THE IMPACT OF THE DIGITAL AGE, WITH A FOCUS ON THE COMPETITIVENESS OF HUMAN CAPITAL IN THE ACCOUNTING PROFESSION

Beatrice -Elena Gore 1* , Ana-Rebeca Neagu $(Ion)^2$, Alexandra Tarau 3 , Florin Radu 4

1)2)3)4) Valahia University of Târgoviște, Târgoviște, Romania

Abstract

The purpose of this article is to analyse the impact of the digital economy and technological transformations on industrial and professional competitiveness, with a particular focus on the accounting profession. The study explores how adapting competitive strategies and business models to digital realities influences organizational performance and long-term sustainability. The methodology employed includes a qualitative analysis of relevant literature, complemented by case studies and secondary data on labour market changes, the automation of repetitive tasks, and transformations in strategic sectors such as automotive, robotics, semiconductors, and aerospace. Additionally, it examines the shifts in professional qualification requirements and how digitalization is shaping labour markets and organizational strategies. The findings reveal that the digital economy is driving significant labour market polarization, favouring highly skilled workers while posing risks for those engaged in repetitive tasks. On a global scale, the competition in artificial intelligence is led by the US and China, while the European Union focuses on strengthening competitiveness in strategic industries such as automotive, robotics, and semiconductors. In the accounting profession, digitalization introduces new challenges, and maintaining competitiveness requires strong professional training, advanced technological skills, and adaptability to change. In conclusion, integrating digitalization into competitive strategies is essential to ensuring the performance and relevance of both organizations and professionals. Aligning digital innovation with economic strategy has become a decisive factor in navigating the complexities of today's economic and technological landscape.

Keywords

artificial intelligence, internationalization, skills, accounting, competition, economy

JEL Classification

J24, M12, M41, M51, N24

_

^{*} Corresponding author, **Gore Beatrice -Elena** – gorebeatrice32@yahoo.com.

Introduction

The rapid evolution of the digital economy and the implementation of advanced technologies, such as artificial intelligence (AI), have significantly transformed the labour market. The accounting profession, in particular, has been profoundly impacted by the automation of repetitive tasks, necessitating the development of advanced skills. This paper examines the mechanisms through which human capital adapts to these challenges and analyzes the impact of digitalization on the accounting profession, highlighting the key difficulties and opportunities arising from this transformation.

The integration of professional and transversal skills in the field of accounting, aligned with the International Accounting Education Standards (IFAC) and correlated with the DESI 2023 indicators, is essential for professionals to adapt to the demands of the digital economy. This holistic approach contributes to increasing the efficiency of financial reporting, improving decision-making processes, and ensuring sustainable organizational performance in the context of rapid technological transformations.

The digital economy is an economy based on the massive adoption of digital technology for processing, sharing, and transferring information. The combination of different components of artificial intelligence (AI), such as language processing, speech synthesis and translation, has revolutionized the interaction we have with electronic devices today, an eloquent example being the Siri assistant of the Apple mobile phone platform. In recent years, advances in robotics have allowed AI to be incorporated into humanlike robots, increasing the potential for virtual assistants to transform into colleagues, companions autonomous vehicles, and even psychologists.

The success of a company is the result of the work done by the human factor with the help of the technology at its disposal, the two elements that generate success being in a relationship of strict dependence. In a world marked by continuous and accelerated transformation, a company's leader must manage human capital with a combination of strategic skill and operational precision. This approach aims to ensure employee motivation, adaptability to change, and active contributions to enhancing organizational performance. An old Arabic proverb underscores this principle, stating that "the difference between an oasis and a desert is not water, but man" (Costa, G. 2019), a metaphor that highlights the crucial role of human capital in an organization's success and sustainability. Precisely because people are unique and cannot be put on an equal footing with rational operators, due to the psychological, physical, and social characteristics that differentiate them, and make them indispensable and irreplaceable in their entirety.

At the same time, artificial intelligence represents a revolutionary "factor of production," capable of driving performance growth by reducing costs, increasing labour productivity, and optimizing working time. AI catalyzes technological advancements and innovations, minimizes human errors, and facilitates decision-making processes, providing major opportunities for improving our lives. However, the effective adoption and integration of AI require a well-prepared and flexible human capital, capable of utilizing advanced technologies and actively contributing to transformation processes. Starting from the fundamental article of Nelson and Phelps (1966), the empirical literature abounds in studies that analyze the link between human capital and the adoption of new technologies, both at the macroeconomic and

microeconomic levels. The adoption of any new technology requires a workforce equipped with the necessary skills, this requirement is particularly relevant in the case of complex technologies and computing systems (Arvanitis, 2005).

Competence-based technologies have a value closely linked to the skill levels of companies or states (Krueger 1993, Bresnahan et al., 2002). Soete (1997) described knowledge, skills, training, education and learning as essential complementary assets for any information society. Mansell and When (1998) emphasized the importance of experience, skills, and knowledge in technology adoption. In the macroeconomic literature, several authors have analyzed developed and developing countries, obtaining mixed results (Wunnava and Leiter, 2008; Chinn & Fairlie, 2007; Crenshaw & Robinson, 2006).

Other researchers, who have studied OECD countries, have found a significant influence of human capital on the adoption of technologies (Gust and Marquez, 2004). Bartel and Sicherman (1999) found that industries with high rates of technological change require highly skilled employees. Companies that face increased competition are more likely to innovate and adopt new technologies to improve their performance and ensure their survival. Competitive pressure has been identified as an incentive for innovation and the adoption of new technologies (Ghobakhloo et al., 2011; Porter, 2004). The adoption of technologies can strengthen a company's competitive position, providing a competitive advantage and increasing its ability to respond quickly to market changes and customer needs, as well as by reducing costs (Bayo-Moriones & Lera-Lopez, 2007; Bocquet et al., 2007).

Several studies have shown that competitive pressure is positively associated with the adoption of technologies (Arduini et al., 2010; Bayo-Moriones and Lera-Lopez, 2007; Süygün, 2007; Hollenstein, 2004; Kowtha and Choon, 2001), whether it is the diffusion of EDI (Ramamurthy et al., 1999), the adoption of technological innovations (Grover, 1993), the degree of computerization (Dasgupta et al., 1999) or e-business (Zhu et al., 2002).



Figure no. 1: Industry 4.0 and digital technology Source: Geissbauer et al., 2016

Figure no. 1 illustrates the technological ramifications of the digital economy, the introduction of functionalities such as Cloud, Big Data, Location Detection Technologies, Biometric Authentication (Fingerprint, Facial Recognition), Internet of Things (IoT), 3D Printing, Smart Sensors, Multi-Level Customer Interaction and

Profiling - which lead to a reduction in total IT spending, simplifying tasks and processes within the company, but requiring employees to adapt contextually quickly, demonstrate agility and the ability to filter information and easily implement innovations

1. Review of the scientific literature

The specialized literature highlights the complex relationship between digitalization, automation, and the transformation of skills required in various professions. According to the fundamental theory proposed by Nelson and Phelps (1966), the ability to adopt new technologies depends on the skill level of human capital. This perspective was later reinforced by Bresnahan, Brynjolfsson, and Hitt (2002), who demonstrated that the integration of information technologies is directly influenced by employees' competencies and organizational structure.

These conclusions are supported by David H. (2015), who argues that technological revolutions generate both opportunities and risks. While automation eliminates certain jobs, it also creates new, more complex ones, leading to labour market polarization. In this context, McKinsey Global Institute (2018) predicted that, by 2030, 30% of global working time could be saved through automation, highlighting the urgent need for employees to adapt their skills quickly.

In the accounting profession, these trends are particularly evident. Studies such as those conducted by Frey and Osborne (2013) classify accounting as having a medium risk of automation, emphasizing that repetitive tasks, such as data entry or bank reconciliation, are highly automatable. However, tasks involving critical analysis or managerial consulting remain predominantly human, indicating a shift in priorities within the profession.

On the other hand, the adoption of advanced accounting software, such as SAGA and SAP, demonstrates that digitalization not only enhances efficiency but also reduces errors. This aligns with the findings of Bayo-Moriones and Lera-López (2007), who emphasize that integrating advanced technologies requires a restructuring of employee skills but offers significant benefits to organizations.

In this context, Ghobakhloo et al. (2011) emphasize the importance of continuous training for human capital to meet the increasingly complex demands of the market. This suggests that the success of digital transformations depends not only on the availability of technologies but also on employees' ability to adapt quickly and efficiently to new requirements.

2. Research methodology

This study adopts a mixed methodology that combines qualitative and quantitative approaches to analyze the impact of digitalization on the accounting profession and the adaptation of human capital to new technological requirements. The methodology was structured into several stages, each playing a well-defined role in supporting the conclusions, thus providing an integrated and detailed perspective on the subject.

In the first stage, a systematic review of the specialized literature was conducted, identifying and analyzing relevant sources on digitalization, automation, and

professional skills. Fundamental studies, such as those by Nelson and Phelps (1966) and Frey and Osborne (2013), were combined with recent reports from McKinsey Global Institute (2018), providing a solid theoretical framework for understanding the relationship between technology and human capital.

Next, a comparative analysis was carried out to evaluate the degree of automation in the accounting profession relative to other economic sectors. This stage was based on data provided by international institutions and empirical studies, aiming to identify unique characteristics and trends in the accounting profession. The results of this analysis facilitated the identification of common adaptation patterns and significant sectoral differences. To support the theoretical conclusions, case studies were conducted on the implementation of advanced accounting technologies, such as SAGA, SAP, and Nexus, in Romanian companies. These studies highlighted the impact of digitalization on accounting processes, emphasizing both the advantages, such as error reduction and increased efficiency, and the challenges, including resistance to change and the need for continuous employee training.

The final stage of the research focused on analyzing the impact of automation on the skills required in the accounting profession, correlating data obtained from the literature and the case studies. This stage revealed a transition from basic technical skills, such as data entry, to advanced competencies, including ERP system usage, data analysis, and critical thinking development.

By integrating these stages, the proposed methodology provides a comprehensive understanding of the analyzed phenomenon, creating a solid foundation for interpreting the results presented in the following section.

3. Results and discussions

Human capital in the face of artificial intelligence

More and more applications of AI have begun to appear in our daily lives, among the most handy and widely used by the population, including machine translations, image recognition, music, facial, fingerprint recognition, etc., observing the internationalization of this phenomenon.

We live, whether we like it or not, in a world irreversibly influenced by the digital economy, but we must not let ourselves be carried away completely because we are in control of technology, not vice versa, let's never forget that "Artificial intelligence does not know how to cry humanly..." (Corneliu, V.).

If competitiveness in the field of labour was already a challenge, the penetration of AI into the labour market is downright a problem, with employees being constantly subjected to testing after which they must demonstrate unparalleled human qualities to maintain their position.

Figure no. 2 illustrates four types of skills that the entity expects to find, more or less, in its employees. In the left quadrant, we see skills that are important or not today but will not be needed in the future, for example: data entry and processing, basic calculation and communication, operation and navigation with general equipment, etc. In the upper right quadrant are mentioned the skills that are important today, but even more important in the future: leadership, communication, calculation and advanced programming skills, critical thinking, etc., and in the lower right quadrant, we identify

skills that are less important today but imported in the future, such as advanced data analysis, complex information processing, etc. adaptability, etc.

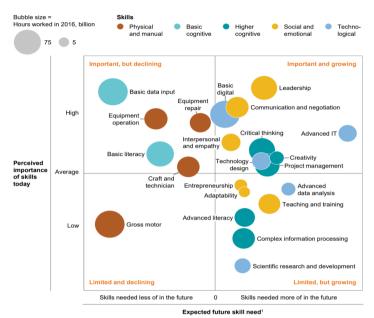


Figure no. 2: Today's Skills vs. Tomorrow's Skills *Source:* McKinsey Global Institute, 2018

Authoritative researchers have estimated that by 2030, worldwide, approximately 30% of human capital working time could be saved by automating tasks, this being possible depending on the speed of adaptation to change, technical feasibility, the pace of technological development, costs, social and regulatory acceptance, increasing by 41% the competition of human capital to occupy a job that requires skills in advanced technology.

The reduction in the workforce will focus on low-skilled workers, who carry out activities such as cargo handling, equipment operation and maintenance, typing, logistics, transport, etc. Thus, physical and manual skills (e.g.: equipment repair, mechanical, craftsmanship and technical skills, inspection and monitoring skills, etc.) present the highest degree of automation, therefore the category within which the working time of human capital will be considerably reduced, following their basic cognitive skills. Even in terms of higher cognitive skills, it will be possible to reduce employees' working time when we talk about advanced communications, but with the possibility of automation, and statistics. On the other hand, critical thinking, decision-making, interpretation of complex information and creativity will remain, at least for the moment, specific to the human being, therefore irreplaceable. Social and emotional skills will be increasingly sought after in the labour market, so to combat competitiveness, employees must demonstrate rigorous communication and negotiation

skills, empathy, team leadership and management of new situations, which require fast, efficient and innovative solutions, continuous improvement and, above all, advanced technological skills.

It can be seen from the graph below (Figure no. 3) that the jobs that require the highest degree of qualification (e.g. lawyers, doctors, teachers, etc.) are the most difficult to automate (a percentage of 22% of current work tasks can be replaced by AI) since, although they are dependent on the facilities offered by technology to increase labour productivity concerning repetitive work tasks, They cannot be replaced by artificial intelligence in terms of their "non-fungibility", the novelty of the situations encountered, which involve the use of qualities that are found only in human beings, namely creativity, flexibility and so on. The more we turn our attention to the low level of education, the more we notice that the degree of replacement of human capital with artificial intelligence increases.

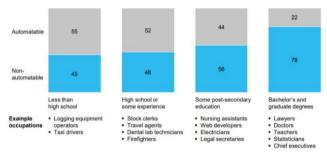


Figure no. 3: The correlation between the level of education/experience and the potential for automating work tasks

Source: McKinsey Global Institute, 2017

Recent studies state that 8-9% of the labour demand in 2023 will be represented by occupations that did not exist or had a low share until now, arising from the new leisure economy (skiing, golf, tourism, DIY, etc.).

The accounting profession in the context of digitalization

Of course, jobs cannot be completely replaced by robots or machines, but the accounting profession is significantly threatened, because, even though it requires higher education, it has a low degree of interaction with the public and an increased frequency of repetitiveness of work tasks.

For example, in the mathematical calculations involved in simple accounting, retrieval, sorting and storage of structured information, typical of office work, the precise execution of repetitive physical operations will be encoded by computer programs and executed by machines, which leads to a substantial decrease in employment in the economy, respectively in the administrative, office sectors, production and operational. From Figure no. 4 We can see that the accounting sector is not yet as automated as it is expected to be in the coming years when accountants will begin to be replaced by computer programs.

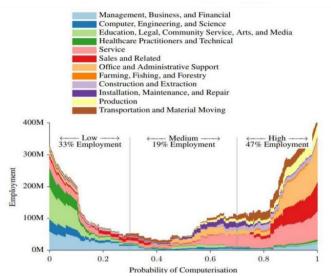


Figure no. 4: Computerization of labour sectors Source: Frey, Osborne, 2013

Automating repetitive tasks through virtual software robots frees accountants from heavy workloads, increasing efficiency, and reducing working time and costs.

In Romania, most of the accountants (50%) work in SAGA, because it has an intuitive and easy-to-learn interface, easily imports data from other systems and keeps up with legislative changes. In descending order of use, after SAGA, we find in the preferences of companies the following programs: WinMentor, Nexus, Ciel, Sap.

How does this software impact the accounting profession? For example, the invoicing employees are easily, easily replaced by the software, which records the invoices, recognises their value, the parties, and the accounting accounts involved and posts them; Also, the duties related to the registration of bank statements disappear, as well as many other duties of the back-office employees, the human capital only checking if the amounts in the accounts have been correctly allocated.

Winmentor is a program used in commerce, industrial and agricultural production, construction, financial accounting auditing, public administration and services. Ciel offers the standard version for small and medium-sized companies and the professional version for large companies. Nexus is aimed at companies in services, production, HoReCa, tourism, commerce, distribution, construction, installations, but also state institutions and accounting firms, and SAP is one of the most complex ERP programs, integrating the accounting part with the logistics and personnel part, but it has the disadvantage that it is not exactly an easy to use program, which is why prior training is needed.

Among the advantages of the impact of digitization on the accounting profession are: the speed of accounting data processing, the creation of closer relationships with clients through the availability of 24/7 services, the removal of errors inherent to the human

being, the wider geographical spread of services, the efficiency and transparency of payments and collections, the reduction of costs (for example for the purchase of paper, payment of postal services, warehousing, etc.), the increase in the efficiency of the auditing, providing detailed information to managers in real-time for decision-making and more.

Since nothing can be perfect, the disadvantages are: job reduction, the need to invest in hardware and software and consultants, employee training through continuous improvement programs, staff resistance, especially due to age, special attention to protecting and securing data and so on.

For optimal results, the secret lies in welcoming novelty and change with open arms and learning to adapt as easily as possible, integrating the advantages brought by artificial intelligence into our lives and enhancing its positive effects through our irreplaceable qualities.

The analysis of data and specialized literature highlighted several significant aspects regarding the impact of digitalization on the accounting profession. First, the degree of automation in the accounting profession was found to be moderate, with a marked increase in the use of advanced technologies such as SAGA and SAP. Repetitive tasks, such as data entry and bank reconciliation, are the most susceptible to automation, according to trends reported by McKinsey Global Institute (2018). However, tasks involving strategic financial analysis or managerial consulting continue to require human intervention.

Second, the transition to advanced skills is evident in the results obtained. Automation requires employees to develop abilities that include complex data analysis, ERP system usage, and critical thinking. This transition supports the conclusions of studies by Frey and Osborne (2013), which suggest that technology reduces the demand for routine activities but increases the need for advanced competencies.

Furthermore, the analysis revealed a significant impact on the labour market, indicating notable polarization. While demand for analytical and technological skills is increasing, jobs based on repetitive tasks are in continuous decline. Additionally, case study results showed that the implementation of advanced technologies brings substantial benefits, such as increased efficiency and reduced human errors, but is accompanied by challenges related to professional training and employee resistance to change.

The results obtained allow for a deeper analysis of the implications of digitalization on the accounting profession. First, the transition from repetitive tasks to strategic roles highlights a fundamental shift like accounting work. Automation frees employees from manual activities and allows them to focus on more complex and strategic aspects, such as interpreting financial data and managerial consulting. This reflects trends highlighted in the specialized literature and underscores the importance of the added value brought by human competencies.

Another important aspect is the urgent need for continuous training. As technology evolves, employees must constantly develop their skills to keep pace with new requirements. This conclusion is supported by Ghobakhloo et al. (2011), who emphasize that the success of implementing advanced technologies largely depends on the preparedness and adaptability of employees. Therefore, professional development becomes a strategic priority for organizations.

The discussions also highlighted the economic and social impact of digitalization. Although automation contributes to increased efficiency and cost reduction, it amplifies risks associated with structural unemployment, particularly for employees with limited skills. This paradox underscores the need for a balance between leveraging technology and supporting employees affected by digital transformations.

Finally, the adoption of technologies in Romania revealed significant differences between large companies and SMEs. While large organizations benefit from sufficient resources to implement advanced solutions, SMEs face challenges due to financial constraints and a lack of employee training. This underscores the necessity of support policies to facilitate digitalization across all categories of organizations.

Conclusions

Automation is both a source of hope and a potential challenge, offering significant opportunities while raising concerns about its broader implications. The global economy has long required productivity and economic growth to compensate for demographic changes, such as an ageing population. Technological revolutions have facilitated this shift, not only by reducing the prevalence of existing jobs but also by creating new roles such as web application developers, social media marketing specialists, search engine optimization consultants, web designers, Uber drivers, Airbnb hosts, and influencers.

This study highlights the critical role of artificial intelligence (AI) in reshaping the labour market and the skills required by human capital. To adapt to this rapid evolution, employees need advanced technological skills, as well as social and emotional competencies and creativity. These abilities are essential not only to operate within digital environments but also to thrive in roles that demand a high level of human interaction and ingenuity.

In the accounting profession, employees must acquire a deep "digital understanding" that enables them to implement new systems effectively. The adoption of advanced accounting technologies, such as ERP systems, has highlighted both opportunities and challenges. While automation enhances efficiency, reduces errors, and allows for a more strategic focus, it also exposes the gap in employees' readiness to adapt to digital tools. Alarmingly, nearly one in three organizations express concern about employees' lack of skills needed to meet the demands of the digital era.

While this study provides valuable insights into the impact of digitalization on the accounting profession and human capital, certain limitations must be acknowledged. First, the research relies heavily on secondary data and case studies, which may not fully capture the diversity of experiences across various regions or industries. Future research could address this limitation by incorporating primary data collection methods, such as interviews or surveys, to provide a broader perspective.

Additionally, this study focuses primarily on the technological aspects of digitalization. Future research could delve deeper into the psychological and organizational challenges associated with the adoption of advanced technologies. Questions regarding how organizations can effectively address resistance to change or foster continuous learning among employees remain largely unexplored.

Another potential avenue for future research involves examining the role of policy interventions in supporting digital transformation. Understanding how governments and

institutions can facilitate access to training, particularly for SMEs and vulnerable employees, would provide actionable insights for bridging the digital divide.

In conclusion, while digitalization offers transformative opportunities for the accounting profession and beyond, it also demands a proactive approach to addressing its challenges. Future research must continue to explore these dynamics, ensuring that organizations and employees alike can fully harness the benefits of technological advancements.

References

- [1] Allen, J. P. (2019). Digital Entrepreneurship. Routledge, New York.
- [2] Arduini, D., Nascia, L., & Zanfei, A. (2010). Complementary approaches to the diffusion of ICT: Empirical evidence on Italian firms. Working Paper Series in Economics, Mathematics and Statistics, WP-EMS 2010/02, Faculty of Economics, University of Urbino.
- [3] David H. (2015). Why Are There Still So Many Jobs? The History and Future of Workplace Automation. Journal of Economic Perspectives, 29(3), 3-30.
- [4] David H. (2019). Work of the Past, Work of the Future. AEA Papers and Proceedings, 109, 1-32.
- [5] Bartel, A., & Sicherman, N. (1999). Technological Change and Wages: An Interindustry Analysis. Journal of Political Economy, 107, 285-325.
- [6] Bayo-Moriones, A., & Lera-López, F. (2007). A Firm Level Analysis of Determinants of ICT Adoption in Spain. Technovation, 27(6-7), 352-366.
- [7] Bocquet, R., Brossard, O., & Sabatier, M. (2007). Complementarities in organizational design and the diffusion of information technologies: An empirical analysis. Research Policy, 36, 367-386.
- [8] Bontis, N. (1998). Intellectual capital: an exploratory study that develops measures and models. Management Decision, 36(2), 63-76.
- [9] Bresnahan, T. F., Brynjolfsson, E., & Hitt, L. (2002). Information technology, workplace organization, and the demand for skilled labor: Firm-level evidence. Quarterly Journal of Economics, 117(1), 339-376.
- [10] Butera, F. (2017). Industry 4.0 as participatory design of networked sociotechnical systems. Industry.
- [11] Butera, F. (2017). Work and organization in the Fourth Industrial Revolution: the new socio-technical design. L'Industria, Rivista di economia e politica industriale, Il Mulino, 3, 291-316.
- [12] Chinn, M. D., & Fairlie, R. (2007). The Determinants of the Global Digital Divide: A Cross-Country Analysis of Computer and Internet Penetration. Oxford Economic Papers, 59, 16-44.
- [13] Cimoli, M., Dosi, G., Nelson, R., & Stiglitz, J. (2006). Institutions and Policies Shaping Industrial Development: An Introductory Note. LEM Papers Series, 2006/02, Sant'Anna School of Advanced Studies, Pisa, Italy.
- [14] Costa, G., & Gianecchini, M. (2019). Human resources, people, relationships and value. Mc Graw Hill.

[15] Crenshaw, E. M., & Robinson, K. K. (2006). Globalization and the Digital Divide: Roles of Structural Conduciveness and Global Connection in Internet Diffusion. Social Science Quarterly, 87, 190-207.

- [16] Dahlman, C., & Nelson, R. (1995). Social Absorptive Capability, National Innovation Systems and Economic Development. In B. Koo & D. Perkins (Eds.), Social Capability and Long Term Economic Growth (pp. 82-122). London: Macmillan.
- [17] Dasgupta, S., Agarwal, D., Ioannidis, A., & Gopalakrishnan, S. (1999). Determinants of Information Technology Adoption: An Extension of Existing Models to Firms in a Developing Country. Journal of Global Information Management, 7(3), 30-40.
- [18] Damioli, G., Van Roy, V., & Vertesy, D. (2021). The impact of artificial intelligence on labor productivity. Eurasian Business Review.
- [19] Frey, C. B., & Osborne, M. (2013).
- [20] Ghobakhloo, M., Sabouri, M. S., Hong, T. S., & Zulkifli, N. (2011). Information technology adoption in small and medium-sized enterprises; An appraisal of two decades literature. Interdisciplinary Journal of Research in Business, 1(7), 53-80.
- [21] Kraus, S., Breier, M., & Dasí-Rodríguez, S. (2020). The art of crafting a systematic literature review in entrepreneurship research. International Entrepreneurship and Management Journal, 1-20.
- [22] McKinsey Global Institute (2017). Job Lost, Job Gained, workforce transitions in a time of automation.
- [23] McKinsey Global Institute (2018). Skills Shift Automation and the future of the workforce.
- [24] McKinsey Global Institute (2020). The Future of Work in Europe. Discussion Paper.
- [25] McKinsey Global Institute (2021). The Future of Work After COVID-19.
- [26] Micic, L. (2017). Digital transformation and its influence on GDP. Economy, 5(2), 135-147.
- [27] OECD (2018). Job Creation and Local Economic Development. Preparing for the Future of Work.
- [28] Simon, H. A. (1969). The Sciences of the Artificial. Cambridge, MA: MIT Press.
- [29] Snow, C., Miles, R. E., & Coleman, J. H. (1992). Managing 21st Century Network Organizations. Organizational Dynamics, 21(4), 5-20.
- [30] Telegescu, T. (2018). IT in the workspace The need for digital transformation. From Gruyter Open.
- [31] Timmers, P. (1998). Business models for electronic markets. Electronic Markets, 8, 3-8.
- [32] Timothy, F., & Bresnahan, S. G. (2013). Technological Competition and the Structure of the Computer Industry. The Journal of Industrial Economics. https://doi.org/10.1111/1467-6451.00088.
- [33] Tranfield, D., Denyer, D., & Smart, P. (2003). Towards a methodology for developing evidence-informed management knowledge by means of systematic review. British Journal of Management, 14(3), 207-222.
- [34] Trequattrini, R. (2008). Knowledge and business economics. Elements of theory. ESI, Naples.

- [35] World Manufacturing Forum (2019). Skills for the Future of Manufacturing
- [36] It was a miracle, but human Il Sole 24 ORE, accessed on 30.11.2023;
- [37] Labour market information: Italy (europa.eu), accessed on 30.11.2023;
- [38] The International Standards of Accounting Education (IFAC): https://ceccar.ro/ro/?p=14634, accessed on 04.12.2024;
- [39] The Digital Economy and Society Index 2023 (DESI): https://digital-strategy.ec.europa.eu/ro/policies/desi, accessed on 04.11.2024.