology and Information Perception in Water Management with 7 publications. Next come Liverpool John Moores University with 6 publications, along with the University of Benha. Chandigarh University and Charotar University of Science and Technology, each of them with 5 publications. These results testify to the significant involvement of these institutions in artificial intelligence into management control and its practices research.

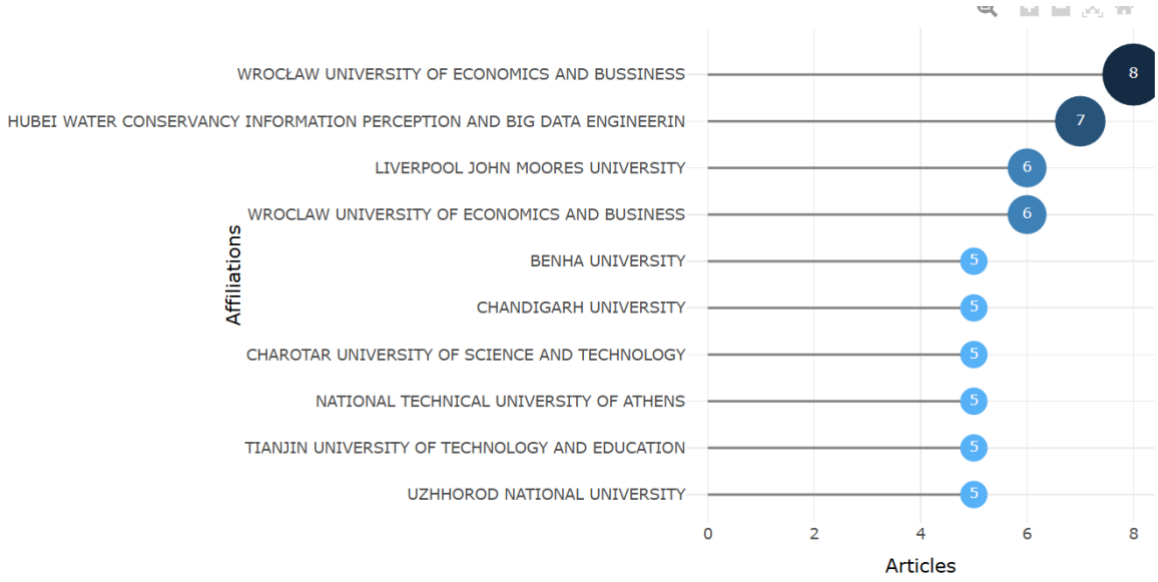
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Figure 5: Analysis of the most productive authors (R-Studio)



Source: Authors

Figure 6: Most relevant affiliations in the field (R-Studio)



Source: Authors

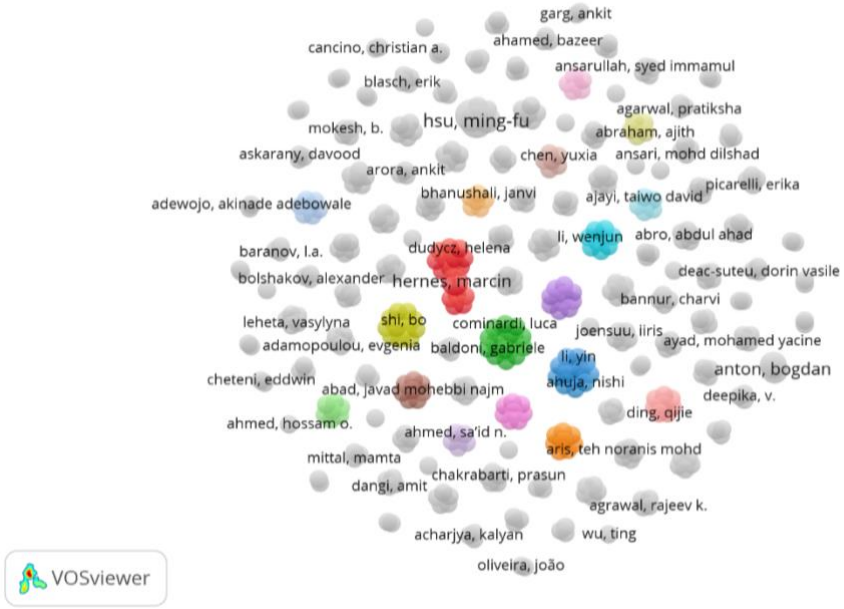
The map generated using VOSviewer program **(Figure 7)** includes 498 authors divided into 122 slightly connected clusters, with a total number of links 1,143. The densest cluster is shown in **Figure 8**, comprising 2 documents, 16 items and 70 links. Examination of the co-authors' network, checked against the bibliographic database, indicated that two articles were at the origin of this collaboration. This analysis highlights the collaborative links between the authors listed in our database.

These publications were written by the following authors: Dudycz H., Hernes M., Kes Z., Mercier-Laurent E., Nita B., Nowosielski K., Oleksyk P., Owoc M.L., Palak R., Pondel M., et

Wojtkiewicz K.. Their paper, entitled *"A Conceptual Framework of Intelligent Management Control System for Higher Education"*, was published in 2021 in Artificial Intelligence for Knowledge Management: 8th IFIP WG 12.6 International Workshop, AI4KM 2021, Held at IJCAI 2020, Yokohama, Japan, January 7-8, 2021, Revised Selected Papers (pp. 35-47), published by Springer International Publishing. This work has been cited 3 times.

Another collaboration by Bytniewski A., Matouk K., Chojnacka-Komorowska A., Hernes M., Zawadzki A., and Kozina A., resulted in the paper "*The functionalities of cognitive technology in management control system"*, published in 2020 in the proceedings of the Asian Conference on Intelligent Information and Database Systems, also by Springer International Publishing. This paper received 21 citations.

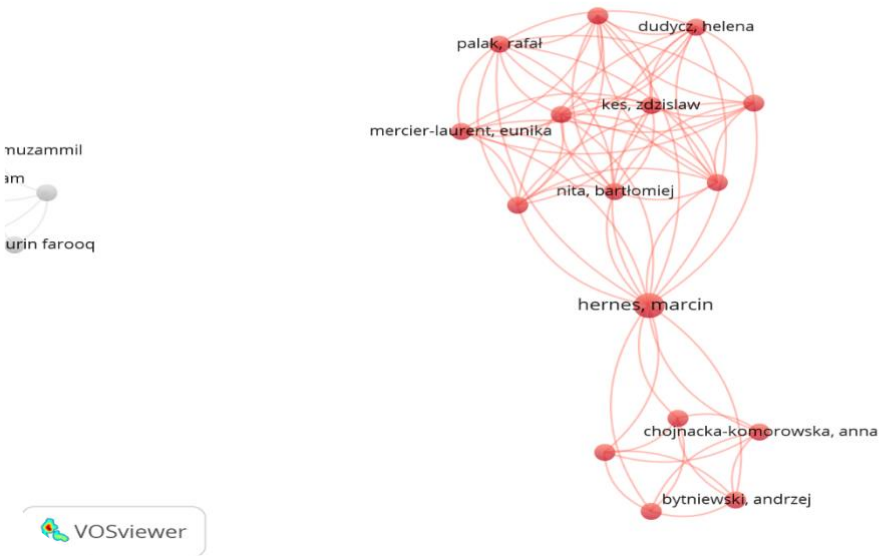
Figure 7: Co-authorship map



Source: Authors

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Figure 8: Focus on the most active co-authors cluster



Source: Authors

The dispersion of author clusters suggests that the field remains theoretically under-consolidated. The absence of a strongly interconnected core reflects fragmentation between technological and managerial perspectives without a dominant conceptual framework. Such a configuration is characteristic of emerging research domains. It indicates that research at the intersection of AI and management control is still in a structuring phase. This fragmentation highlights an open intellectual space to the development of more theoretical frameworks.

1.2.3. Exploring dominant themes: clusters resulting from keyword co-occurrences:

Figure 9 presents the extraction of 1,522 keywords from 126 publications in the Scopus database used for this study. As part of the keywords co-occurrence analysis achieved using VOSviewer, a minimum threshold of 4 co-occurrences was set for a keyword to be included in the analysis.

A total of 59 keywords meet this criterion and make up the co-occurrence network. These keywords highlight the dominant themes and structuring lines of research that emerge recurrently in the corpus analyzed. The keywords co-occurrence network is distributed into 5 separate clusters, each visualized using a different color to represent their spread and interconnections. The size of the keywords is proportional to their frequency of occurrence in the corpus analyzed.

Figure 10 lists the most frequently occurring keywords in the publications studied. It highlights the central themes and dominant topics addressed in the literature. The highest-frequency keywords establish the fundamental technological foundation of the field:

Artificial Intelligence (82 occurrences): Represents the overarching technological paradigm

Example of studies: *"A Hybrid Artificial Intelligence-Based Model for Corporate Sustainability Evaluation and Forecasting "* **(Chang et al., 2024)**; *" The mediating role of knowledge management practices and balanced scorecard in the association between artificial intelligence and organization performance: evidence from MENA region commercial banks."* **(Mahboub & Ghanem, 2024).**

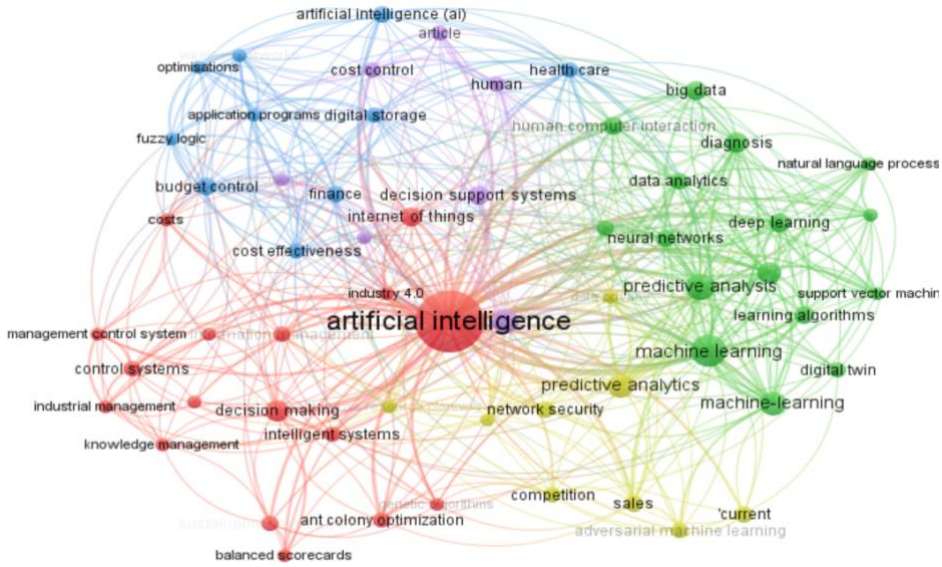
Table 2 displays the 5 clusters identified from the keywords co-occurrence analysis. Each cluster groups together a set of keywords frequently associated in publications, reflecting coherent and interconnected research themes.

Taken together, the clusters reveal a field structured around three dominant logics:

- **Strategic and transformational logic** (Cluster 1);
- **Technological and analytical logic** (Clusters 2 and 4);
- **Operational financial control logic** (Clusters 3 and 5).

The imbalance in cluster size suggests that technological and AI-centered themes currently dominate the field, while traditional management control dimensions (budget and cost control) appear more specialized and less central. This configuration reinforces the idea that the domain is still evolving from a technology-driven paradigm toward a more theoretically integrated management control framework.

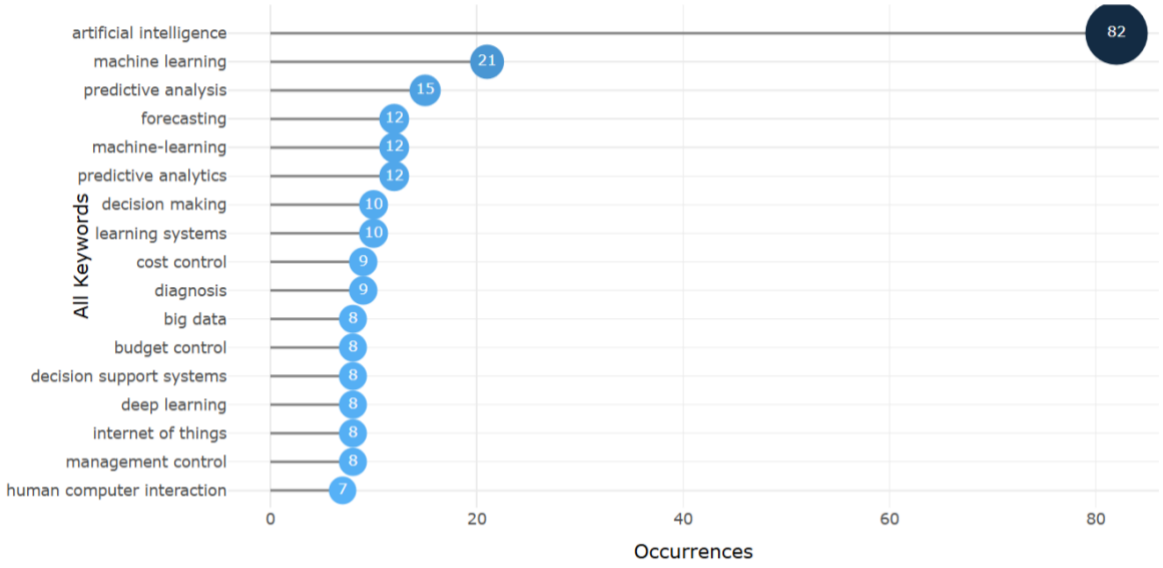
Figure 9: Keywords co-occurrence network (VosViewer)



Source: Authors

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Figure 10: Most frequent keywords in the corpus analyzed (R-Studio)



Source: Authors

Table 2: Thematic structuring based on keyword clusters

Clusters	Number of items	Main topic	Examples of Keywords
1 (Red)	17	Artificial Intelligence	• Artificial intelligence • Management control • Digital transformation • Decision making • Costs • Intelligent systems
2 (Green)	16	Machine learning	• Machine learning • Big data • Diagnostics • Human-Computer interaction • Predictive analysis
3 (Blue)	10	Budget control	• Finance • Budget control • Optimizations • Cost effectiveness
4 (Yellow)	9	Predictive analytics	• Competition • Predictive Analytics • Risk assessment • Data privacy • Network security
5 (Purple)	7	Cost control	• Cost control • Forecasting • Data mining • Decision support systems

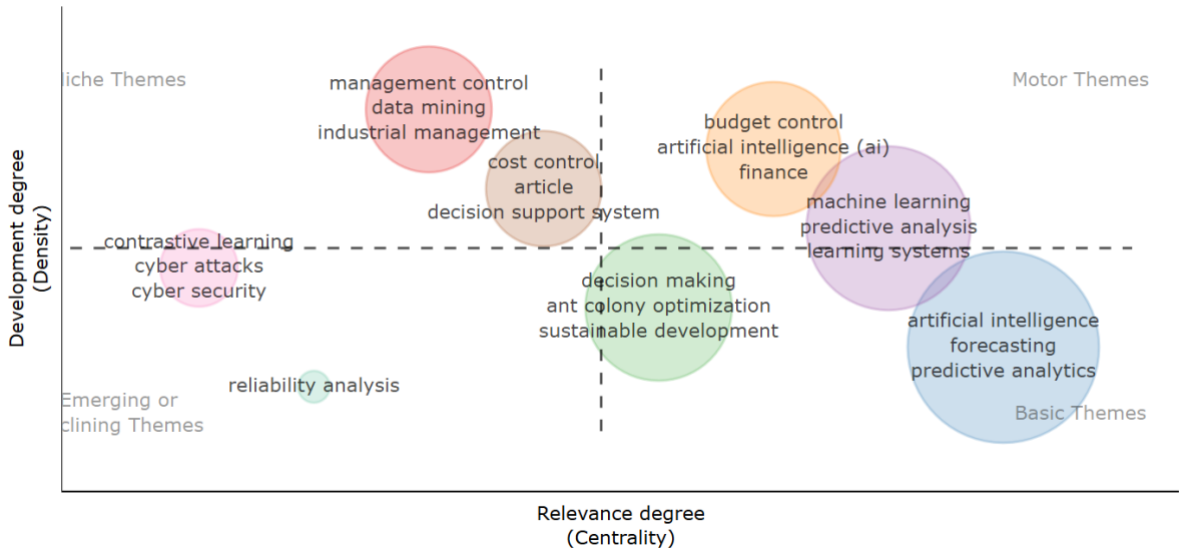
Source: Authors

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The thematic map (Figure 11) intersects two main dimensions identified by bibliometric analysis: centrality (horizontal axis), which reflects a theme's relevance and level of interconnection with other research fields, and density (vertical axis), which measures the degree of internal development or maturity of a given theme.

The thematic map divides research topics into four quadrants according to their centrality (relevance) and density (maturity). The motor themes are simultaneously central and thoroughly developed, playing a structuring role. Basic themes are central but not yet fully developed. Niche themes are well-developed but poorly connected to the overall field. Finally, emerging or declining themes are neither central nor well-developed, indicating areas of exploration or loss of interest. This cartography enables us to identify research dynamics and high-potential areas.

Figure 11: Thematic map of AI in management control (R-Studio)



Source: Authors

This thematic map identifies research priorities, mature areas, strategic axes to be strengthened and emerging opportunities.

The positioning of *management control* as a "niche theme" in the thematic mapping is an indicator of a field undergoing specialized appropriation. In advanced bibliometric analyses, a niche theme is characterized by high internal density but low centrality within the overall network. Studies addressing management control in relation to artificial intelligence exhibit increasing conceptual coherence yet remain weakly connected to the dominant streams of AI research. This configuration reflects a structural imbalance within the field: artificial

intelligence continues to be predominantly examined from a technological perspective, while its integration into organizational control systems is still in the process of theoretical consolidation.

Table 3: Analysis of thematic map quadrants:

Motor themes	✓ Machine learning ✓ Predictive Analysis ✓ Learning systems ✓ Finance ✓ Budget control	These themes are the structuring pillars of the field. They attract a great interest and are well established, forming the core of AI research applied to management.
Basic themes	✓ Artificial intelligence ✓ Forecasting ✓ Predictive Analytics	These themes still require theoretical and empirical work to strengthen their internal coherence. They offer solid research opportunities.
Emerging or declining themes	✓ Reliability analysis ✓ Cybersecurity	These themes are in the exploratory phase, and can become innovative if supported by research.
Niche themes	✓ Management control ✓ Data mining ✓ Cost control	These themes are highly developed, but not very central and specific to certain contexts. These themes are studied in depth in a sub-field, but remain insufficiently linked to the core of the field and may represent advanced or technical directions.

Source: Auteurs

The status of a "niche theme" therefore signals not a weakness of management control scholarship, but a strategic opportunity of developing integrative frameworks capable of articulating algorithmic innovation with control mechanisms.

2. Results discussions:

The bibliometric analysis of academic publications relating to the integration of AI tools in management control practices between 2015 and 2025 provides a detailed analysis of the evolution of this field, as well as a look at the trend themes and collaborations between researchers in the domain, with 126 documents from 112 different sources showing the evolution of research and the attention the subject is attracting on an international scale.

The analysis shows that the annual number of publications grew from 6 in 2015 reaching 28 in 2024, with a very high annual growth rate of 13.87%, this growing trend indicates that management control augmented by AI tools is gaining recognition as a critical field of study.

With an average of 4.02 co-authors per paper and 26.98% of publications resulting from international collaborations, this underlines the important role of transnational partnerships in the development of research in management control and AI. The collaborative nature of this subject is confirmed by the fact that only 14 of the 486 authors published their work as a single author. In addition, geographical analysis shows that 53 countries have contributed to research in management control and AI, which highlights the worldwide importance of this topic.

Keywords co-occurrence analysis shows that the term management control has links with several major technological concepts such as « artificial intelligence (AI) », « fuzzy logic », « intelligent systems » and « robotics », confirming its progressive integration into the dynamics of digital transformation. This convergence towards innovative technology improves forecast quality, strategic decision-making and automates processes **(El Kezazy & Nafzaoui, 2023; Boutgayout & El Ghazali, 2020).**

The arrangement of keywords into five clusters gives a thematic structuring of the scope of research into the adoption of AI technologies within management control. This area of research is not developing in isolation, but along complementary lines.

The analysis of these clusters and the thematic map led us to the following conclusions:

- AI is seen as a lever for modernizing management control practices in order to make decision-making processes more intelligent, is also mobilized to optimize existing financial processes.
- The inclusion of human-machine interaction underlines the desire to maintain a collaborative interface between AI and human decision-makers.
- Keywords such as “data privacy” and “cybersecurity” suggest that researchers are looking into the ethical and regulatory concerns of using these technologies in control systems.
- « Data mining » reflects the desire to build decision support systems based on the automatic detection of trends and anomalies, useful to controllers in their alert and optimization role **(Boutgayout & El Ghazali ,2020).**

Conclusion:

This bibliometric analysis provides a comprehensive examination of research at the intersection of artificial intelligence and management control practices from 2015 to 2025, this study has focused on the evolution of scientific production, international collaboration and the major themes that structure the domain.

The dominance of technological clusters and the niche positioning of management control reveal a transitional phase, where predictive analytics and algorithmic systems are reshaping performance steering mechanisms. Control is progressively shifting from retrospective financial oversight to forward-looking, data-driven governance. These trends imply a strategic repositioning of the management controller. Rather than serving primarily as a producer of financial reports, the controller becomes an interpreter of algorithmic outputs and a translator of data into strategic insight. Ultimately, management control is evolving into a technologically integrated strategic capability, where human judgment and algorithmic intelligence operate in complementarity rather than substitution.

This study demonstrates the growing convergence between innovative technologies and management control, demonstrating significant global research interest in this interdisciplinary domain. Even so, several limitations need to be taken into consideration. Firstly, the limitation of the selected documents to works indexed in a single database (SCOPUS) can be a major constraint, as it excludes relevant papers that may be published in other databases such as Web of Science, Google Scholar or PubMed, and consequently a biased representation of the real state of the research linked to this theme.

Bearing in mind that the analysis is based exclusively on document metadata (titles, abstracts, keywords and author information), and the absence of a more in-depth study of the full texts may overlook more complex and important ideas, themes and dependencies. The publication period covered (2015-2025) may not evaluate some early and fundamental works that constitute the first contributions in this field of research.

The results obtained unlock new methodologies for research in the area of expertise of integrating innovative technologies such as AI into management control practices. Firstly, the use of other databases such as Web of Science, Google Scholar or PubMed to build a more relevant and richer corpus, with detailed analysis of the full content of articles to capture more complex relationships and master the evolution of research in the field. Secondly, to use these results as a starting point for research into the integration of artificial intelligence into management control, following sector-based approaches and targeting specific organizational

contexts (industry, services, public sector, etc.), which will provide a more precise comprehension of actual practices, operational issues and the specific features of each organizational environment. In closing, examine how AI is changing decision-making processes in management control, weighing the ethical implications and governance challenges associated with AI use.

References:

ANTHONY, R. H. & GOVINDARAJAN, V. (2007). Management Control Systems, 12th Edition, McGraw-Hill Irwin, New York.

ARIA, M. & CUCCURULLO, C. (2017) bibliometrix : An R-tool for comprehensive science mapping analysis, Journal of Informetrics, 11(4), pp 959-975, Elsevier.

BOUTGAYOUT, B., & EL GHAZALI, M. B. (2020). Contrôle de gestion 3.0: Nouveaux outils et prise de décision à l'ère de la transformation digitale. Revue Internationale d'Economie Numérique, 2(1), 62-78.

Bukar, U. A., Sayeed, M. S., Razak, S. F. A., Yogarayan, S., Amodu, O. A., & Mahmood, R. A. R. (2023). A method for analyzing text using VOSviewer. MethodsX, 11, 102339. https://doi.org/10.1016/j.mex.2023.102339

BYTNIEWSKI, A., MATOUK, K., CHOJNACKA-KOMOROWSKA, A., HERNES, M., ZAWADZKI, A., & KOZINA, A. (2020, MARCH). The functionalities of cognitive technology in management control system. In Asian Conference on Intelligent Information and Database Systems (pp. 230-240). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-030-42058-1_19

CHANG, T. M., YEH, C. C., HU, G. H., LIN, S. J., HSU, M. F., & HUNG, H. H. (2024, July). A Hybrid Artificial Intelligence-Based Model for Corporate Sustainability Evaluation and Forecasting. In International Conference on Frontier Computing (pp. 193-199). Singapore: Springer Nature Singapore. https://doi.org/10.1007/978-981-96-2395-2_33

DEKRI, M. (2024). Hybridization of the management controller's job. IJDAM - International Journal of Digitalization and Applied Management. 1(2), 84–91. https://doi.org/10.23882/ijdam.24132

DONTHU, NAVEEN & KUMAR, SATISH & MUKHERJEE, DEBMALYA & LIM, WENG MARC. (2021). How to conduct a bibliometric analysis: An overview and guidelines. Journal of Business Research. 133. 10.1016/j.jbusres.2021.04.070.

DUDYCZ, H., HERNES, M., KES, Z., MERCIER-LAURENT, E., NITA, B., NOWOSIELSKI, K., ... & WOJTKIEWICZ, K. (2021). A conceptual framework of Intelligent

Management Control System for Higher Education. In Artificial Intelligence for Knowledge Management: 8th IFIP WG 12.6 International Workshop, AI4KM 2021, Held at IJCAI 2020, Yokohama, Japan, January 7–8, 2021, Revised Selected Papers 8 (pp. 35-47). Springer International Publishing. https://doi.org/10.1007/978-3-030-80847-1_3

EL KEZAZY, H. & NAFZAOUI, M. A. (2023). Contrôle de gestion à l'ère de la digitalisation : revue de littérature. International Journal of Economics and Management Sciences, volume 2 (2), pp 01-16. Consulté à l'adresse https://ijemsjournal.com/index.php/home/article/view/26

HSU, M. F., YEH, C. C., & LIN, S. J. (2018). Integrating dynamic Malmquist DEA and social network computing for advanced management decisions. Journal of Intelligent & Fuzzy Systems, 35(1), 231-241. doi:10.3233/JIFS-169583

LAVANYA, B., RAJKUMAR, A.D. (2024), Bibliometric insights on mapping the landscape of cybersecurity: Uncovering the research potential in banking industry. Multidisciplinary Reviews, 7(6), 2024113. https://doi.org/10.31893/multirev.2024113

MAHBOUB, R., & GHANEM, M. G. (2024). The mediating role of knowledge management practices and balanced scorecard in the association between artificial intelligence and organization performance: evidence from MENA region commercial banks. Cogent Business & Management, 11(1), 2404484. https://doi.org/10.1080/23311975.2024.2404484

RAZZOUKI M. & BENAZZI K (2019). La relation entre système du contrôle de gestion et mesure de la performance. Revue du contrôle, de la comptabilité et de l'audit « Numéro 10 : Septembre 2019 / Volume 4 : numéro 2 » p : 527 – 537. Retrieved from https://www.revuecca.com/index.php/home/article/view/405

RUSSELL, S., NORVIG, P., POPINEAU, F., MICLET, L., & CADET, C. (2021). Intelligence artificielle : une approche moderne (4e édition). Pearson France, 2021, 978-2-3260-0221-0. ⟨hal-04245057⟩

WANG, H., HUANG, Y., KHAJEPOUR, A., & SONG, Q. (2016). Model predictive control-based energy management strategy for a series hybrid electric tracked vehicle. Applied Energy, 182, 105-114. https://doi.org/10.1016/j.apenergy.2016.08.085

ZHANG, Z., IGATHINATHANE, C., LI, J., CEN, H., LU, Y., & FLORES, P. (2020). Technology progress in mechanical harvest of fresh market apples. Computers and Electronics in Agriculture, 175, 105606. https://doi.org/10.1016/j.compag.2020.105606

https://www.ibm.com/think/topics/artificial-intelligence accessed on: 06/23/2025