

Connecting the Characteristic Elements in the Accounting Profession - from the Perspective of New Technological Changes

Carmen E. Stoenoiu ^{1*}

¹ Memorandumului st., no. 28, 400114, Cluj-Napoca, Romania, carmen.stoenoiu@emd.utcluj.ro

Technical University of Cluj-Napoca

ABSTRACT

The current research focuses on existing studies from 2015-2024, which investigate 5 elements such as: competence, skills, knowledge, abilities, attitudes, regarding the accounting field, in the context of structural changes related to activities in the economy. At the level of the accounting field, the study reveals strong interconnectivity between economic and business aspects and those of technical and professional skills. The originality of the study lies in the fact that it creates an image of the progress of the accounting profession, showing the synergy that exists in education and the development of skills, and then between the application of knowledge and the achievement of performance.

Type of Paper: Review

Keywords: employability, accounting, economics and business, technical and professional skills.

1. Introduction

One of the main challenges of the 21st century is the sustainable development of countries under the impact of both technological evolution and changes due to economic and political crises. The emergence of the digital economy, as a product of technological evolution, has had consequences in the business environment (Li et al., 2022; Zeng et al., 2022; Chen et al., 2023), leading to the need to remodel products and processes (Fernandez-Vidal et al., 2022; Li, 2022). At the company level, as in everyday life, we observe that the phrase "survival", based on Darwin's principle, is used as a fundamental necessity in business practices (Bolboaca et al., 2010; Liu et al., 2023). The need for redesign has become topical in both industries and professions, due to the approaches arising from the implementation of Industry 4.0, which is also found at the level of the accounting field (Tan & Laswad, 2018; Tsiligiris & Bowyer, 2021; Elo et al., 2023). The perspectives that emerge regarding the future of the accounting profession must be viewed in the light of competencies, skills, knowledge, but also requirements, which implies a process of continuous calibration and recalibration.

2. Literature Review

The range of accounting competencies has expanded through the assimilation of new skills, as the role of the accountant is considered crucial for building success at the organizational level (Jackson et al., 2022; Elo et al., 2023; Anomah et al., 2024).

The current research focused on existing studies in specialized literature from 2015-2025, conducting a thematic bibliometric analysis of 5 elements, such as: competencies, skills, knowledge, attitudes, and regarding the accounting field. In the context of the challenges of adapting and supporting the company to increase performance, the study consists of a quantitative and qualitative analysis of the accounting profession. The originality of the study lies in the fact that it creates a current picture of the requirements at the level of the accounting profession, combining economic and business aspects with technical and professional ones. The first chapter discusses the current state of knowledge through a systematic analysis of the specialized literature, then describes the methodology and based on it, the results and discussions of the findings. Finally, the paper concludes with a section dedicated to conclusions, practical implications and possible further research.

3. Research Methodology

The research involved a search and review of academic studies that refer to the 5 elements such as: competencies, abilities, knowledge, skills, attitudes, regarding the accounting field. The thematic analysis aimed to identify and group the elements as they emerge from the existing literature. Initially, a systematic review was carried out to identify and collect studies on the specified elements, by launching a keyword search on the Web of Science platform. The keyword combinations used were: (“competence” or “abilities” or “knowledge*” or “skills” or “attitudes”) and (“accounting”). The search was performed using the Web of Science platform through two filters: (1) keywords in the "title" associated with the word "accounting" in all articles and (2) keywords in the field of interest "accounting". The first filtering by keywords in the article title (“competences” or “abilities” or “knowledge” or “skills” or “attitudes”) targeted all publications, and the reason for using this filter is given by the relevance of the search, thus ensuring that it is consistent with the subject. The second filtering was necessary to narrow the field to the area of interest, that of accounting. The analyzed period is 2015–2024, because we considered that a ten-year search is more suggestive and will allow for the observation of significant progress at the level of the accounting profession.

Subsequently, they were individually analyzed by reading the abstract to check if they fit the researched topic. This was done by reviewing the abstracts of the articles to exclude those whose content is not focused on the accounting profession. In addition, those sources that mention only one of the researched elements (mentioned above) were excluded, without there being an analytical debate on the content of these elements. While some works may provide specific core elements, others may refer to complementary elements as an umbrella that incorporates several elements. The extracted set of elements was grouped into categories based on similarities, resulting in clusters of elements. The clusters of elements are discussed further in the results section. The entire set of

articles was analyzed quantitatively using Vos Viewer. The purpose of the quantitative analysis is to observe the trends specified in the specialized literature regarding the requirements necessary for the accounting profession. Subsequently, the selected sample was qualitatively analyzed to extract the main competencies and discussions related to them and mentioned in the specialized literature.

4. Results

The analysis of the distribution of the number of articles by journal shows us the high interest dedicated to the subject of the set of elements among accounting journals (see Figure 1 (a)). The analysis of the distribution of the number of articles associated with keywords by country shows us the place of origin of the authors and the specific studies existing in several geographical areas (see Figure 1 (b)).

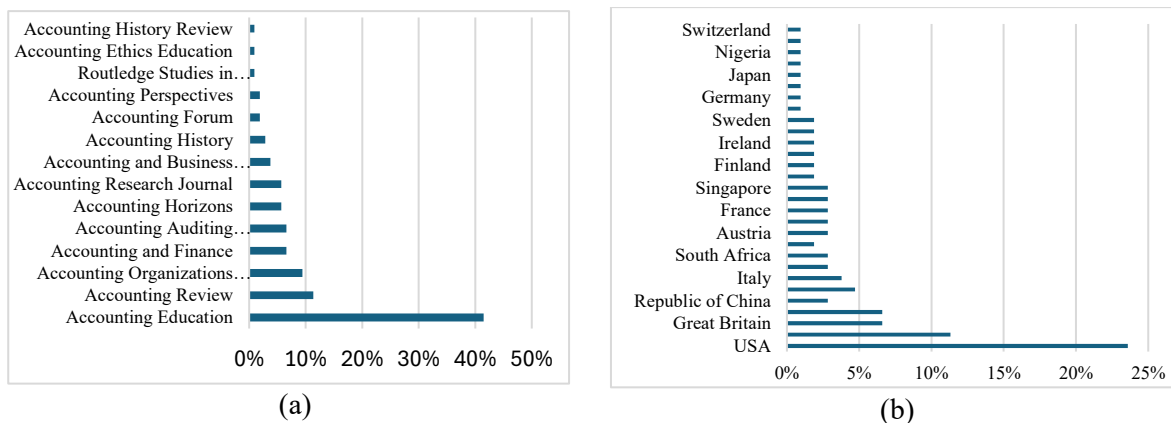


Figure 1. Distribution of the number of articles per journal and country

Analyzing the distribution of the number of associated keywords in the articles of the editor function allows us to see the number of articles published in various important editions that discuss the subject of our research, such as Taylor & Francis (47.17%), American Accounting Association (19.81%), Emerald Group Publishing (12.26%), Elsevier (9.43%), Wiley (7.55%), Sage (2.83%) and Routledge (0.94%).

The analysis of the distribution of keywords by the number of articles allows us to see the share of the number of articles according to the research elements (see Figure 2).

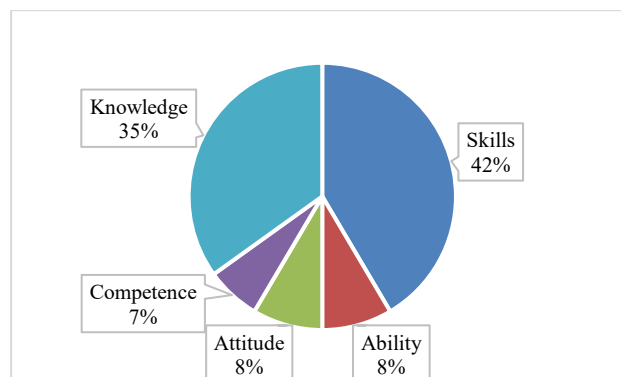


Figure 2. Distribution of keywords by the number of articles

The analysis of the distribution of keywords by the number of citations and the year of publication, shows us the importance of the subject addressed, which is observed to increase from one year to the next, taking the greatest extent in the period 2015-2024 (Figure 3).

interconnection of the two domains. The red cluster, labeled "Performance and quality in accounting context, with its determinant elements," refers to results and indicators (performance, quality, earnings, and accruals) within the accounting profession or the activities of entities. "Determinants" and "identification" suggest research that attempts to pinpoint factors influencing these outcomes. "Independence," "experience," "knowledge transfer," and "expertise" are qualities or attributes of accounting professionals that contribute to performance and quality. "Risk" and "information sharing" indicate aspects related to risk management and the dissemination of financial information. "Managerial ability" underlines the impact of management on these results. The yellow cluster, labeled "Impact, Trust, and Emotional Intelligence - Thematic Connectors", acts as a bridge between the other domains. "Impact" suggests that research analyzes the effects of various factors (education, skills, and performance) on the profession. "Trust" is a crucial component in accounting and auditing, linking performance (red cluster) to perceptions and competencies (green cluster). "Emotional intelligence" and "leadership" are essential interpersonal skills that connect professional abilities with how they influence performance and foster trust. "Knowledge" and "culture" are also important transversal factors.

If, at the beginning of the analyzed period (around 2020), the emphasis was more pronounced on educational fundamentals and the development of general skills, recent periods (towards 2022) reveal a significant shift towards the impact of these abilities on performance and quality, risk management, as well as the relevance of human aspects (trust, leadership, emotional intelligence) within the profession's economic context. This dynamic suggests a maturation of the research domain, moving from formative aspects to applied ones and to the evaluation of results within the business ecosystem.

In addition to the quantitative analyses mentioned above, a qualitative analysis of the selected articles was also conducted. Articles with different levels of granularity, including discussions of niche or strictly accounting elements, incorporating multiple groups under the umbrella of a single category of elements, required reanalysis. The analysis resulted in 2 categories of aspects: economic and technical (see Table 1).

Table 1. Analytical situation of the economic and technical aspects for the accounting profession

Economics and Business Aspects	Technical and Professional Skills Aspects
<ul style="list-style-type: none"> - "Performance" and "quality" reflect the concern for effectiveness and value generated by economic and professional activity. - "Earnings" and "accruals" reflect the concern for the financial results of entities. - "Risk" and "information" the concern for risk management and information dissemination. - "Managerial capacity" links leadership skills to tangible results. - "Employers" and "expectations" reflect labor market demand and the alignment of professional training with employer needs. - "Employability" is a direct result of professional integration. - "Trust" and "independence" are essential ethical and professional principles that support the credibility of accounting information. 	<ul style="list-style-type: none"> - "Skills" (including "soft," "professional," "generic," and "communication") are the pillars of the capacity to perform profession-specific tasks. - "Competences" represent the integrated application of knowledge and abilities in specific contexts. - "Emotional intelligence" falls within the domain of non-technical skills, essential for complex professional interactions. - "Expertise" and "knowledge" constitute the cognitive and technical foundation of any professional practice. - "Knowledge transfer" refers to the process of disseminating and applying technical and professional information. - "Accounting education" and "education" are critical processes through which necessary competencies and knowledge are acquired. - "Model" and "framework" refer to conceptual and methodological structures guiding practice and research in the field. - "Science" indicates the methodological and epistemological foundation of accounting research.

<ul style="list-style-type: none"> - "Leadership" and "culture" influence organizational climate and strategic decisions. - "Determinants" and "experience" indicate efforts to identify factors influencing economic performance and professional value. 	<ul style="list-style-type: none"> - "Teamwork" is an essential work methodology in complex professional environments. - "Identification" refers to recognition or classification processes (e.g., risk identification, anomaly identification). - "Matter" represents the specific subject or technical domain of study.
---	--

5. Conclusion

Bibliometric analysis highlighted the dynamics and main research directions in the field of the accounting profession, in the context of accelerated technological changes. The co-occurrence map of keywords allowed the identification of dominant thematic clusters and the evolution of scientific interest in recent years. While at the beginning of the analyzed period, the literature focused predominantly on fundamental aspects such as “accounting education”, “higher education” and the development of “generic skills” or “teamwork”, more recent publications show an increased interest in “performance”, “quality”, “risk” and “managerial capacity”. This evolution suggests a maturation of the field, moving from what is learned to the results obtained and how the profession adapts in the contemporary economic environment. Another notable result is the consolidation of the concern for “non-technical skills”, “emotional intelligence”, “trust” and “leadership”. These concepts, which appear more frequently in recent studies, underline the growing recognition of the importance of interpersonal and behavioral skills alongside technical skills. At the same time, the emphasis on ‘employers’ and ‘expectations’ in the recent literature indicates an alignment of research with the demands and pressures of the labor market, underlining the need for continuous education and training to meet the concrete needs of employers. The map illustrated a strong interconnectivity between the identified categories – “Economic and business aspects” and “Technical and professional competence aspects”. The significant connections between “accounting education” and “performance” or between “competences” and “quality” demonstrate a holistic approach in specialist literature. This interconnectivity suggests that the progress of the accounting profession does not depend exclusively on the individual development of certain skills or on the achievement of isolated economic results, but on a complex synergy between education, skill development, application of knowledge and achievement of performance in a constantly evolving economic environment.

The conclusion is that the accounting profession is continuously redefining itself, adapting to new technologies and market demands. The research had limitations related to the volume of articles and the lack of direct validation with the labor market, which opens opportunities for future studies.

Acknowledgments

This research has received funding for open access publishing from the author’s employer, Technical University of Cluj-Napoca.

References

Journal article

- Al-Hattami, H.M. (2021). University accounting curriculum, it, and job market demands: Evidence from Yemen.
Sage Open, 11(2).
- Anomah, S., Ayebofo, B., Owusu, A., Aduamoah, M. (2024). Adapting to AI: exploring the implications of AI integration in shaping the accounting and auditing profession for developing economies.
EDPACS, 69(11), 28–52.
- Bolboaca, S.D., Jantschi, L., Balan, M.C., Diudea, M.V., Sestras, R.E. (2010) State of Art in Genetic Algorithms for Agricultural Systems.
Not. Bot. Horti Agrobot., 38, 51–63.
- Chen, W., Srinivasan, S. (2023). Going digital: Implications for firm value and performance.
Rev. Account. Stud., 29, 1619–1665.
- Dow, K. E., Jacknis, N., Watson, M. W. (2021). A framework and resources to create a data analytics-infused accounting curriculum.
Accounting Education, 36(4), 183–205.
- Elo, T., Pätäri, S., Sjögrén, H., & Mättö, M. (2023). Transformation of skills in the accounting field: the expectation–performance gap perceived by accounting students.
Accounting Education, 33(3), 237–273.
- Fernandez-Vidal, J., Gonzalez, R., Gasco, J., Llopis, J. (2022). Digitalization and corporate transformation: The case of European oil & gas firms.
Technol. Forecast. Soc. Chang., 174, 121293.
- Jackson, D., Michelson, G., Munir, R. (2022). Developing accountants for the future: new technology, skills, and the role of stakeholders.
Accounting Education, 32(2), 150–177.
- Li, L. (2022). Digital transformation and sustainable performance: The moderating role of market turbulence.
Ind. Mark. Manag., 104, 28–37. <https://doi.org/10.1016/j.indmarman.2022.04.007>
- Li, L., Ye, F., Zhan, Y., Kumar, A., Schiavone, F., Li, Y. (2022). Unravelling the performance puzzle of digitalization: Evidence from manufacturing firms.
J. Bus. Res., 149, 54–64.
- Liu, S., Zhao, H., Kong, G. (2023). Enterprise digital transformation, breadth of ownership and stock price volatility.
Int. Rev. Financ. Anal., 89, 102713.
- Tan, L. M., Laswad, F. (2018). Professional skills required of accountants: what do job advertisements tell us?
Accounting Education, 27(4), 403–432.
- Tsiligiris, V., Bowyer, D. (2021). Exploring the impact of 4IR on skills and personal qualities for future accountants: a proposed conceptual framework for university accounting education.
Accounting Education, 30(6), 621–649.
- Zeng, H., Ran, H., Zhou, Q., Jin, Y., Cheng, X. (2022). The financial effect of firm digitalization: Evidence from China.
Technol. Forecast. Soc. Chang., 183, 121951.