

BIBLIOMETRIC ANALYSIS OF THE APPROACH TO THE ROLE OF COSTS IN MANAGERIAL DECISION MAKING

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Abstract: *The purpose of this literature review is to provide an understanding of the research topic in order to develop the ability to provide assessments, judgements and interpretations. We aim to outline new elements by which we can contribute to and improve the state of scientific knowledge in our research area, i.e. accounting. Taking a classical approach to our scientific approach, the first thing to be taken into account is the grounding of the topic addressed through the delimitation of the current state of knowledge. We aim to achieve this objective primarily through a projection of the literature from the perspective of the literature.*

Keywords: *costs, managerial decision, managerial accounting, cost calculation.*

JEL Classification: M40, M41, M49.

1. Introduction

Public Managers should aim to break down costs by responsibility centre as realistically as possible. When managers are faced with having to make certain decisions involving cost analysis, the certainty of the correctness of direct costs is much greater than that of indirect costs. Regardless of what entities do, indirect costs are a major headache because it is not possible to accurately quantify the resources consumed on each separate cost item.

The cost of production is the monetary expression of expenditure; it reflects the costs incurred by the producer in producing and marketing the goods produced and represents a proportion of the total effort incurred by the enterprise in the pursuit of economic activity.

Cost efficiency implies an efficient use of available resources under existing production conditions and within the constraints imposed by the crisis situation.

In order to make relevant strategic decisions, managers need to know closely the evolution of costs which can be closely observed with the help of cost functions. We can perceive the cost function as a mathematical expression of cost changes.

In today's economy, the only way to increase economic efficiency is to use cost budgets efficiently. In order to withstand competition, entities must find numerous

levers to reduce expenditure and make good use of the resources they consume.

A significant role in the research process is the literature review, with the help of which we establish the basis for research in the area of interest. The literature review should be seen as having a dual role, that of exposing the state of the art of knowledge and another role could be seen as identifying new research opportunities through which to add information to knowledge.

2. Research methodology

In order to highlight the basic objective of the research we want to conduct a broad literature survey in the field of accounting, especially managerial accounting. We define this objective as: to delineate the current state of knowledge on the influence of costs in informing managerial decisions.

We believe that our research addresses a topic of particular interest and importance today - namely the influence of costs in informing managerial decision-making. Our motivation is based on one main objective, which is our main research question: what decisions can management make that are influenced by costing? The main goal can be separated into secondary goals, which create our main proposed research areas, shown in the figure below. The secondary objectives will be achieved using quantitative and qualitative studies to make a separation of the current state of research in managerial accounting.



Figure 1: Secondary objectives of delimiting the current state of knowledge

Source: own projection.

Motivation for sample selection and period analysed We focused mainly on recent studies, with an emphasis on studies published between 2015-2021. We believe that these studies should address current issues in management accounting. However, there are high quality studies published before 2015 that still provide a detailed

perspective on this topic, but we decided not to include them in the qualitative literature review, focusing only on the 2015-2021 interval.

We have chosen to analyse articles published in the period 2015-2021 for the following reasons: The period 2015-2021 can be considered as a period of roughly similar economic development, without financial or economic crisis. Another defining element is the increased interest in recent years of managers towards the implementation of modern costing models, and then use this information obtained with these calculation methods in the decision-making process.

Methodology - in order to achieve the proposed objectives we have gone through the following step: we have selected articles that focus on this field of research, published in journals from prominent publishing house: Scopus, ISI indexed database.

3. Literature Review

The role of managerial accounting in manufacturing companies is to oversee the achievement of the proposed objectives. This monitoring is done by means of indices and indicators which must be anchored in the reporting system of production business equities. As will be outlined below managerial accounting is of particular importance in production companies.

Taking into account the definitions given by the authors Caraiani and Dumitrana (2004, p.11) with which we agree, managerial accounting "is a broader concept involving professional knowledge and skill in the preparation and especially in the presentation of information required by management at different hierarchical levels. The source of such information is financial accounting and management cost accounting".

The definitions in the literature under consideration reinforce our perception of managerial accounting, resulting in its wider application.

In an operational sense managerial accounting deals with annual budget planning, cost management and productivity control. There are several definitions of managerial accounting in the literature. In the following we present the point of view of the author Briciu Sorin about management accounting, a point of view that reveals the features of this branch of accounting, an opinion that we share, namely "managerial accounting can be defined as a set of procedures for identifying, quantifying, collecting, analysing and reporting accounting information on operations, activities, processes, works and services performed by economic entities in order to support tactical and strategic decisions on achieving the objectives set by the business entity" (Briciu, 2006, p. 25).

As the authors R. Laptés, L. Possler have said, with which we agree, accounting has undergone a substantial evolution that has adapted to economic reality. These authors argue that "the adaptation of accounting to the information requirements of the planned economy was mainly a matter of Soviet experience. In this regard, in the early 1950s, accounting works by Russian authors were translated and turned into accounting manuals, which formed the theoretical basis for the development of a

new accounting system. The beginning of the 1970s was a time of change, both in accounting legislation, with the advent of regulations on the organisation and conduct of accounting, and the introduction of a system of accounts" (Laptes et. al., 2007, p.1870).

Lenghe's scholarly work, shows the impact of harmonization of accounting adapted to the economic specifics of each country, saying rightly that "international accounting harmonization is the process by which national rules or standards, different from one country to another, sometimes divergent, are refined to become compatible" (Lenghel, 2011, p.186).

In our opinion the author has rightly said that "Managerial accounting is an integral part of management dealing with the identification, presentation and interpretation of information" (Briciu, 2006, p.427). I think the above excerpt gives us the simplest definition of managerial accounting by clearly stating its components.

"The main purpose of management accounting is to reflect all operations for the collection and allocation of expenditure by destination, i.e. by products, works, services, orders, stages of manufacture, activities, departments, etc., the settlement of the production obtained, and the calculation of the production cost of the products manufactured, works carried out and services rendered, including production in progress" (Calin, 2002, p.15). This helps managerial accounting which, in order to prepare the information needed by the management team, is also required to use information provided by financial accounting and management control. We believe that this view correctly reflects the reality of the problem presented by the author.

4. Research results

In the table below we present the list of journals and magazines in which more than one article has been published, as well as the number of articles that have been considered in the framework of the study on the state of the art in management accounting.

We selected articles published between 2015-2021 in the 113 journals and magazines considered in our chosen sample. The search for articles was conducted by the keywords "managerial decision" and "cost" and was limited to the appearance of these words in the title, keywords or abstract of the articles. Initially, 368 articles resulted from this selection criterion. The limitation to these keywords that are directly related to the topic of our research was made because we wanted to make a selection of articles relevant to the researched field and moreover to avoid a high number of articles, with all these limitations we reached a number of 185 articles that we analyzed in order to determine their impact and relevance to the researched topic. The next step to reach the proposed objective is the selection of articles in order to eliminate those articles that are not directly related to the research topic. After detailed analysis of the articles we selected, our sample was reduced to 123 articles.

Table 1 : List of journals included in the study

Nr.crt.	List of journals included in the study	Nr. of articles
1	Journal of Cleaner Production	9
2	International Journal of Production Research	5
3	Problems and Perspectives in Management	4
4	Custos e Agronegocio	3
5	International Journal of Mathematical, Engineering and Management Sciences	3
6	International Journal of Production Economics	3
7	Academy of Accounting and Financial Studies Journal	2
8	Actual Problems of Economics	2
9	Decision Sciences	2
10	Economic Annals-XXI	2
11	Emerald Emerging Markets Case Studies	2
12	Entrepreneurship and Sustainability Issues	2
13	Espacios	2
14	European Journal of Operational Research	2
15	International Journal of Accounting	2
16	International Journal of Business and Systems Research	2
17	International Journal of Research in Marketing	2
18	International Journal of Systems Science: Operations and Logistics	2
19	Journal of Advanced Research in Law and Economics	2
20	Journal of Business Research	2
21	Journal of Enterprise Information Management	2
22	Journal of Social Sciences Research	2
23	Management Decision	2
24	Strategic Management Journal	2

After establishing the sample, we have resorted to a detailed analysis of these articles in order to identify the main research directions. Therefore we grouped the articles into 5 research themes:

- The influence of costs in informing management decisions;
- Problematizing the use of modern costing methods;
- The relationship between costs and managerial decisions;
- Establishing relevant expenses in cost determination;
- Other aspects of cost management.

Also at this stage we identified the type of research, which can be of three types:

- Qualitative research - theoretical research;
- Quantitative research - empirical research;
- Mixed research - theoretical research combined with empirical research;
- Following the identification of the defining elements of the articles included in the sample we resorted to a qualitative analysis of the articles in the sample, within this

analysis we categorized the articles into the 5 themes determined by us according to the content of the articles;

- The last stage of the literature review was devoted to the contour of the results obtained.

The added value of this study is to outline research directions in the field of managerial accounting. Furthermore we want to identify the current state of the literature.

The sources of information used to carry out our proposed case study we used the non-participatory observation method, analysing the journals and magazines included in the sample in order to select relevant articles for our study.

The results of the analysis is quantitative study - evolution and and type of research

The evolution of research in the field, as stated in the research methodology 113 journals indexed in the Scopus database were included in the study. If we refer to the indexing of the journals that included the 152 articles, it can be noticed that all of them were published in journals and magazines indexed in the Scopus database. Our sample as can be seen in the graph below following the analysis performed on the articles and the elimination of a significant number of the total articles, is based on 24 journals and magazines out of the 113 indexed in the Scopus database.



Figure 2: Classification of articles by provenience
 Source: own projection based on collected date.

It is worth noting that researchers' interest in publishing in the field of management accounting is directed towards journals such as International Journal of Production Research, Journal of Cleaner Production, Problems and Perspectives in Management and Custos e Agronegocio.

Thus we can say that the topic of costs and their influence on the basis of managerial decisions has been and is a topic of interest given the approach to the concept by practitioners, specialists and researchers in the field.

Also, we can see in the graph below analyzing the correlation with the date of publication of these articles included in our sample, we notice the intensification of interest of researchers as well as practitioners in addressing costs and their influence in the foundation of managerial decisions in the period 2015-2021.

Table 2: Distribution of articles by year

Year	Nr. of articles
2015	18
2016	14
2017	21
2018	28
2019	20
2020	26
2021	25

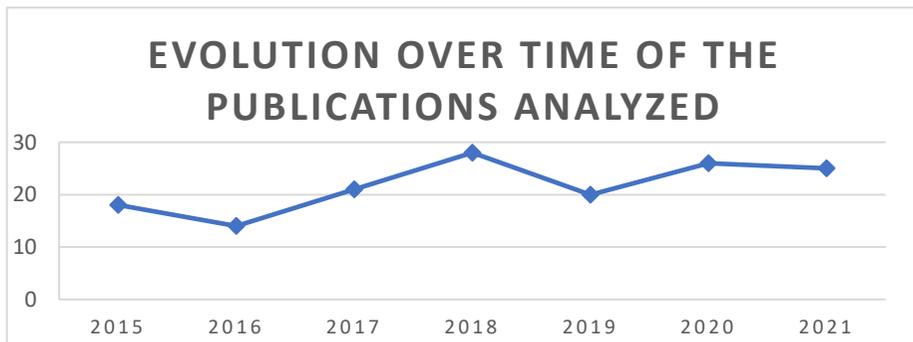


Figure 3: Evolution over time of the publications analysed

Source: own projection based on collected date.

From one year to another, the interest of researchers to devote themselves to the topic of the role of costs in managerial accounting is still on an upward trend, if in 2015 or published 18 articles in 2021 we are talking about a number of 25 articles. It also notes a slight decrease in the interest to publish in the field in 2019.

The main theme addressed in the articles is one of the most important features. Therefore, at the level of the quantitative study of the articles in our sample, we have limited ourselves to the delimitation of these themes and the quantification of the number of articles identified in each theme. In a research on the current state of knowledge in the field of managerial accounting we consider it important to highlight the research trends on each theme. Following the identification of these research

themes we are able to develop our quantitative study into a qualitative study in which we aim to present the current state of knowledge in the main research areas identified. In order to classify the articles in our sample, we have identified 5 main themes addressed by specialists in the field, articles that have been divided into one of the 5 themes:

- The influence of costs in informing managerial decisions - in this category we have included those articles that deal with the role of costs in informing managerial decisions;
- Problematising the use of modern costing methods - in this category we have included those articles that deal with the use of modern methods in business entities and the benefits of their use for the entity;
- The relationship between costs and managerial decisions - in this category we have included those articles that deal with the binomial costs, managerial decisions from the management perspective of economic entities;
- Determination of relevant expenses in determining costs - in this category we have included those articles that deal with the classification of expenses according to different factors, and the detailed analysis of those that enter into the costs that form the basis of managerial decisions;
- Other aspects of cost management - in this category we have included those articles that deal with managerial accounting from different perspectives.

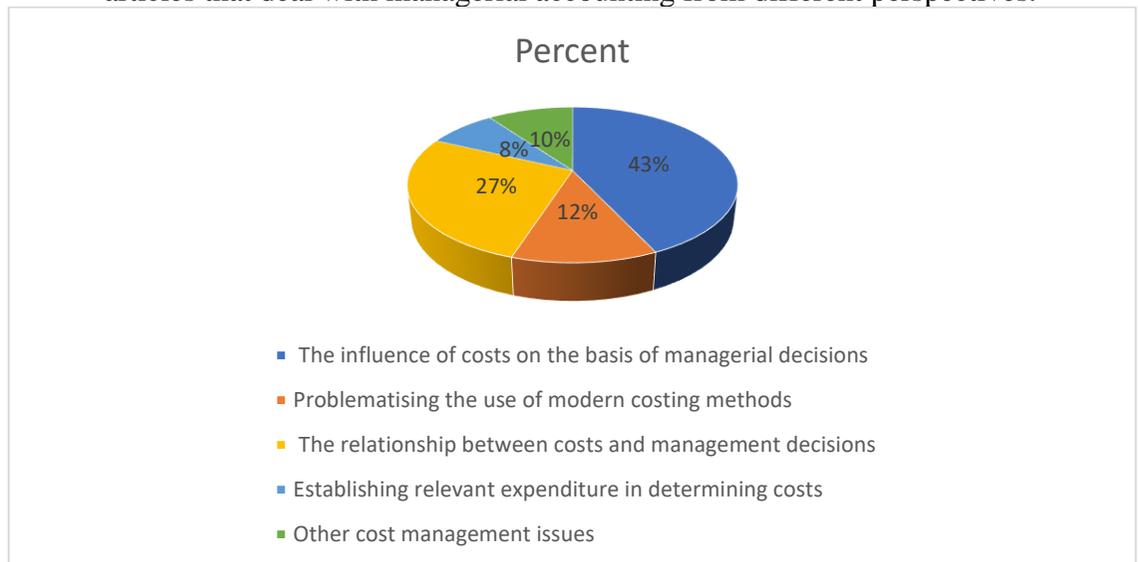


Figure 4: Theme covered by sampled articles
Source: own projection based on collected date.

A detailed analysis of the articles included in the sample on the topic addressed showed a high interest on the part of the authors in addressing the influence of costs on the basis of managerial decisions, with a weight of 43%, followed by articles dealing with the relationship between costs and managerial decisions, with a weight of 27%. Also of interest, in descending order, are articles dealing with the use of modern costing methods, with a weight of 12%, followed by other aspects of cost

management with a weight of 10%. In last place are articles dealing with issues related to the determination of relevant expenses in costing, with a share of only 8%. The type of research used as we have shown in the methodology in point four, we have mentioned that in the quantitative study we will also analyse the type of research addressed by the authors in the articles. In terms of the type of research in the field of accounting the research falls into two broad categories:

- Qualitative research, i.e. a descriptive theoretical approach to certain aspects of research, with the aim of presenting existing research in the field;
- Quantitative research, i.e. empirical approach direct observation of reality, carried out using specific methods and techniques for collecting and processing information;
- Mixed research, i.e. a descriptive theoretical approach as well as an empirical approach.

Thus, after analysing the articles included in the sample, we found that both qualitative and quantitative approaches exist in the field of managerial accounting. However, it is worth noting that qualitative approaches predominate in this field, which can be seen in the figure below.



Figure 5: Types of research used in articles
Source: own projection based on collected date.

Thus following the analysis of the articles included in the sample we found the countries in which the topics of managerial accounting, specifically costs and managerial decision were of interest in the period 2015-2021. It is worth noting is that the United States is the country where the most articles were published in the analyzed sample, namely 39 articles.

In the chart below we present the list of countries where more than one article was published, as well as the number of articles that were considered in the framework of the study on the state of the art in management accounting.

NUMBER OF PUBLICATIONS CORRELATED WITH THE COUNTRIES WHERE THE PUBLICATION WAS PRODUCED

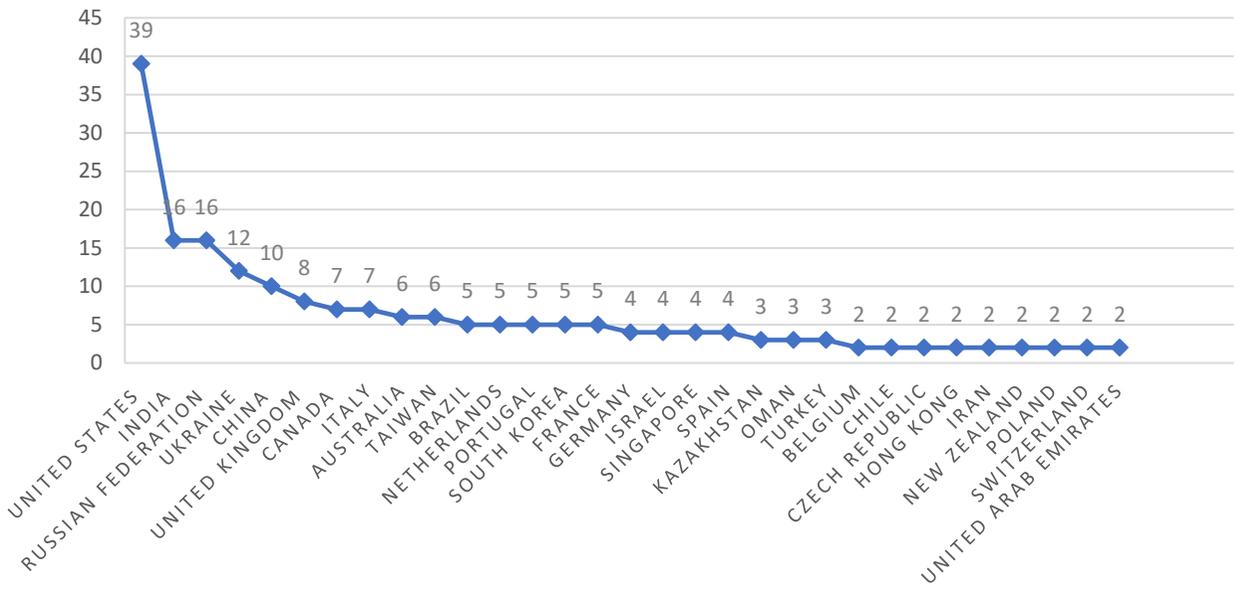


Figure 5: Number of publications correlated with the countries where they took place in the field of management accounting
 Source: own projection based on collected date.

Also, if we analyse the language in which these articles included in our sample were published, we notice 146 articles published in English, 3 articles published in Portuguese and only one article published in Spanish, Russian and Ukrainian. Because the vast majority of articles are published in English, they are available to researchers and practitioners worldwide.

5. Conclusions

In conclusion, following the bibliometric analysis of the research carried out in the period, 2015-2021, the evolution of management accounting on costing and how it can, in a decisive way, through the information provided by management accounting, influence managerial decisions has been progressively highlighted and exposed. The quality of the published articles is of great help to both research specialists and practitioners.

6. Limitations of the research

The present research analyses articles published between 2015-2021, indexed in the ISI-Scopus database. As a limitation of the research we can highlight the period before 2015, and articles published in other prestigious databases.

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