Accounting Management for Decision Making

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Abstract

A documentary review was carried out on the production and publication of research papers related to the study of Accounting Management for Decision Making. The purpose of the bibliometric analysis proposed in this document is to know the main characteristics of the volume of publications registered in Scopus database during the period 2015-2020, achieving the identification of 78 publications. The information provided by said platform was organized by means of tables and figures categorizing the information by Year of Publication, Country of Origin, Area of Knowledge and Type of Publication. Once these characteristics were described, a qualitative analysis was used to refer to the position of different authors on the proposed topic. Among the main findings of this research, it is found that the United States, with 25 publications, is the country with the highest production. The Area of Knowledge that made the greatest contribution to the construction of bibliographic material referring to the study of Accounting Management for decision making was Medicine with 25 published documents, and the Type of Publication that was most used during the above-mentioned period was the Journal Article, representing 77% of the total scientific production.

Keywords: Management accounting, decision making.

I. Introduction

Accounting management involves all processes of financial analysis for controlling the economic actions developed in a company by recording all expenses and income of a company. It is a very effective tool for decision making as it helps the company to know what other expenses it can assume or in which area more investment is needed always taking into account the accounting calculations. In order to achieve an accounting

management, it is necessary that the companies have well-trained collaborators in accounting to guarantee a good execution of the accounting record that can benefit the business management and the processes directed to financial issues. García and Pérez (2015) consider that Accounting has a very important role for the operation of the company, which allows to make plans for the future, thus proposing objectives and concrete goals in order to develop the company more and more, seeking to raise the levels of

competitiveness and obtaining higher profits always looking for corporate social responsibility which today is something fundamental for business development; so that accounting management is an important aspect for the growth of the company and the efficient execution of its processes.

Accounting Management is increasingly talked about and researched as it helps to identify new costs that should be included in the company's budget, thus ensuring a better execution of economic activities, SO the essence of management accounting is the aid to decision making, as long as this management is useful, truthful and timely. Even taking into account that accounting management is essential in a company's decision-making process, Esteban Salvador (2019) considers that accounting management is flawed in its preparation because it does not take into account particular aspects depending on the environment in which the company develops, so it is necessary to adopt accounting management depending on the specific needs of each company, whether for environmental or social aspects. Therefore, it is important to know in terms of bibliographic resources, the current state of research related to accounting management for decision making of companies globally, so a bibliometric analysis of the scientific production registered in Scopus

database during the period 2015-2020 is proposed to answer the question: How has been the production and publication of research papers related to the study of the variable accounting management for decision making during the period 2015-2020?

2. General Objective

To analyze from a bibliometric and bibliographic perspective, the production of high impact research papers on the variable *accounting management for decision making in companies* during the period 2015-2020.

3. Methodology

Quantitative analysis of the information provided by Scopus is performed under a bibliometric approach on the scientific production related to Management Accounting for Decision Making. Also, from a qualitative perspective, examples of some research papers published in the area of study mentioned above are analyzed from a bibliographic approach to describe the position of different authors on the proposed topic.

The search is performed through the tool provided by Scopus and the parameters referenced in Table 1 are established.

3.1 Methodological design

	PHASE	DESCRIPTION	CLASSIFICATION
PHASE 1	DATA COLLECTION	Data was collected using the Scopus web page search tool, through which a total of 78 publications were identified.	Published papers whose study variables are related to Management accounting for decision making. Research papers published during the period 2015-2020.

			Without distinction of country of origin. Without distinction of area of knowledge. Without distinction of type of publication.
PHASE 2	CONSTRUCTION OF ANALYSIS MATERIAL	The information identified in the previous phase is organized. The classification will be made by means of graphs, figures and tables based on data provided by Scopus.	Word Co-occurrence. Year of publication Country of origin of the publication. Area of knowledge. Type of publication
PHASE 3	DRAFTING OF CONCLUSIONS AND FINAL DOCUMENT	After the analysis carried out in the previous phase, the study proceeds to the drafting of the conclusions and the preparation of the final document.	

Table 1. Methodological design. **Source:** Own elaboration (2021)

4. Results

4.1 Co-occurrence of words

Figure 1 shows the co-occurrence of keywords within the publications identified in the Scopus database.

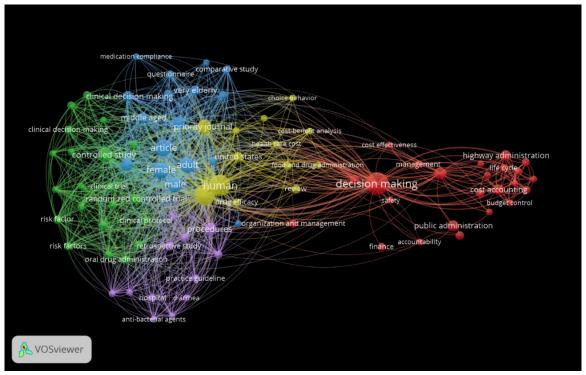


Figure 1. Co-occurrence of words **Source:** Own elaboration (2021); based on data provided by Scopus.

As shown in Figure 1, the most used key word is decision making, which is one of the variables taken into account in this study and refers to the process by which companies define their objectives and the strategies they will use to achieve them, helping to solve the problems that arise in a company by identifying the difficulty and choosing the best solution for each situation from among possible solutions. There are also keywords such as analytical cost accounting, finance, management, accounting and budgetary control, which are the aspects that are taken into account when using an accounting management from finance and administrative management which seeks to couple a business budget depending on the needs of the company depending on the particular needs and external aspects that may affect them, so that accounting management is a form of risk mitigation by trying to predict the possible effects on the business economy and help to develop strategies to help counteract them. In the human component are keywords such as procedures, controlled studies, qualified personnel, risk factors, that refer to the need for companies to have collaborators with previous knowledge in accounting and finance in order to guarantee good accounting management based on financial data.

4.2 Distribution of scientific production by year of publication.

Figure 2 shows how the scientific production is distributed according to the year of publication, taking into account the period from 2015 to 2020.

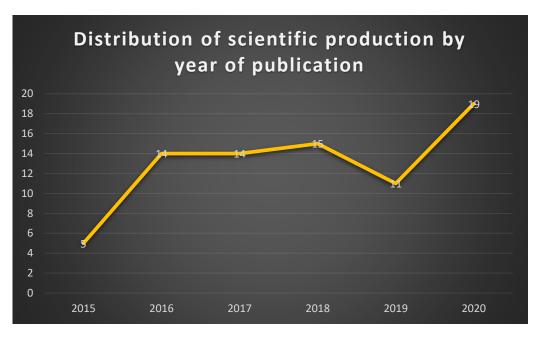


Figure 2. Distribution of scientific production by year of publication. **Source:** Own elaboration (2021); based on data provided by Scopus.

2020 is the year with the highest number of documents related to the variables under study, with a total of 19 documents, including "The role of the computerized accounting information system in supporting senior management decisions" (Baker El-Ebiary & Alawi, 2020) . The main objective of this paper is to identify the role of computerized accounting information systems in improving the efficiency of managerial decision making in oilfield service companies in Iraq. Through this study, it was obtained that computerized accounting information systems help to improve the efficiency of administrative selections in oil services companies in Iraq at an excessive stage and there is a position of automated accounting statistics structures to improve the performance of strategic, tactical and operational options in companies, even so there is an emphasis on improving work processes according to the computerized accounting systems to be had and used, and the need for the sanatorium management to the results of the take a look at.

In second place is 2018 with 15 publications related to accounting management and decision

making within which is the title "The consequences of the current public sector reporting framework for government accountability and decision making" (Mack, 2018) . This paper argues that Australia's New Public Management has undergone fundamental reform in both the way it structures its operations and the processes of managing its operations, and therefore considers the need for appropriateness of a general purpose financial reporting framework that has a useful purpose for decision making as a means of fulfilling accountability in the public sector, this through Government Finance Statistics (GFS), which provides statistics to help obtain (among other comparison things) an international government financial performance, even so it is considered to be a fragmented accountability picture.

In third place is 2017, with a total of 4 documents published in Scopus, among which is the one entitled "The subordination of accounting to management: a study in the light of the agency theory" (C.C.L.S., L.M., R.A.B., & Passos, 2017). This article states that with the change that

occurs in the management companies depending on the new strategies that are used some conflicts arise, among them are the agency problems when the information is incomplete, so sometimes the board of directors does not agree with what the manager of a company raises; so it is considered important the role of the Comptroller which seeks to balance the information and thus act as a tool to support managers in decision making, having the accounting management an important role as a tool to support the Administration and the reduction of subordination.

4.3 Distribution of scientific production by country of origin.

Figure 3 shows the distribution of scientific production according to the nationality of the authors.

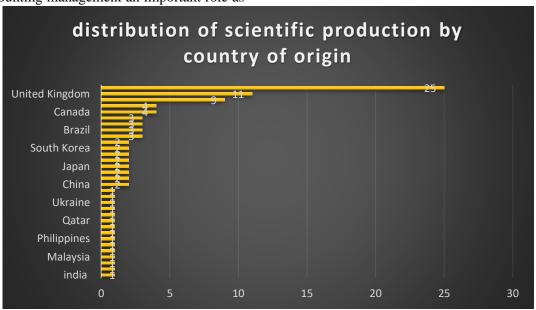


Figure 3. Distribution of scientific production by country of origin. **Source:** Own elaboration (2021); based on data provided by Scopus.

United States is the country with the highest number of bibliographic records published in high impact journals indexed in Scopus database during the period 2015-2020, achieving a total of 25 papers, within which the title "500 Management; business finance; marketing; accounting" (Bell, 2018) raises the need that in accounting performance measurement through earnings reporting, whether it is based on present value or historical cost accounting, should not be determined as its primary objective and establish instead a "reporting approach" that would better emphasize the needs of investors in relation to the future dividends of the company in order to help decision making, but the need arises to create a real change in accounting that links the legitimate interests of Beaver and others in forecasting with the market assessments of those forecasts in the style of present value accounting.

In second place is United Kingdom with a total of 11 papers registered in Scopus, among which is "Achieving radical change: a comparative study of public sector accounting in Westminster and Scotland" (Hyndman & Liguori, 2018) . This article aims to identify changes in financial accounting, budgeting and performance management at two levels of government (Westminster and Scotland) and how this influences government management, identified through the study of patterns with perceived outcomes of change. This study finds that changes introduced to improve "rational"

decision making are often received as being driven by some source of authority rather than by sources of economic analysis in government.

At this point it should be noted that the production of scientific publications, when classified by country of origin, presents a special characteristic and that is the collaboration between authors with different affiliations to both public and private institutions, and these institutions can be from the same country or from different nationalities, so that the production of an article co-authored by different authors from different countries of origin allows each of the countries to add up as a unit in the overall publications. This is best explained in Figure 4, which shows the flow of collaborative work from different countries.

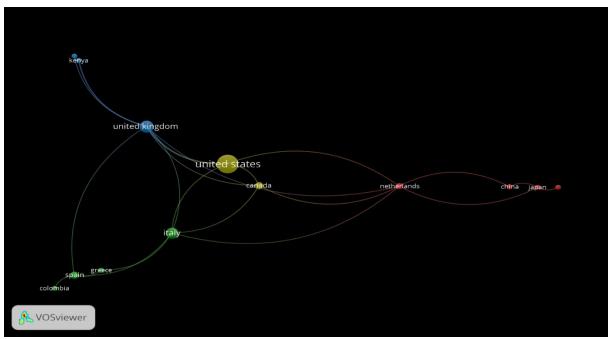


Figure 4. Co-citations between countries.

Source: Own elaboration (2021); based on data provided by Scopus.

As mentioned above, the United States and the United Kingdom are the two countries that present the greatest contribution of research related to accounting management and decision making, having collaborations with authors from countries such as Canada and the Netherlands, demonstrating the global need to investigate the accounting management in influence of companies for a correct decision-making process. In third place is Italy which has co-authored publications with Greece, Spain and Colombia mainly presenting 9 papers among which we can identify "Local government management systems and local government accounting information needs: is there a mismatch?" (Cohen, Manes, Caperchione, & Brusca, 2019). This article is an exploratory study on the relationship between local government administrative systems and local government accounting information needs, where a frequent mismatch is evidenced between the accounting and performance measurement information needed for internal and external purposes evaluated on the basis of the current administrative system and the accounting information for decision making, evidencing a shortcoming in European legislation regarding the management of accounting information and how this affects government management and budgeting.

4.4 Distribution of scientific production by area of knowledge

Figure 5 shows how the production of scientific publications is distributed according to the area of

knowledge through which the different research methodologies are executed.

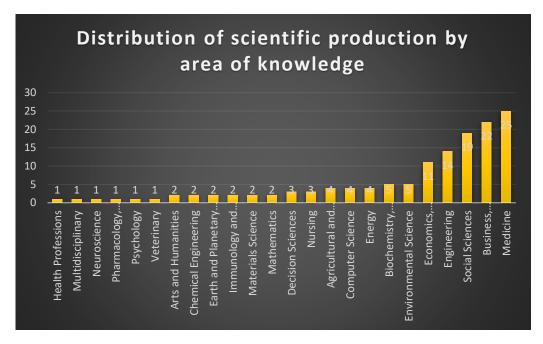


Figure 5. Distribution of scientific production by area of knowledge. **Source:** Own elaboration (2021); based on data provided by Scopus.

Medicine is the area of knowledge with the largest number of contributions through the theories that are framed in it, in the search for new knowledge on accounting management in decision making having a total of 25 publications, within which is the paper called "Cost analysis of blood purification: a tool for decision making and optimization of the supply chain" (S., et al., 2019) . This research aims to study the reorganization of the processes of health care providers based on the cost of the product life cycle using management accounting to determine the costs of administering extracorporeal dialysis treatments and other treatments in extracorporeal systems in order to improve the decision-making process in medical activities. It is concluded that the study conducted can be used for accounting purposes and for economic planning, as a tool for an accurate statistical evaluation of medical care.

In second place is business with a total of 22 publications registered in Scopus which were

written following the guidelines of the topics related to this area. Among these documents is "Triggerfish animation studios: the challenges of financing digital entertainment" (Lowman, Samuelsson, & Bick, 2020). This study analyzes a case study set in how films are financed in South Africa. It finds that there is a need to apply good accounting management to determine what returns film investors can expect through the "payback waterfall", the means by which film producers and investors recoup their investments and make a profit.

In third place is social sciences presenting 19 publications related to the variables under study, among which is the study named "The beneficial role of governmental accounting literacy in the development of participatory citizens" (Karatzimas, 2020). This paper has as its main objective to evidence the need for a broader public sector accounting education plan that facilitates the development of participatory

citizens in order to have an effective accounting management in governments, thus linking government accounting literacy of citizens with several decisions related to the community and, in particular, decision making. So, it is concluded that accounting management can be improved through the provision of public sector accounting education in a continuous lifelong learning process.

4.5 Type of publication

Figure 6 shows how the bibliographic production is distributed according to the type of publication chosen by the authors.

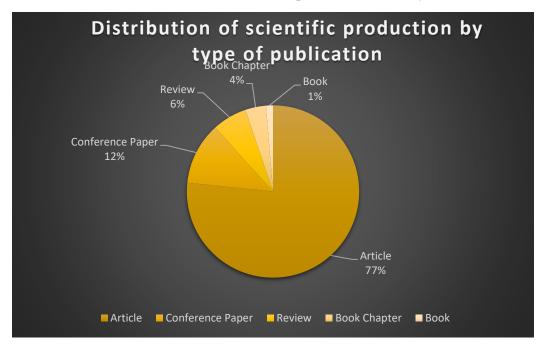


Figure 6. Type of publication **Source:** Own elaboration (2021); based on data provided by Scopus.

As shown in Figure 6, within the different types of publications, 77% of the total number of documents identified through Phase 1 of the Methodological Design, correspond to Journal Articles, among which is the one entitled "cost measurement through the use of accounting to rationalize managerial decisions" Hamzah, & Allawi, 2020). The main objective of this article is to analyze the performance of selected companies through the use of performance accounting. In which it is evidenced how following modern production methods leads to commit economic units to the need to improve cost calculation methods to comply with the new production environment, since traditional cost systems have not provided the necessary information and adequate standards, as well as

the degree of veracity that must be provided. It is concluded that the use of performance accounting in cost measurement leads to improved operating performance and helps management make decisions that maximize the value of the business entity.

In second place are conference proceedings, which represent 12% of the total number of documents identified in this study, within these is the title "Financial crisis and public reforms: Moving from public administration to public management. Cost allocation and performance information for the decision-making process in the public sector. The case of the Greek public sector under the Greek crisis" (Kyriakidou & Vazakidis, 2020). This paper has as main objective to show the need and importance of

promoting a more effective financial management, a higher degree of transparency and accountability of public spending, taking into account that the globalized international environment and the financial crisis have generated new demands with internal (citizensusers) and external (creditors) pressuring governments to control public spending and improve efficiency in the provision of public goods/services.

5. Conclusions

Thanks to the bibliometric analysis proposed in this research, it can be determined that the United Kingdom is the country with the largest number of bibliographic records in the Scopus database during the period between 2015 and 2020 with a total of 25 documents. The scientific production related to the study of Accounting Management for Decision Making has presented an important growth during the period previously indicated, going from 5 publications in 2015 to 19 units in 2020, that is to say there is a good number of publications throughout the years presenting a linear growth in the last 6 years which demonstrates the need for research on the need to implement an effective accounting management in order to improve the decision making processes in organizations.

Accounting management turns out to be indispensable in decision making since through it, the current status of expenses and costs of an organization can be known to help implement strategies and policies that contribute to business growth. This management is done in order to control the financial actions that are performed in an organization, which will help to present business budgets and to set the objectives and processes by which these can be met. In the accounting management, effective and necessary data are needed, through qualified manpower or accounting information software that allows validating its veracity.

Even so, in the execution of accounting management there may be failures when not all the factors that influence the execution of the

company's processes are taken into account, so that in the analysis of costs and expenses it is necessary to include social, demographic and environmental factors in order to control possible risks and offer several alternatives for their solution. All the above allows this article to conclude highlighting the importance of knowing the theory or bibliographic resources that seek to awaken the interest in organizations, to manage policies that ensure effective accounting management and ensuring good decision-making regarding business goals and budget setting in order to help the economic growth of organizations. That is why it is necessary to highlight the need for studies such as the one presented in this document, which make a tour of those texts that deal with the mentioned topic, in order to give the reader a broad view of the current situation of the literature on decision making through accounting management.

References

- [1] Baker El-Ebiary, Y., & Alawi, N. (2020). The role of computer based accounting information system in supporting top-management decisions. International Journal of Engineering Trends and Technology, 114 119.
- [2] Bell, P. (2018). 500 Administration; business finance; marketing; accounting. In B. P.W, Toward Greater Logic and Utility in Accounting: The Collected Writings of Philip W. Bell (pp. 351 -355).
- [3] C.C.L.S., d. C., L.M., F., R.A.B., F., & Passos, I. (2017). The subordination of accounting to management: A study in the light of agency theory. Spaces.
- [4] Cohen, S., Manes, R. F., Caperchione, E., & Brusca, I. (2019). Local government administration systems and local government accounting information needs: is there a mismatch? International Review of Administrative Sciences, 708 725.

- [5] Esteban Salvador, L. (2019).

 Management accounting as a tool for decision making.
- [6] Garcia Panti, G. D., & & Perez Ruiz, A. Y. (2015). Influence of accounting management for organizational decision making in the ASIMVES association of the VES industrial park.
- [7] Hyndman, N., & Liguori, M. (2018). Achieving radical change: a comparative study of public sector accounting in Westminster and Scotland. Accounting, Auditing and Accountability Journal, 428 455.
- [8] Karatzimas, S. (2020). The beneficial role of government accounting literacy in developing participatory citizens. Accounting Education, 229-246.
- [9] Kyriakidou, E., & Vazakidis, A. (2020). Financial crisis and public reforms: Moving from public administration to public management. Cost allocation and performance information for decisionmaking process in the public sector. The case of the Greek public sector under the Greek crisis. **CEUR** Workshop Proceedings, (pp. 252 262). Thessaloniki.
- [10] Lowman, C., Samuelsson, M., & Bick, G. (2020). Triggerfish animation studios: the challenges of financing digital entertainment. Emerald Emerging Markets Case Studies, 1 31.
- [11] Mack, J. (2018). The consequences of the current public sector reporting government framework for accountability and decision making. In J. Mack. Public Sector Accounting, Accountability and Governance: Globalising the Experiences of Australia and New Zealand (pp. 43 - 54).
- [12] Mijbil, S., Hamzah, A., & Allawi, K. (2020). Measuring cost by using throughput accounting to rationalize administrative decisions. International

- Journal of Economics and Business Administration, 569 578.
- [13] S., G., C., R., L.P., F., M., G., Bellucci, Colivicchi, I., & Mancino, M. (2019). Cost analysis of blood purification: A tool for decision-making and supply chain optimization. Renal Replacement Therapy.
- [14] AbdelWahab, A., & Sapp, J. (2017). Ventricular tachycardia with ICD shocks: When to medicate and when to ablate. Current Cardiology Reports, 19(11) doi:10.1007/s11886-017-0924-0.
- [15] Arbolino, R., Boffardi, R., De Simone, L., & Ioppolo, G. (2020). The evaluation of sustainable tourism policymaking: A comparison between multicriteria and multi-objective optimisation techniques. Journal of Sustainable Tourism, 29(6), 1000-1019. doi:10.1080/09669582.2020.1843044.
- [16] Avinante, M. D. P., Tayao, J. -. C., Mangalile, M. J., Ramos, P., & Japco, K. M. (2019). Examining the critical thinking and decision making skills as graduate attributes. Paper presented at the GLOCAL Conference Proceedings, , 2019-January 298-307. Retrieved from www.scopus.com
- [17] Bajagai, R. K., Keshari, R. K., Bhetwal, P., Sah, R. S., & Jha, R. N. (2018). Impact of ownership structure and corporate governance on capital structure of nepalese listed companies. Business governance and society: Analyzing shifts, conflicts, and challenges (pp. 399-419) doi:10.1007/978-3-3-319-94613-9_22 Retrieved from www.scopus.com
- [18] Baker El-Ebiary, Y. A., & Alawi, N. A. M. (2020). The role of computer based accounting information system in supporting top-management decisions. International Journal of Engineering Trends and Technology, (1), 114-119. doi:10.14445/22315381/CATI3P219.
- [19] Ballard, G., Ferdous, R., Payoe, A., & Kulhawy, A. (2020). Application of risk

and reliability in designing facility site containment. Paper presented at the Proceedings of the Biennial International Pipeline Conference, IPC, , 2 doi:10.1115/IPC2020-9261 Retrieved from www.scopus.com

- [20] Barasa, E. W., Molyneux, S., English, M., & Cleary, S. (2017). Hospitals as complex adaptive systems: A case study of factors influencing priority setting practices at the hospital level in kenya. Social Science and Medicine, 174, 104-112. doi:10.1016/j.socscimed.2016.12.026.
- [21] Lee, B. Y., Mueller, L. E., & Tilchin, C. G. (2017). A systems approach to vaccine decision making. Vaccine, 35, A36-A42. doi:10.1016/j.vaccine.2016.11.033.
- [22] Levine, S. R., Weingast, S. Z., Weedon, J., Stefanov, D. G., Katz, P., Hurley, D., Balucani, C. (2018). To treat or not to treat? exploring factors influencing intravenous thrombolysis treatment decisions for minor stroke. Stroke, 49(8), 1933-1938.

 doi:10.1161/STROKEAHA.118.020971.
- [23] Li, Y., Qian, X., Zhang, L., & Dong, L. (2017). Exploring spatially explicit greenhouse gas inventories: Location-based accounting approach and implications in japan. Journal of Cleaner Production, 167, 702-712. doi:10.1016/j.jclepro.2017.08.219.
- [24] Lin, R., Thall, P. F., & Yuan, Y. (2020). An adaptive trial design to optimize dose-schedule regimens with delayed outcomes. Biometrics, 76(1), 304-315. doi:10.1111/biom.13116.
- [25] Lip, G. Y. H., Waldo, A. L., Ip, J., Martin, D. T., Bersohn, M. M., Choucair, W. K., Halperin, J. L. (2016). Determinants of time in therapeutic range in patients receiving oral anticoagulants (A substudy of IMPACT). American Journal of Cardiology, 118(11), 1680-

- 1684. doi:10.1016/j.amjcard.2016.08.047.
- [26] Lowman, C., Samuelsson, M., & Bick, G. (2020). Triggerfish animation studios: The challenges of financing digital entertainment. Emerald Emerging Markets Case Studies, 10(3), 1-31. doi:10.1108/EEMCS-03-2020-0061.
- [27] MacDaniels, J. S., & Schwartz, T. L. (2016). Effectiveness, tolerability and practical application of the newer generation anti-obesity medications. Drugs in Context, 5 doi:10.7573/dic.212291.
- [28] Mack, J. (2018). The consequences of the public sector current reporting framework for government accountability and decision making. Public sector accounting, accountability and governance: Globalising experiences of australia and new zealand 43-54) doi:10.4324/978131515121727-4 Retrieved from www.scopus.com
- [29] Onegina, V., Husiatynskyi, M., Nemchenko, V., Mayorova, T., Bohrinovtseva, L., & Sedikov, D. (2019). Informational support of cash flow management processes in public administration. International Journal of Innovative Technology and Exploring Engineering, 8(11), 2836-2841. doi:10.35940/ijitee.K2401.0981119.
- [30] Padmanabhan, R., Meskin, N., & Haddad, W. M. (2015). Closed-loop control of anesthesia and mean arterial pressure using reinforcement learning. Biomedical Signal Processing and Control, 22, 54-64. doi:10.1016/j.bspc.2015.05.013.
- [31] Qiao, Y., Moomen, M., Zhang, Z., Saeed, T. U., Agbelie, B., & Labi, S. (2016). Accounting for observation-specific correlation in deterioration modeling of bridge components using binary probit models with random effects. Paper presented at the Maintenance,

- Monitoring, Safety, Risk and Resilience of Bridges and Bridge Networks Proceedings of the 8th International Conference on Bridge Maintenance, Safety and Management, IABMAS 2016, 1351-1359. Retrieved from www.scopus.com
- [32] Reitmaier, C., & Schultze, W. (2017). Enhanced business reporting: Value relevance and determinants of valuation-related disclosures. Journal of Intellectual Capital, 18(4), 832-867. doi:10.1108/JIC-12-2016-0136.
- [33] Retolaza, J. -., San-Jose, L., & Ruiz-Roqueñi, M. (2019). Monetarizing the social value: Theory and evidence. CIRIEC-Espana Revista De Economia Publica, Social y Cooperativa, (83), 43-62. doi:10.7203/CIRIEC-E.83.13418.