

**THEORETICAL APPROACH TO THE CONCEPTS OF ECONOMIC, ACCOUNTING AND MANAGERIAL PROFILE OF PRODUCTION SMEs****Corina PETRESCU***Stefan cel Mare University of Suceava, 720229, Romania  
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*The image or overall performance of a company is determined by many internal and external factors that have a greater or lesser influence on it, depending on the specifics and characteristics of each company. It is therefore a priority for management and investors to be aware of the main factors impacting on a company's financial and overall performance so that decisions and development strategies are the most optimal in a given context. In this sense, this paper aims to analyse the components and determinants of the economic profile and performance of the managerial and accounting profile of companies, and their contribution to the creation and construction of their overall performance profile. The usefulness of the research results is that they can be of interest to different categories of stakeholders, depending on their role in the decision-making process and in the establishment of company development strategies.*

**Keywords:** *accounting profile; bibliometric analysis; economic profile; managerial profile; global performance profile;*

**JEL Classification:** *D20, D21, M11, M40*

**I. INTRODUCTION**

Given the importance and complexity of determining the overall performance profile of a company, particularly for capital providers interested in locating investments in highly profitable businesses developed in a stable and challenging environment, the present paper *aims at* analysing the components and determinants of the performance of the managerial and accounting profile of companies - which of course is also reflected at the macro-economic level through various indicators illustrating the profitability of an industry/sector or the performance of an economy in general - and their contribution to the creation and construction of their overall performance profile.

In order to achieve this goal, the following *objectives* were set: **O<sub>1</sub>** - to theoretically address the concepts of economic, accounting and managerial profile of small and medium-sized enterprises (SMEs) in order to outline their significance in building their overall performance profile; **O<sub>2</sub>** - to address the concepts analyzed through a bibliometric analysis of specialized literature addressing these issues and highlighting the most prominent works, themes and research trends in the context of this paper;

The results obtained may prove useful for academic researchers who, after identifying factors with a significant impact on the overall performance profile of SMEs - by recognising future prospects and directions of development - can help the business environment with suggestions on areas that need optimisation and streamlining, so that it is prepared for new challenges related to management and accounting, as well as those generated by changes in the economic environment brought about by today's increasing digitalisation and globalisation trends.

**II. RESEARCH METHODOLOGY**

In order to achieve **O<sub>1</sub>**, the presentation of the literature perspectives on the concepts analysed in this paper will be carried out using the methods of observation, analysis and deduction, aiming to highlight the fundamental aspects related to them, as well as the results already obtained in existing research. In order to reach the **O<sub>2</sub>**, the aim will be to highlight the quality of the scientific production available on the WoS platform in the period 1995-2022, referring to the analysed topic, highlighting the most significant works in the context of the present research, by considering the total citations/work indicator.

This procedure will be carried out with the help of CiteSpace v. 6.1.R4, by processing the databases exported from the WoS platform with the *Full record and Cited references* option.

Therefore, in order to obtain a database that corresponds to the research theme of this paper, the search for articles on the WoS platform was carried out according to the following word constructions: "*economy*" and "*manufacturing SMEs*", "*industry*" and "*manufacturing SMEs*", "*performance*" and "*manufacturing SMEs*", "*managers*" and "*manufacturing SMEs*", "*profitability*" and "*manufacturing SMEs*" and "*accounting*" and "*manufacturing SMEs*". For the first word structure a total of 122 scientific papers resulted, for the second structure a total of 243 scientific papers, the third 566 scientific papers, the fourth 194, the fifth 36 and the sixth a total of 44 papers. The search was carried out according to these more generic terms, so that from the results obtained it was possible to identify the connection of the concepts analysed with other scientific fields or branches, thus highlighting their complementarity and interconnectivity. The exported database was imported into CiteSpace v. 6.1.R4 in order to obtain a bibliometric analysis based on *keywords*. The keyword selection criteria are related to the *g-index*, where the *k-factor* was set to 25 points to eliminate insignificant nodes that may occur in the context of a bibliometric keyword analysis, the *Top N* which was set to 50 points, according to which the first 50 levels of the most frequent items for each year are selected, and the *Top N%* which was set to 20%, meaning that 20% of the items identified according to the *Top N* were selected. Thus a total of 764 nodes and 3078 links between them resulted and 638 terms met the conditions and thresholds set by the settings and were qualified to be presented as a cluster network and a timeline graph.

### III. CONCEPTUAL APPROACH AND BIBLIOMETRIC ANALYSIS

The overall image or profile of a company's performance, regardless of its size, legal form of organisation, geographical location, the legislative system governing it or other macroeconomic conditions - which have their own specific level of impact - is also determined by many internal aspects relating to the management of the business and the development policies and strategies aimed in particular at increasing the company's financial and sustainable performance, which can only be achieved when human capital also contributes by creating added value that contributes to the sustainable development of the entity. This paper therefore aims to focus on the aspects of accounting and managerial performance within a company that determine, contribute to and largely shape their overall performance profile, which in turn is reflected in the competitiveness and efficiency of the industries to which they belong or the economy in general.

Despite the relatively small size of SMEs, they are considered by economists to be the engines of growth and the main source of dynamism, innovation and flexibility in developed and developing economies (Hee Song, Daisy Mui Hung & Sanjay Kumar, 2017). However, one of the main problems faced by SMEs is the lack of consistency in achieving an optimal level of financial performance or profitability, which can be caused by many issues such as: minimal or no level of practice of governance policies on planning objectives and strategies to achieve them, as well as careful and regular monitoring of their implementation process (Moeuf, et. al., 2018); limitations in the availability of funds for investment, R&D-innovation and automation activities (Somohano-Rodríguez & Madrid-Guijarro, 2022; Audretsch, Coad & Segarra, 2014), staff training and others that have the capacity to create long-term value; greater sensitivity than large corporations to macroeconomic conditions, as their business is not very large and therefore can be significantly affected by certain regional or national conditions.

Thus, a significantly important role in maintaining and increasing the profitability of SMEs lies with management (Madrid-Guijarro, Martin & García-Pérez-De-Lema, 2021), which through the decisions and policies adopted has the ability to gain a sustainable competitive advantage in the market and improve its processes and systems to help develop innovation capabilities by identifying and exploiting all opportunities that arise, thus boosting business performance (Hussain, Abbas & Asad Khan, 2018), as well as fostering the acquisition of information and knowledge (Beltramino, Garcia-Perez-de-Lema & Valdez-Juarez, 2020). The timeliness and effectiveness of these decisions are, however, also determined by the quality and reality of the information received from different departments within the company, depending on the area of interest, which is also confirmed by the results obtained by Okpala & Osanebi (2020) who revealed that SMEs with qualified and experienced accounting employees significantly influence the quality of financial-accounting information made available to management to inform decisions, thus boosting the company's efficiency and performance. This is also in line with Khalique, et. al., (2020) who, based on the literature reviewed, state that in the contemporary business environment, the manifestation of SMEs' ability to remain competitive in the market and to deliver and perform successfully is only possible with the active involvement of intellectual capital, and Xu & Liu, (2020) also highlight the importance of using intellectual capital in increasing the financial performance and value of companies.

In the same vein, Seo & Kim (2020) also argue that SME managers could strategically use investments in intangibles - such as those in human capital, advertising and R&D - to achieve their goals of profitability and increasing business value. Also Wahyono & Hutahayan, (2021) point out that SMEs' market orientation positively influences business performance, with innovation as a mediating variable generated by knowledge acquisitions or through R&D outputs. The same is supported by Abdulkarim, Ahamd & Tariq (2021) who, in their analysis of 107

SMEs in Malaysia, found that market orientation positively influences their financial and non-financial performance, which once again highlights the importance of the quality of decision-making at management level. Therefore, we can appreciate that the managerial profile of manufacturing SMEs is largely reflected in the level and quality of financial-accounting indicators that reflect the level of business expansion (turnover - turnover) and profitability (profit/loss) and issues such as capital structure, leverage, cash-flow and the like, as these are all significantly influenced by managerial decision-making based on internal information received, the quality of which is in turn determined by the professionalism and expertise of the supplier staff.

Given that we are discussing SMEs with production activity, we cannot overlook the importance of the information provided by financial accounting, as well as management accounting in particular for optimising and streamlining the managerial decision-making process in order to achieve established performance and profitability objectives. Therefore, the quality of the accounting process is considered essential in ensuring the timeliness of management decisions and strategies. However, many SMEs use external accounting services whose specialists are usually not familiar with the specifics of production activities, thus limiting the range of information and services they can provide to managers, which means that their decisions are not fully based on the reality of cost, time and profitability of production activities, thus reducing the possibility of identifying and streamlining certain problems related to different production or supply processes, which can lead to loss of competitiveness in the market.

The same is also highlighted by Mihaylova & Papazov (2022) in their paper, stating that many of the SME managers surveyed in their research are not aware of the benefits of the information provided by management accounting, especially for strategic business planning, and some techniques that could be tools for identifying high business risks are not applied due to lack or limitation of information. Nguyen, (2018) also emphasizes that the information provided by management accounting are unique resources of the business and consequently can play an important role in the success, competitive advantage and performance of the firm. Not far from these statements are also the results of Le, Nguyen & Hoang, (2020) who identified a positive relationship between management's innovation orientation significantly influenced by management accounting information and the firm's innovativeness and performance. According to Cadez & Guilding (2008), in addition to traditional management accounting practices, SMEs should also move towards adopting strategic management accounting practices, such as activity-based costing, balanced scorecards or total quality management, which provide a much broader picture of internal production processes and can of course contribute to optimising and streamlining managerial decision-making.

However, there are also other perspectives on the usefulness of practicing management accounting in the context of SMEs, such as that of Davila, Fyster & Oyon, (2008) who presented it as an inhibitor of innovation, suggesting that under the impetus of the desire for innovation influenced by various mechanisms of the management accounting system, dysfunctional excesses on the part of managers may arise, which could bring more harm than good (Bisbe & Malaqueno, 2009). However, we do not subscribe to this idea, as we believe that the likelihood of its occurrence is quite low, and if it were to occur, these would be isolated and sporadic cases, because a correct, realistic and careful management of the information provided by managerial accounting would only result in added value for the whole business.

As mentioned above, SMEs are considered to be the engine of decentralised economies in the European Union (EU) and across the globe, and they have a significant positive impact on gross domestic product (GDP) and on reducing unemployment levels (Cicea et. al., 2019), which means that when they are successful in their activity, certain economic and social benefits are also generated, which contribute to increasing the quality of life of the population. The literature highlights the ability of SMEs to adjust and adapt their development strategies in line with changes in the business environment, with Ipinnaiye, Dineen & Lenihan (2017) highlighting the positive effect of strategies such as training, R&D investment and trade growth (Ullah et. al., 2020). Thus, there are many macroeconomic factors that influence to a lesser or greater extent the ability of SMEs to perform, and among those identified by Cicea et. al., 2019 we can list the inflation rate (Ceylan, 2021), unemployment rate, corruption perception index, fund absorption rate and other issues viewed from economic, social, political and demographic perspectives. Ademosu & Morakinyo (2021) as well as Osazevbaru, (2021), identified that SMEs' access to finance is largely influenced by inflation rate, exchange rate and interest rate, which means that with increasing difficulty in attracting external sources of capital, they might find themselves unable to finance the business, which means that the business cannot continue, thus limiting its ability to operate or even leading to its bankruptcy.

Also, Somohano-Rodríguez & Madrid-Guijarro, (2022) identified that the level of competitiveness of industries can play a mediating role between the level of innovation of manufacturing SMEs and their performance, demonstrating that the practice of Big Data technology has a positive effect on SME performance. In the same vein, Khalique, et. al., (2020) assess that increasing global competition is driving many organizations around the world to achieve outstanding performance in order to stay in the market and ensure an optimal level of profitability. Another particularly important macroeconomic aspect in the context of this analysis is the level of tax burden borne by SMEs, but they may also enjoy certain tax exemptions or incentives, in which case an increase in profitability could be observed, as Picas et. al., (2021) have also demonstrated. In the context of a high tax burden,

the area or state where the tax is levied is no longer highly attractive to investors, thus discouraging innovation processes, which can only be detrimental to the smooth running of the economy, and legislators need to identify the optimal balance in tax rates so as to ensure an environment conducive to the sustainable development of the business environment. So all these aspects - and many others - of the macroeconomic environment in which manufacturing SMEs operate have the power to positively or negatively influence their ability to create value and perform, ultimately reflected in their performance at industry or sector level as expressed in output and labour productivity indices.

Addressing all these aspects has helped us to outline a general picture of the aspects pursued through this paper when we refer to the economic, managerial and accounting profile of SMEs with production activity which, in the second chapter of this paper, we will try to outline for those classified in class 16 of CAEN codes in Romania. First, however, we will focus our attention on a bibliometric analysis based on *keywords* of the literature identified on the Web of Science (WoS) platform related to the analyzed topic.

As mentioned in the research methodology section, bibliometric analysis of the literature was carried out using CiteSpace v. 6.1.R4 software. In order to obtain the top of the most cited papers from the database exported from the WoS platform according to the topic addressed in the paper, the option of *References* was checked in the *Node types* section of the program instead of *Keywords* as it was checked for the bibliometric analysis based on keywords. Therefore, the scientific papers that are in the top 10 most cited scientific researches are presented below in *Table 1*.

**Table 1. Top 10 articles cited in the network of papers exported from WoS**

<i>Crt. no.</i>	<i>Authors</i>	<i>Title of the paper</i>	<i>Citation frequency</i>	<i>Quote burst</i>	<i>Period</i>	<i>Total citations</i>
1.	Moeuf et al, (2018)	<i>The industrial management of SMEs in the era of Industry 4.0</i>	23	8,13	2020-2022	396
2.	Muller et al, (2018)	<i>Fortune favors the prepared: How SMEs approach business model innovations in Industry 4.0</i>	23	6,89	2019-2022	384
3.	Ghobakhloo (2018)	<i>The future of manufacturing industry: a strategic roadmap towards Industry 4.0</i>	18	6,36	2020-2022	426
4.	Moeuf et al, (2020)	<i>Identification of critical success factors, risks and opportunities of Industry 4.0 in SMEs</i>	17	6	2020-2022	123
5.	Hair et al, (2019)	<i>When to use and how to report the results of PLS-SEM</i>	17	6	2020-2022	3329
6.	Love & Roper, (2015)	<i>SME innovation, exporting and growth: A review of existing evidence</i>	8	4,44	2018-2019	339
7.	Gronum et al, (2012)	<i>The Role of Networks in Small and Medium-Sized Enterprise Innovation and Firm Performance</i>	7	4,34	2016-2017	239
8.	Lechner & Gudmundsson (2014)	<i>Entrepreneurial orientation, firm strategy and small firm performance</i>	8	4,27	2016-2018	208
9.	Horvath & Szabo (2019)	<i>Driving forces and barriers of Industry 4.0: Do multinational and small and medium-sized companies have equal opportunities?</i>	12	4,23	2020-2022	286
10.	Qin et al, (2016).	<i>A Categorical Framework of Manufacturing for Industry 4.0 and Beyond</i>	9	4,14	2020-2022	387

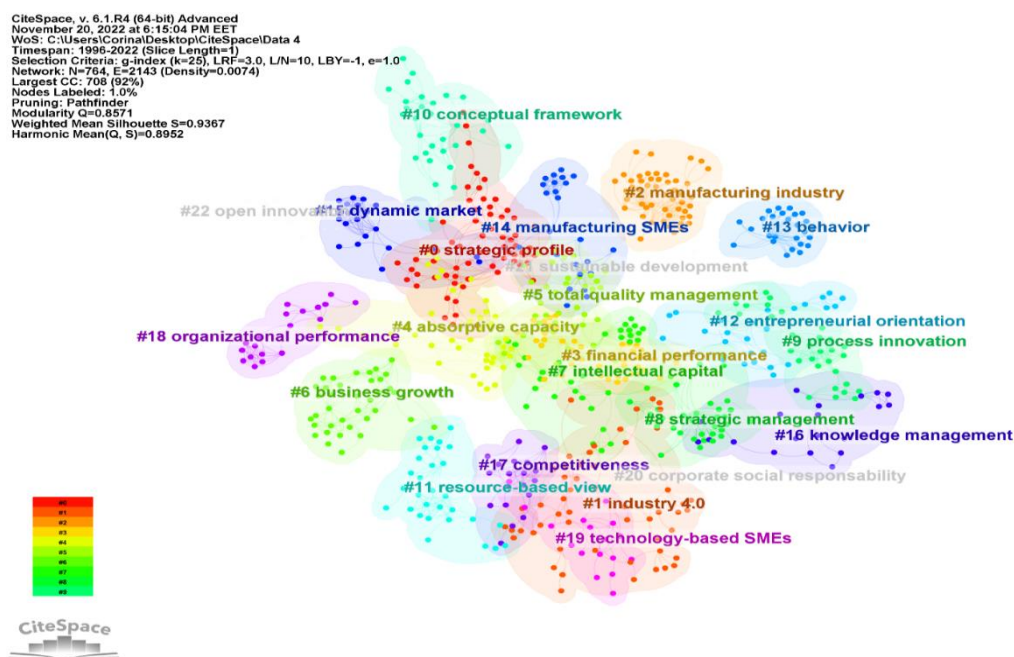
Source: personal data processing according to results obtained in CiteSpace v. 6.1.R4

The concept of *citation burst* indicates a certain period of time in which a sudden change in citation frequency occurs, which means that the publication has clearly attracted a high degree of attention from the scientific community during that period, and this indicator is also a reflection of the most active and current research areas (Chen, 2014). Therefore, looking at the information presented in the above table we can easily realize that in the top 10 of the most cited papers of those forming the database are papers with impact in academia, given the high number of citations collected by them. It can also be seen that a total of 6 papers out of the 10 presented - including the top 4 with the highest values for the *citation burst* indicator - refer to the concept of the Fourth Industrial Revolution / Industry 4.0, which in the literature is associated with a series of interrelated fundamental concepts and innovations aligned with the technological and socio-economic transformation of the manufacturing industry and the factory of the future (Hughes, et. al., 2022), which means that the current main theme built around manufacturing SMEs is about innovation, digitisation and technologisation, and the potential

opportunities, benefits and challenges brought by these new development trends. It can also be seen that even though these cited papers are not very recent, however the predominant period in which their citation frequency is in a sharp increase is between the years 2020-2022, which means that this is the predominant current research trend in the context of manufacturing SMEs.

As for the other 4 papers in the top 10 of those presented, 3 of them refer to issues such as SME performance evaluation, entrepreneurial orientation and innovation, with the period of sharp increase in the frequency of citations being between 2016-2019, and the fourth paper refers to the evaluation by structural equation modeling using the partial least squares method (PLS-SEM) of complex correlations between observed and latent variables, which has become a standard and current approach in scientific research (Hair Jr., et. al., 2021). Through this analysis we were able to identify current areas of interest for researchers in academia - and beyond - in the context of the theme related to building performance profiles in the economic, managerial and accounting fields for SMEs with manufacturing activities, demonstrating that in this area of analysis, too, research trends are aligned with global trends of digitization and innovation of economic activities with the aim of increasing the performance, efficiency and profitability of the products or services offered.

Turning our attention now to the bibliometric analysis based on keywords whose methodology was presented in the *research methodology* section of this chapter, the cluster network that was generated using CiteSpace v. 6.1.R4 can be seen in *Figure 1* below.

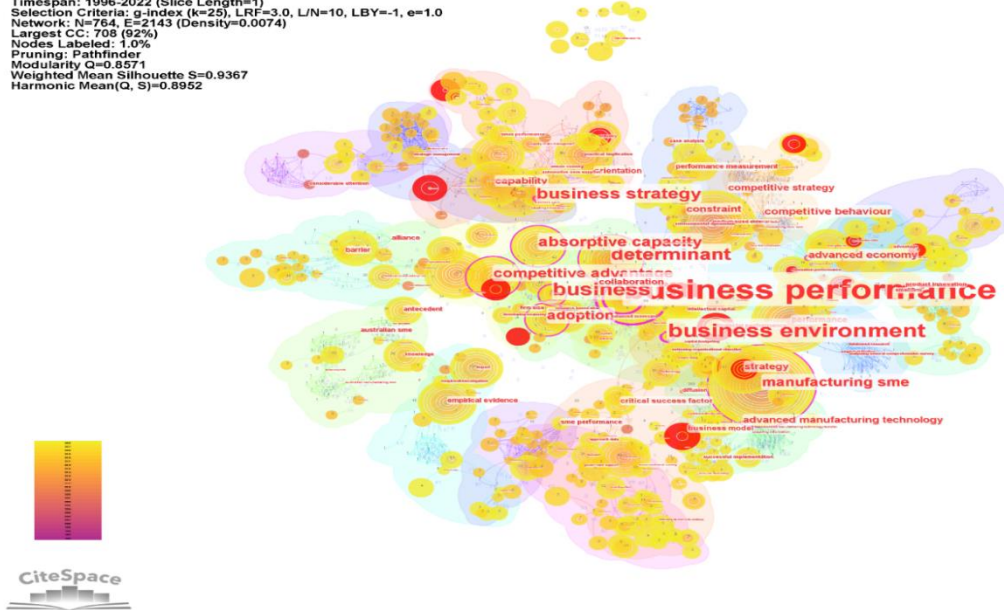


**Figure 1. Cluster network based on the thematic approach according to WoS**  
Source: personal processing in CiteSpace v. 6.1.R4 software

Looking at the figure above, we can identify that a number of 22 clusters have been created, differentiated by different colours and names highlighted above each one, which have been generated according to the predominant theme among the elements that make it up. Aspects or indicators that are tracked in the structural analysis of the clusters include *betweenness* centrality, *modularity* and *silhouette*, and in terms of temporal and hybrid measures, these include *frequency burst* and *novelty*.

In terms of cluster network modularity, this reflects the extent to which a network can be decomposed into multiple components or modules, while also providing a benchmark of the overall clarity of a given network decomposition (Chen, 2022). Its value is shown in the network characteristics illustrated in the top left of *Figure 1* as  $Q = 0.8571$ , which means that the network is reasonably divided into loosely coupled clusters as can be seen in the figure shown above, and few correlations can be identified beyond those between nodes outside the clusters. As for the average cluster network silhouette score, it measures the quality of a clustering configuration and its value varies in the range of  $[-1, 1]$ , and the closer it is to 1, the more the presented solution is a perfect one. Thus, the average score obtained in the value of 0.9367 suggests that the homogeneity of these clusters is, on average, quite high suggesting a strong reliability of the information.

CiteSpace, v. 6.1.R4 (64-bit) Advanced  
November 21, 2022 at 1:38:04 AM EET  
WoS: C:\Users\Corinal\Desktop\CiteSpace\Data 4  
Timespan: 1996-2022 (Slice Length=1)  
Selection Criteria: g-index (k=25), LRF=3.0, L/N=10, LBY=-1, e=1.0  
Network: N=764, E=2143 (Density=0.0074)  
Largest CC: 708 (92%)  
Nodes Labeled: 1.0%  
Pruning: Pathfinder  
Modularity Q=0.9571  
Weighted Mean Silhouette S=0.9367  
Harmonic Mean(Q, S)=0.8952



**Figure 2. Interlocking centrality of cluster network nodes**  
Source: personal processing in CiteSpace v. 6.1.R4 software

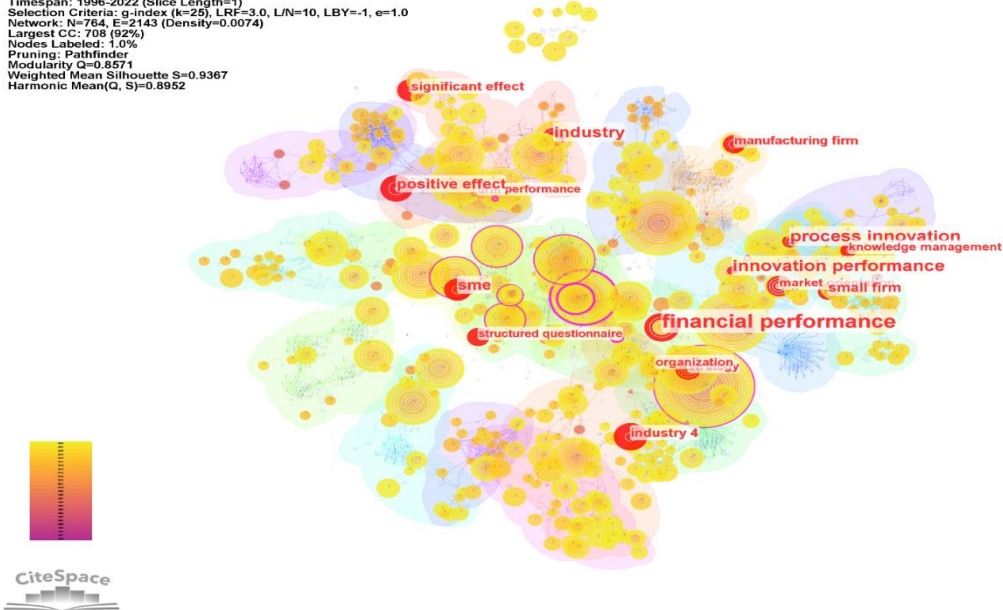
In the context of our cluster network, the centrality of node intertwining can be analysed in *Figure 2* above. The scores of the indicator related to the centrality of interlocking are normalized to the unit range of [0, 1]. Typically, a node with high intertwining centrality is one that connects two or more large groups of nodes, with the node itself between them, hence the term intertwining. High intertwining centrality nodes are highlighted by means of purple linings within the nodes, and the greater their thickness, the stronger the intertwining centrality (Chen, 2022). The centrality of nodes in a network highlights the extent to which the node in question is part of the paths connecting an arbitrary pair of nodes in the network, and according to structural hole theory and structural variation theory, they may have transformational potential waiting to be recognized (Chen, 2020).

According to the data resulting from the calculation of node centrality, the highest value of 0.3 is attributed to the node named *firm*, followed by the *business performance* node with a centrality value of 0.29, then by *business environment* with a value of 0.2. The *business strategy* node is ranked 6th in the ranking with a centrality of 0.16, followed by the *competitive advantage* node with a value of 0.14, then by *manufacturing SMEs* in 10th position with a centrality of 0.13 and a frequency of occurrence of 393 times, closely followed by *advanced manufacturing technology* in 14th position with a centrality of 0.1. This enumeration aimed at highlighting the most relevant concepts in the context of the analysed topic, thus it can be observed that among the concepts represented in the nodes with a high centrality are many of those found in the literature review section, which means that a high convergence can be identified between the results obtained in these two analyses, reinforcing the scientific intersecting sphere around the construction of the economic, managerial and accounting profile of SMEs with manufacturing activity.

Moving on to the analysis of the temporal measurements of the nodes forming the cluster network formed in CiteSpace v. 6.1.R4, we will focus our attention on the indicator that represents the *frequency burst* of the nodes in certain periods of time. The identification of nodes that meet the conditions to be considered as frequency bursts due to a sudden rise in their occurrence behaviour in various scientific researches, can be done with the help of the illustration in *Figure 3*, where they are represented with red colour. The size of the representation of these nodes as well as the size of their naming is proportional to the intensity of the frequency burst, i.e. the number of occurrences of certain keywords in a given period of time.

Thus, it can be seen that the concept of *financial performance* is most representative, which began to be used in the literature in 1998 and which has experienced a frequency explosion with a *strength* of 6.14 points in the period 2020-2022 - a period that can of course be extended - as can be seen in the 14th row of *Figure 4* below. The next most significant bursts of frequency in terms of representativeness in the figure below, as well as in terms of the value of the strength indicator, are for the concepts *innovation performance* and *process innovation*, with a value of 5.13 and 5.03 respectively. According to *Figure 4*, it can be seen that these concepts have experienced a boom in frequency of use right from the beginning of their emergence as concepts in their own right in the literature, with *innovation performance* starting to be used from 2015, with a boom period between 2015 and 2017, and *process innovation* from 2008, with a boom period between 2008 and 2013.

CiteSpace, v. 6.1.R4 (64-bit) Advanced  
November 21, 2022 at 1:36:04 AM EET  
WoS: C:\Users\Corinal\Desktop\CiteSpace\Data 4  
Timespan: 1996-2022 (Slice Length=1)  
Selection Criteria: g-index (k=25), LRF=3.0, L/N=10, LBY=-1, e=1.0  
Network: N=764, E=2143 (Density=0.0074)  
Largest CC: 708 (92%)  
Pruning: Pathfinder  
Modularity Q=0.8571  
Weighted Mean Silhouette S=0.9367  
Harmonic Mean(Q, S)=0.8952



**Figure 3. Frequency explosion of keywords in the cluster network**  
Source: personal processing in CiteSpace v. 6.1.R4 software

Among the following key terms significant for the present research, we can mention the *industry* which obtained a value of 4.91 points of the *strength* indicator and it can be observed that it is represented in the cluster #0 *strategic profile*, which suggests that the industry of belonging of SMEs with manufacturing activity contributes to the construction of their strategic profile, its period of explosion in frequencies being between 2011 and 2017. Also, another important concept for the present analysis is represented by *sme* (*small-and-medium enterprise*), whose period of explosion we can observe was between 2019-2022, which means that in the last period and implicitly at present, SMEs have attracted the attention of researchers, in the sense that until recently most studies were based on the analysis of large corporations listed on regulated stock markets, and now the literature has begun to be enriched with studies on SMEs, thus also meeting the needs and challenges of companies that generate over 75% of GDP in almost all market economy countries.

**Top 16 Keywords with the Strongest Citation Bursts**

Keywords	Year	Strength	Begin	End	1996 - 2022
process innovation	2008	5.02	2008	2013	_____
small firm	2009	4.27	2009	2018	_____
industry	2011	4.91	2011	2017	_____
strategy	2000	3.52	2011	2016	_____
firm performance	2010	3.42	2011	2013	_____
innovation performance	2015	5.13	2015	2017	_____
knowledge management	2016	3.65	2016	2017	_____
significant effect	2018	3.86	2018	2020	_____
manufacturing firm	2018	3.78	2018	2019	_____
market orientation	2014	3.6	2018	2020	_____
sme	2019	4.59	2019	2022	_____
positive effect	2013	4.43	2019	2022	_____
organization	2019	3.54	2019	2020	_____
financial performance	1998	6.14	2020	2022	_____
industry 4	2020	3.93	2020	2022	_____
structured questionnaire	2020	3.36	2020	2022	_____

**Figure 4. Distribution over time of the frequency bursts of the first 16 keywords in the cluster network**  
Source: personal processing in CiteSpace v. 6.1.R4 software

Other terms with high significance in the bibliometric analysis carried out include the concept of Industry 4.0, which obtained a value of 3.93 points for the intensity or strength of the frequency explosion indicator, which in turn was recorded between the years 2020-2022, a period that can be extended given the current trends of globalisation, digitalisation and technologisation of production processes in order to make costs more efficient and increase profitability. This result is also consistent with those obtained in the citation explosion analysis, where 6 out of the top 10 cited papers contained the Industry 4.0 structure in their titles. Therefore, we can appreciate that in the context of the analysis of the profile of manufacturing SMEs, this concept is given particular importance in contemporary literature, identifying the same trend towards concepts related to innovation, artificial intelligence and automation as in many other areas of analysis, such as medicine, services, construction, computing and others. Another concept of interest to us is *market* orientation - this has a frequency burst intensity of 3.6 points and the reference period is between 2018-2020, suggesting a downward interest in this approach over the last 2 years.

#### IV. CONCLUSION

Following the literature review, it can be confirmed that the aim and the two objectives set at the beginning of the analysis have been achieved, which means that it has been possible to identify the components and influencing factors on the overall performance profile of manufacturing SMEs from the perspective of economic, managerial and accounting procedures. Thus, it could be identified that the managerial profile is largely reflected in the level and quality of financial-accounting indicators, which in turn reflect the ability of managers to make effective and timely decisions to develop the business and increase its profitability, but it is also important to base them on qualitative and real sources. As regards the accounting profile of manufacturing SMEs, this refers in particular to the financial or management accounting policies and procedures that are applied in the business, so that accounting is a complete, reliable and sustainable source of information and the basis for managerial decision-making in the context of product profitability, production cost optimisation, stock records and so on, by calculating various reference indicators. As regards the economic profile of manufacturing SMEs from a macroeconomic representation perspective, it is represented by various indicators reflecting the productivity and performance of companies at industry level, and from an influencing factors perspective, it is also largely determined by the quality and regulation of the external environment in which they operate, with SMEs' performance suffering under critical market conditions such as unreasonable inflation, interest and exchange rates, difficulties in accessing credit, unskilled labour and others.

With regard to the bibliometric analysis, it was found that current research trends in determining the overall performance profile of manufacturing SMEs relate to concepts such as the fourth industrial revolution, technologisation, innovation and digitalisation, all of which have a significant impact in terms of making their activities more efficient and optimised, which of course leads to increased business profitability and profitability. It could also be seen that concepts such as financial performance or SMEs with manufacturing activity started to be used in the literature as early as the 1990s, which confirms the basic nature of these concepts in building research clusters.

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#### REFERENCES

1. Abdulkarim, K.J., Ahamd, S.B. & Tariq T.Y.A., (2021). Entrepreneurial Orientation, Market Orientation, Managerial Accounting and Manufacturing SMEs Satisfaction. *Journal of Accounting Science* 6, 1-14. doi:10.21070/jas.v6i1.1590;
2. Ademosu, A. & Morakinyo, A. (2021). Financial System and SMEs Access to Finance: A Market-oriented Approach. *Studia Universitatis Vasile Goldiş Arad, Economics Series*, 31(3), 21-36. <https://publicatii.uvvg.ro/index.php/studiaeconomia/article/view/682>;
3. Audretsch, D.B., Coad, A. & Segarra, A., 2014. Firm Growth and Innovation. *Small Business Economics*, 43, 743-749. doi:10.1007/s11187-014-9560-x;
4. Beltramino, N.S., Garcia-Perez-de-Lema, D. & Valdez-Juarez, L.E., (2020). The structural capital, the innovation and the performance of the industrial SMES. *Journal of Intellectual Capital*. doi:10.1108/jic-01-2019-0020;
5. Bisbe, J. & Malagueño, R., (2009) The Choice of Interactive Control Systems under Different Innovation Management Modes. *European Accounting Review*, 18, 371-405. doi:10.1080/09638180902863803;
6. Cadez, S. & Guilding, C., (2008) An exploratory investigation of an integrated contingency model of strategic management accounting. *Accounting, Organizations and Society*, 33, 836-863. doi:10.1016/j.aos.2008.01.003;
7. Ceylan, I.E. (2021). The Impact of Firm-Specific and Macroeconomic Factors on Financial Distress Risk: A Case Study from Turkey. *Universal Journal of Accounting and Finance*, 9(3), 506-517. doi: 10.13189/ujaf.2021.090325;
8. Chen, C. (2014) The CiteSpace Manual. <http://cluster.ischool.drexel.edu/~cchen/citespace/CiteSpaceManual.pdf>;
9. Chen, C., (2020) How to use CiteSpace 5.7.R1. LeanPub. <https://citespace.podia.com/ebook-how-to-use-citespace>;
10. Chen, C., (2022) How to use CiteSpace 6.1.R3. LeanPub. <https://citespace.podia.com/ebook-how-to-use-citespace>;



11. Cicea, C., Popa, I., Marinescu, C. & Ștefan, S.C., (2019). Determinants of SMEs' performance: evidence from European countries. *Economic Research-Ekonomika Istraživanja* 32, 1602-1620. doi:10.1080/1331677x.2019.1636699;
12. Davila, A., Foster, G. Accounting and control, entrepreneurship and innovation: Venturing into new research opportunities, *European Accounting Review*, 18(2), pp. 281-311. <https://doi.org/10.1080/09638180902731455>;
13. Ghobakhloo, M.(2018). the future of manufacturing industry: a strategic roadmap toward Industry 4.0. *Journal of Manufacturing Technology Management, JMTM-02-2018-0057*. doi:10.1108/JMTM-02-2018-0057;
14. Gronum, S., Verreyne, M.L. & Kastle, T., (2012). The Role of Networks in Small and Medium-Sized Enterprise Innovation and Firm Performance. *Journal of Small Business Management*, 50(2), 257-282. doi:10.1111/j.1540-627x.2012.00353.x ;
15. Hair Jr, J.F., Hult, G.T.M., Ringle, C.M., Sarstedt, M., Danks, N.P. & Ray, S., (2021). Partial Least Squares Structural Equation Modeling (PLS-SEM) Using R. Springer Nature Switzerland AG. doi: 10.1007/978-3-030-80519-7;
16. Hair, J.F., Risher, J.J., Sarstedt, M., Ringle, C.M. & Svensson, G., (2019) When to use and how to report the results of PLS-SEM. *European Business Review*. doi:10.1108/EBR-11-2018-0203;
17. Hee Song, N., Daisy Mui Hung, K. & Sanjay Kumar, S., (2017). The core competence of successful owner-managed SMEs. *management decision*. doi: 10.1108/MD-12-2016-0877;
18. Horváth, D. & Szabó, R.Zs. (2019). Driving forces and barriers of Industry 4.0: Do multinational and small and medium-sized companies have equal opportunities? *Technological Forecasting and Social Change*, 146(1), 119-132. doi:10.1016/j.techfore.2019.05.021;
19. Hughes, L., Dwivedi, Y.K., Rana, N.P., Williams, M.D. & Raghavan, V., (2022). Perspectives on the future of manufacturing within the Industry 4.0 era. *Production Planning & Control*, 33, 138-158. doi:10.1080/09537287.2020.1810762;
20. Hussain, J., Abbas, Q. & Asad Khan, M. (2018). Entrepreneurial Orientation and Performance: The Moderating Effect of Market Orientation, *Global Management Journal for Academic & Corporate Studies*; 7(1). <https://gmjacs.bahria.edu.pk/index.php/ojs/article/view/17>;
21. Ipinnaïye, O., Dineen, D. & Lenihan, H., (2017). Drivers of SME performance: a holistic and multivariate approach. *Small Business Economics*, 48, 883-911. doi:10.1007/s1187-016-9819-5;
22. Khalique, M., Hina, K., Ramayah, T. & Shaari, J.A.N., (2020) Intellectual capital in tourism SMEs in Azad Jammu and Kashmir, Pakistan. *Journal of Intellectual Capital*, 21(3), 333-355. doi:10.1108/jic-11-2018-0206;
23. Le, H.M., Nguyen, T.T. & Hoang, T.C., (2020). Organizational culture, management accounting information, innovation capability and firm performance. *Cogent Business & Management* 7, 1857594. doi:10.1080/23311975.2020.1857594;
24. Lechner, C. & Gudmundsson, S. V. (2014) Entrepreneurial orientation, firm strategy and small firm performance. *International Small Business Journal*, 32(1), 36-60. doi:10.1177/0266242612455034;
25. Love, J.H. & Roper, S. (2015). SME innovation, exporting and growth: A review of existing evidence. *International Small Business Journal*, 33(1), 28-48. doi:10.1177/0266242614550190;
26. Madrid-Guijarro, A., Martín, D.P. & García-Pérez-De-Lema, D., (2021). Capacity of open innovation activities in fostering product and process innovation in manufacturing SMEs. *Review of Managerial Science*, 15, 2137-2164. doi:10.1007/s11846-020-00419-8;
27. Mihaylova, L. & Papazov, E., (2022). Strategic management accounting in Bulgarian manufacturing SMEs. *Management*, 27, 309-321. doi:10.30924/mjemi.27.1.17;
28. Moeuf, A., Lamouri, S., Pellerin, R., Tamayo-Giraldo, S., Tobon-Valencia, E. & Eburdy, R. (2019). Identification of critical success factors, risks and opportunities of Industry 4.0 in SMEs. *International Journal of Production Research*, 1-17. doi:10.1080/00207543.2019.1636323;
29. Moeuf, A., Pellerin, R., Lamouri, S., Tamayo-Giraldo, S. & Barbaray, R., (2018) The industrial management of SMEs in the era of Industry 4.0. *International Journal of Production Research*, 56, 1118-1136. doi:10.1080/00207543.2017.1372647;
30. Moeuf, A., Pellerin, R., Lamouri, S., Tamayo-Giraldo, S. & Barbaray, R., (2017). The industrial management of SMEs in the era of Industry 4.0. *International Journal of Production Research*, 1-19. doi:10.1080/00207543.2017.1372647;
31. Müller, J.M., Buliga, O. & Voigt, K.I., (2018) Fortune favors the prepared: How SMEs approach business model innovations in Industry 4.0. *Technological Forecasting and Social Change*, S0040162517312039. doi:10.1016/j.techfore.2017.12.019;
32. Nguyen, P. N. (2018) Performance implication of market orientation and use of management accounting systems: The moderating role of accountants' participation in strategic decision-making. *Journal of Asian Business and Economic Studies*, 25(1), 33-49. <https://doi.org/10.1108/JABES-04-2018-0005>;
33. Okpala, K.E. & Osanebi, C., (2020). Cost volume profit analysis and profit planning in manufacturing SMEs in Nigeria. *Asia-Pacific Management Accounting Journal*, 15(2), pp. 207-240. <https://www.webofscience.com/wos/woscc/full-record/WOS:000577559000010>;
34. Osazevaru, H., (2021). Interest rate and exchange rate volatility and the performance of the Nigerian informal sector: Evidence from small and medium-sized enterprises. *Ekonomski horizonti*, 23, 19-32. doi:10.5937/ekonhor2101019o;
35. Spades, S., Reis, P., Pinto, A. & Abrantes, J.L., (2021). Does Tax, Financial, and Government Incentives Impact Long-Term Portuguese SMEs' Sustainable Company Performance? *Sustainability*, 13, 11866. doi: 10.3390/su132111866
36. Qin, J., Liu, Y. & Grosvenor, R., (2016). A Categorical Framework of Manufacturing for Industry 4.0 and Beyond. *Procedia CIRP*, 52, 173-178. doi:10.1016/j.procir.2016.08.005;
37. Seo, H.S. & Kim, Y., (2020) Intangible assets investment and firms' performance: evidence from small and medium-sized enterprises in Korea. *Journal of Business Economics and Management*, 21, 421-445. doi:10.3846/jbem.2020.12022;
38. Somohano-Rodríguez, F.M. & Madrid-Guijarro, A., (2022). Do industry 4.0 technologies improve Cantabrian manufacturing smes performance? The role played by industry competition. *Technology in Society*, 70. <https://doi.org/10.1016/j.techsoc.2022.102019>;
39. Ullah, A., Pinglu, C., Ullah, S., Zaman, M. & Hashmi, S.H., (2020). The nexus between capital structure, firm-specific factors, macroeconomic factors and financial performance in the textile sector of Pakistan. *Heliyon* 6, e04741. doi:10.1016/j.heliyon.2020.e04741;
40. Wahyono, D. & Hutahayan, B., (2021). The relationships between market orientation, learning orientation, financial literacy, on the knowledge competence, innovation, and performance of small and medium textile industries in Java and Bali. *Asia Pacific Management Review*, 26(1). <https://doi.org/10.1016/j.apmrv.2020.07.001>;
41. Xu, J. & Liu, F., (2020). Nexus between intellectual capital and financial performance: an investigation of Chinese manufacturing industry. *Journal of Business Economics and Management*, 22, 217-235. doi:10.3846/jbem.2020.13888;