

Martinčević, Ivana; Primorac, Dinko; Bilić, Irena

Article

Sustainable Accounting in the Function of Sustainable Development

ENTRENOVA - ENTERprise REsearch InNOVation

Provided in Cooperation with:

IRENET - Society for Advancing Innovation and Research in Economy, Zagreb

Suggested Citation: Martinčević, Ivana; Primorac, Dinko; Bilić, Irena (2025) : Sustainable Accounting in the Function of Sustainable Development, ENTRENOVA - ENTERprise REsearch InNOVation, ISSN 2706-4735, IRENET - Society for Advancing Innovation and Research in Economy, Zagreb, Vol. 10, Iss. 1, pp. 299-316,
<https://doi.org/10.54820/entrenova-2024-0025>

This Version is available at:

<https://hdl.handle.net/10419/317968>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



<https://creativecommons.org/licenses/by-nc/4.0/>

Sustainable Accounting in the Function of Sustainable Development

Ivana Martinčević

University North, Croatia

Dinko Primorac

University North, Croatia

Irena Bilić

Algebra University, Croatia

Abstract

The very concept of business sustainability includes the economic success of the company and its social responsibility, while simultaneously protecting human and natural resources. The basic purpose of organizations is high-quality, reliable, and comprehensive reporting, which contributes to improving transparency and better management. Businesses today are experiencing a transition from traditional accounting to sustainable accounting. Sustainable accounting is the practice of measuring, analyzing, and reporting a company's social, environmental, and governance impacts. Today businesses need accountants trained to accurately and comprehensively measure sustainability. To research and review novelties in the field of sustainable accounting numerous world literature has been researched. In this research, papers within the Scopus databases were used to gather information on the research topic which shows that a large number of authors have researched the area of sustainable development. Still, there is insufficient correlation and connection between sustainable accounting and sustainable development. A search of Scopus using the following approach (TITLE-ABS-KEY ("sustainable accounting") AND TITLE-ABS-KEY ("sustainable development")) resulted in 47 scientific papers. From the aspect of sustainable development, it is essential to measure and report information regarding sustainability through sustainable accounting.

Keywords: accounting, sustainable accounting, sustainable development, reporting, corporate reporting

JEL classification: M00, M21, M40

Paper type: Research article

Received: 11 June 2024

Accepted: 29 August 2024

DOI: 10.54820/entrenova-2024-0025

Acknowledgments: The authors are thankful to the internal grant of University North, ""Entrepreneurship and management in modern business" UNIN – DRUŠ- 24-1-3, for financial support to carry out this research.

Introduction

As part of the initiative for sustainable development of the economy, three basic groups of goals have been determined that are being attempted to be achieved. These are environmental, social, and governance goals abbreviated ESG. Today, companies should develop and operate in a sustainable and green society with the least possible negative impact on the environment. At the global level, it is necessary to awaken and develop an awareness of the need to accept the concept of sustainable development. At the global level, it is necessary to further strengthen and develop awareness of the need to accept the concept of sustainable development. The application of the concept of sustainable development is essential in achieving a balance between the economic, social, and environmental demands of the globalized market, which is faced daily with unemployment, migration, climate change, poverty, etc.

Along with the very concept of sustainability, sustainable accounting, and related accounting practices have an increasing importance and role in modern business with the main task and goal, which is the harmonization of financial success with the environmental and social responsibility of the company. Sustainable accounting goes beyond traditional accounting precisely through integrated reporting on social, environmental, and economic issues in making business decisions. The goal and task of sustainable accounting is to align corporate strategies with global sustainability goals, i.e. with the United Nations Sustainable Development Goals (SDG). Information on environmental, social, and governance areas and their connection with financial benefits and negative effects helps organizations identify potential risks and manage them in favor of sustainability. Achieving transparent and responsible reporting through sustainable accounting policies contributes to the creation of good relations with all potential stakeholders by providing information on the company's environmental, social, and governance (ESG) performance.

This paper aims to investigate and determine the sustainable accounting and concept of sustainable development, and its connection. The aim is to examine the level of importance of sustainable accounting in business organizations that orient their business and focus on achieving sustainable growth and development.

This paper is sectioned into three parts. The first part of the paper is dedicated to understanding basic terms related to sustainable accounting and sustainable development. In this first part, knowledge about sustainable accounting and sustainable development is presented. The second part of the paper represents the used methodology, literature review, and research results. Lastly, the third part represents the conclusion. In our research, we focus on papers in the fields of sustainable accounting and sustainable development but most importantly, we focus on the importance of sustainable accounting in achieving sustainable development.

The concept of sustainable development and sustainable accounting

Sustainable development

In accordance with the constant development of society and the related changes that concern both society and the companies themselves, we encounter the terms sustainable development and sustainable accounting increasingly. The development of very concept of sustainable development has emerged in recent years and is increasingly being incorporated into all aspects, both social and business, because individuals and companies alike are becoming more aware of the impact of human and business activities on the environment. "Sustainable development is (balanced development, sustainable development) economic development that fully takes into account the impact of economic activity on the environment and is based on renewable sources of goods" (Hrvatska Encyclopedia, 2013-2024). The very concept of sustainable development was mentioned for the first time in the Brundtland report of the World Commission on Environment and Development in 1987. What sustainable development strives for and fights for is solving the problem of climate change, transitioning to a low-carbon economy, encouraging innovation and entrepreneurship, and promoting equal opportunities, access to jobs, education, and health care, as well as social protection. Appreciating what sustainable development is, which is ensuring the environmental, social, and economic components of sustainability to meet the needs of all market stakeholders without endangering future generations. The concept of sustainable development is based on three pillars: economic, social, and environmental, and all three are interdependent and must be balanced to achieve sustainable development. „The essence of the concept of sustainable development derives from the Triple bottom line concept, which implies the balance between three pillars of sustainability – environmental sustainability focused on maintaining the quality of the environment which is necessary for conducting the economic activities and quality of life of people, social sustainability which strives to ensure human rights and equality, preservation of cultural identity, respect for cultural diversity, race and religion, and economic sustainability necessary to maintain the natural, social and human capital required for income and living standards" (Klarin, 2018).

Sustainable development requires the participation and involvement of all stakeholders to pursue and develop sustainable practices and invest in renewable energy and sustainable technologies. To ensure sustainable development, Agenda 2030 was adopted in 2015 as one of the most important programs on sustainable development, which at the center of the program itself has 17 goals and 169 targets of sustainable development (Sustainable Development Goals - SDGs), which called on countries to focus their business on "people, planet, prosperity, peace, and partnership" and thus contribute to long-term sustainable growth and development. The main challenge of the Agenda 2030 is to achieve and ensure an integrated approach to sustainable development, which requires the establishment of new governance frameworks to achieve the management of systemic transformations (Weiland et al., 2021). Likewise, in addition to aiming to achieve sustainable development, the Sustainable Development Goals (SDGs) will lead to profound changes in each of the countries with a series of complementary actions by the government, civil society, science, and business (Sachs et al., 2019). In a such context of achieving sustainable development, Europe has its green goal to become "the first climate-neutral continent in the world" by 2050, which is regulated under the EU

Climate Law (European Commission, 2023). In addition to states' adherence to and implementation of the Agenda, consistent implementation of national and local sustainable development strategies is important to promote sustainable development priorities and foster national economic prosperity (Metcalf & Benn, 2013). To ensure sustainable development, we encounter the term sustainable leaders who focus on sustainable changes and long-term sustainable results and look for a broader context in achieving the SDGs (Hallinger & Suriyankietkaew, 2018). According to the authors, Al-Zawahreh et al. (2019) sustainable leadership is a key factor in the development of organizational learning. However, the author Burawat (2019) believes that sustainable leaders and sustainable leadership are in their infancy, which requires the expansion of this area in the scientific literature and is related to the very concept of sustainable development, where he believes that it is necessary to investigate the relationship between sustainable leadership and sustainable performance.

Sustainable development is a kind of model where, in the application of development policies, the entire economy, as well as companies and individuals, strive to find and apply new and innovative technologies to protect nature and preserve the environment, economic efficiency, and social responsibility (social progress). The authors (Silvestre and Țircă, 2019) believe that innovation is key to the process of transformation from individuals, organizations, supply chains, and communities towards a sustainable future. Sustainable development requires the involvement of governmental and non-governmental organizations and all other stakeholders in the creation of development policies, their application, and the achievement of results. We can claim that the concept of sustainable development is one of the biggest challenges for organizations today, precisely because of the inclusion of social, societal, and environmental topics in their corporate strategies and operational routines (Bebbington et. al., 2020). Achieving sustainable development also means achieving a sustainable society, which is not easy, therefore coordination and cooperation between different disciplines and sectors is necessary to achieve this (Broman and Robèrt, 2017). Sustainable development should first of all be the basis and framework for shaping business policies and strategies through which economic and social progress will be pursued while respecting, respecting and using natural sources of current and future damage to the environment. The concept of sustainable development is not a project or a defined task, but rather a process that must be part of everyday business.

Sustainable accounting

An indispensable segment of good management certainly lies in accounting, i.e. accounting data management. The main and key role of accounting is the collection, processing, interpretation, and publication of data related to the organization's operations, but also participation in the creation and making of business decisions based on accounting data. Therefore, accounting is part of the accounting information system that records all business activities by measuring their performance, which should be of high quality, reliable, and accurate to serve managers in the decision-making and management process. The modern and globalized economy, stimulated by the direction of sustainable development, creates changes in accounting itself, creating the so-called sustainable or green accounting. The importance of sustainability reporting and providing sustainability data through sustainable accounting is emphasized in the EU strategies themselves, the EU Sustainable Financing Strategy and the European Green Deal (European Commission, 2018, 2019), which emphasize the importance of sustainability reporting to achieve long-term sustainability and appropriate environmental risk management.

Sustainable or green accounting can be defined as a new and modern form of accounting whose purpose is to provide data and information about the economic effects of business decisions (Perišić, 2007). Sustainable accounting is also known as environmental, social, and governance (ESG) accounting. Furthermore, it provides transparent information on the use of materials and energy, on changes in the structure of environmental costs, that is, on all segments and management activities that affect the improvement and environmental protection of the business system (Perišić, 2007). Therefore, the key role, task, and goal of sustainability, i.e. green accounting, is reporting on the impact of business processes on the environment. As a segment of managerial accounting, the goal and task are to provide information for the management of "eco-resources (green accounting of resources), eco-costs (green accounting of costs) and eco-segments (green accounting of responsibilities)" (Perišić, 2007). Therefore, sustainable accounting consolidates and secures data, both financial and non-financial, for internal as well as external stakeholders. Along with the aspiration to orientate businesses towards sustainable ways of doing business, sustainable accounting practices are gaining more and more importance as a key tool for integrating and unifying environmental, social, and governance (ESG) factors in financial reporting and decision-making processes. Therefore, we are talking here about integrated reporting, i.e. sustainable reporting, which is necessary and can be implemented through the system of activities for which the so-called socially responsible business manager (Argento et al., 2019). Integrated reporting as the final product of sustainable accounting should achieve and provide transparent information, both regarding the management of the company from the financial aspect and in terms of environmental issues, all with the aim of long-term business sustainability. The key role of sustainable accounting is certainly to contribute to good practices of corporate sustainability in addition to stimulating accounting professions in achieving organizational sustainability (Egan & Tweedie, 2018). Along with the importance of financial data and financial reporting and their transparency, reality, and objectivity, the accounting profession through practice emphasizes the importance of accountability and the verifiability of environmental and social information in annual reports (Bose et al., 2019). Sustainable accounting (ecological, green, or social accounting) goes beyond traditional accounting precisely in the way that the focus of reporting, in addition to financial data, includes and deals with non-financial data, i.e. the organization's impacts and dependencies on the environment, society, and economy. The authors Laine et al. (2021) believe that in today's global society and business, traditional accounting techniques and systems are not sufficient to manage the modern sustainability challenges that our societies and companies face. „Traditional financial accounting does not recognize the economic concept of an externality, that is, the costs and benefits incurred by an unrelated third party as a side effect of a transaction between two parties" (Zyznarska-Dworczak, 2020). About the goal of realizing and achieving sustainability, i.e. sustainable development through the UN Sustainable Development Goals, and all in the interest of sustainable business operations of companies and society, sustainability accounting plays a major role where radical transformations in the accounting model itself and its responsibilities are expected and demanded (Adams & Larrinaga, 2019). The integration and application of sustainable accounting practices enable organizations to develop strategies and manage risks associated with sustainability factors (natural disasters, social and social inequality).

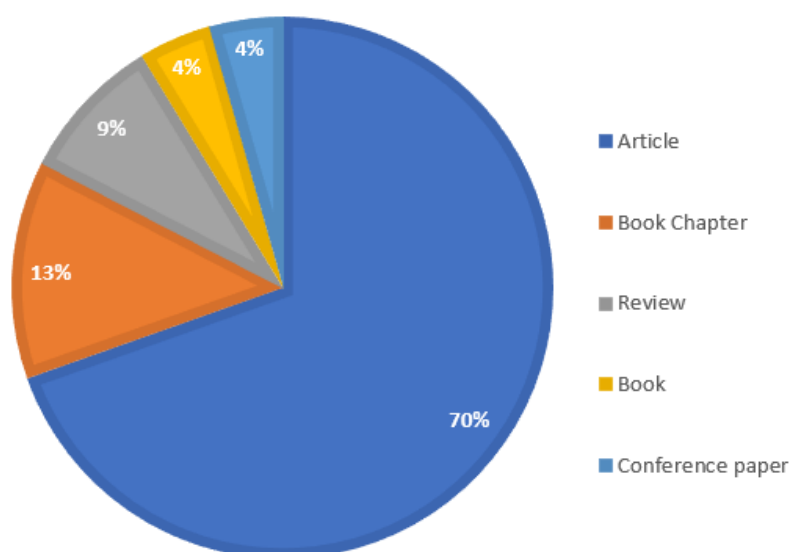
Methodology

To investigate the importance of this area, sustainable development, and sustainable accounting, the literature within the Scopus database was investigated. The literature research showed that the area and topic of sustainable accounting is insufficiently researched. Although the field of sustainable development is today the topic of research by many authors, its correlation and connection with sustainable accounting is minimal and insignificant. To prove the lack of research in this area, research data from the Scopus database is presented. Research within the Scopus database was created based on the following settings (TITLE-ABS-KEY („sustainable accounting“) AND (ALL FIELDS (sustainable AND development))) resulting in the 47 scientific papers. The presented researched results are grouped into several areas according to (1) documents by type; (2) documents by subject area; (3) documents by year; (4) documents by country/territory; (5) documents per year by source; and (6) documents by author.

The first research results present an investigation of the connection between sustainable accounting and sustainable development. This step resulted in: article (33) book chapter (6) review (4), book (2), and conference paper (2) (Figure 1).

Figure 1

Documents by type investigating sustainable accounting and its connection to sustainable development in the Scopus database (2008 – June 2024)

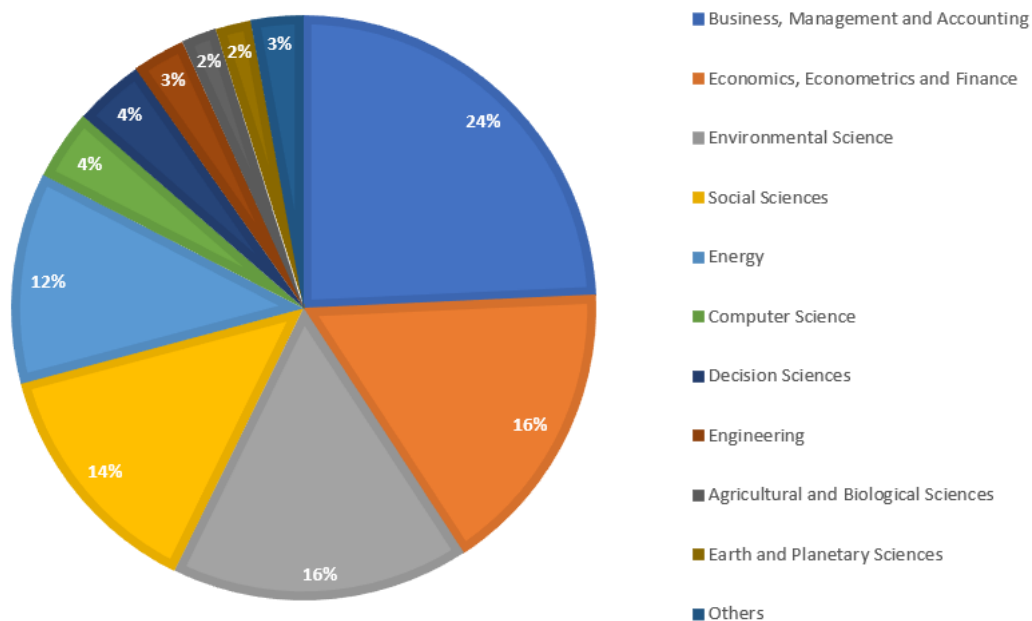


Source: authors (2024)

The research area of the research that connects sustainable accounting to sustainable development regards the period from 2008 to June 2024., and includes various subject areas (Figure 2). Figure 2. presents the documents by subject area exploring sustainable accounting and its connection to sustainable development in the period from 2008 to June 2024 in the Scopus database. Most of the papers belong to the subject areas of Business, Management, and Accounting (25), Economics, Econometrics and Finance and Environmental Science (each 17), Social Sciences (14) and Energy (12). Other areas have fewer than 10 papers.

Figure 2

Documents by subject area exploring sustainable accounting and its connection to sustainable development in the Scopus database (2008 - June 2024)

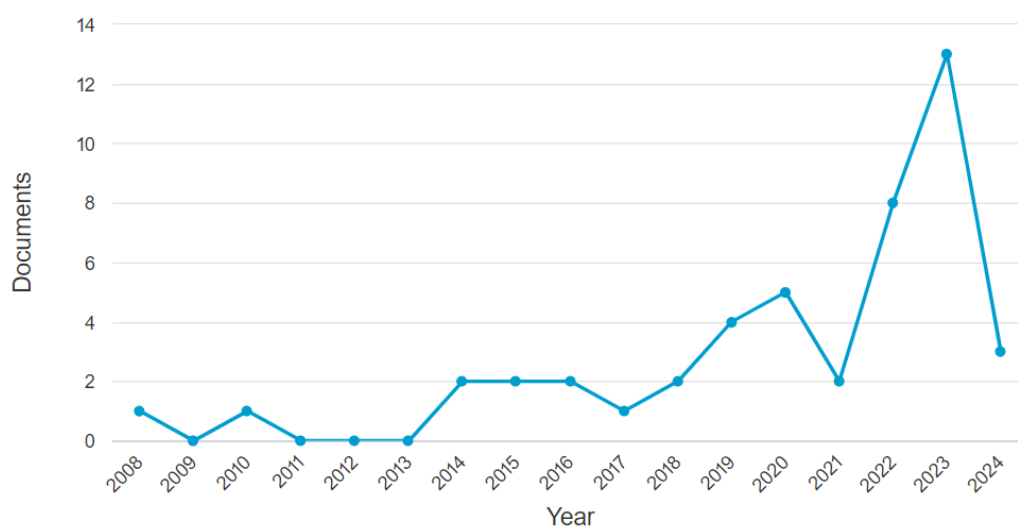


Source: authors (2024)

The number of papers that investigate sustainable accounting and its connection to sustainable development has increased substantially in 2023 (13 papers). A growing trend is noticeable in 2019 (4), 2020 (5 papers), 2022 (8 papers), 2020 (5 papers), 2021 (2 papers), and June 2024 (3 papers) (Figure 3). Still, there is an evident lack of research that explores sustainable accounting and links it to sustainable development.

Figure 3

Number of papers investigating sustainable accounting and its connection to sustainable development in the Scopus database (2008 - June 2024)

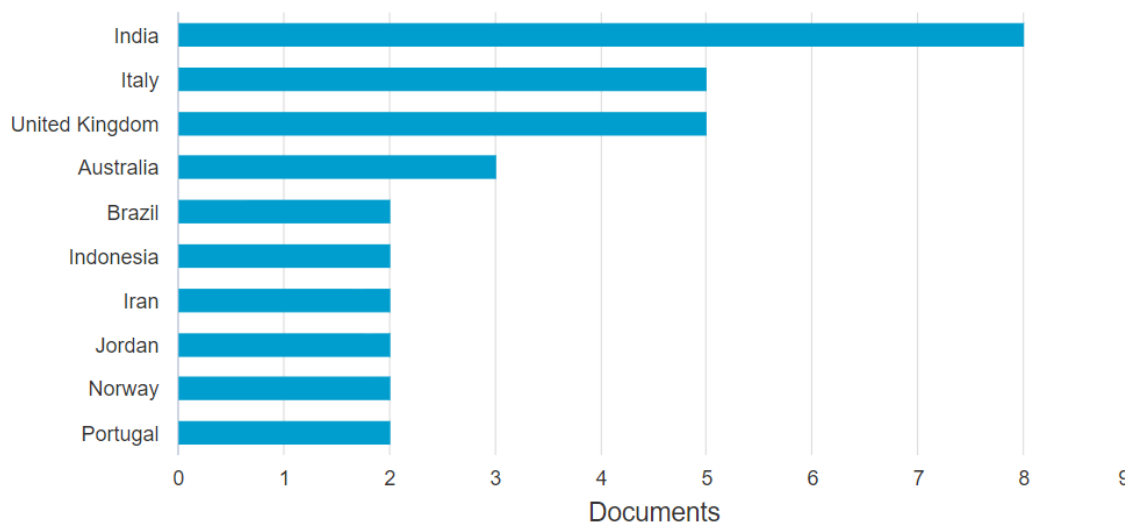


Source: authors (2024)

Most of the research papers were from India (8), Italy and the United Kingdom (each 5), Australia (3), Brazil, Indonesia, Iran, Jordan, Norway and Portugal (each 2). Other countries that explore research areas have less than 2 papers per country (Figure 4).

Figure 4

Country of origin of the authors investigating sustainable accounting and its connection to sustainable development in the Scopus database (2008 - June 2024)

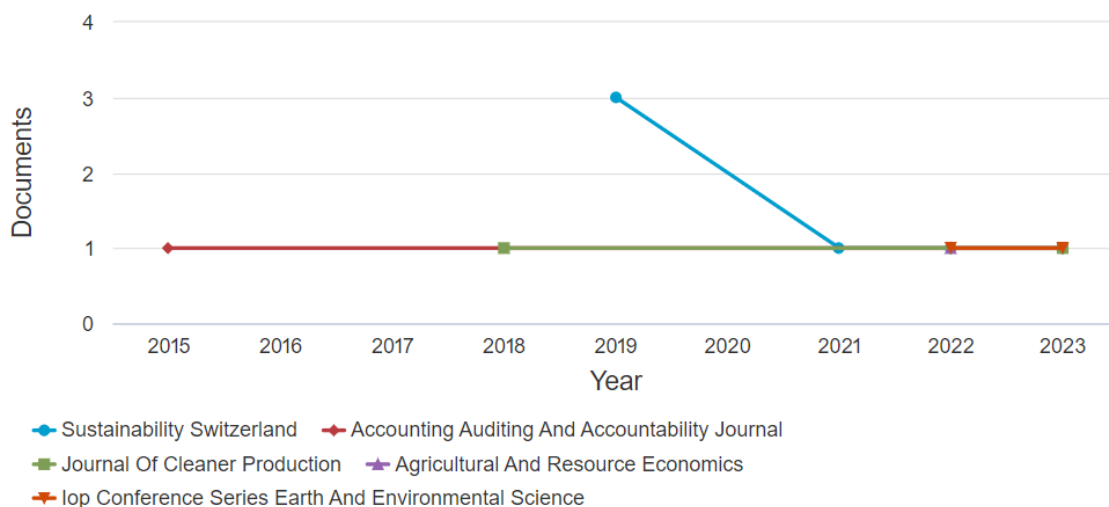


Source: authors (2024)

Figure 5 presents the journals that published papers investigating sustainable accounting and its connection to sustainable development. As seen in Figure 5, the growing trend of papers started in 2008, having increased since 2019. The largest number of papers were published in Sustainability Switzerland (6), Accounting Auditing And Accountability Journal, Iop Conference Series Earth And Environmental Science, and Journal Of Cleaner Production (each 2). Other journals have published only one (1) paper on the research topic.

Figure 5

The journals that published papers investigating sustainable accounting and its connection to sustainable development in the Scopus database (2008 - June 2024)

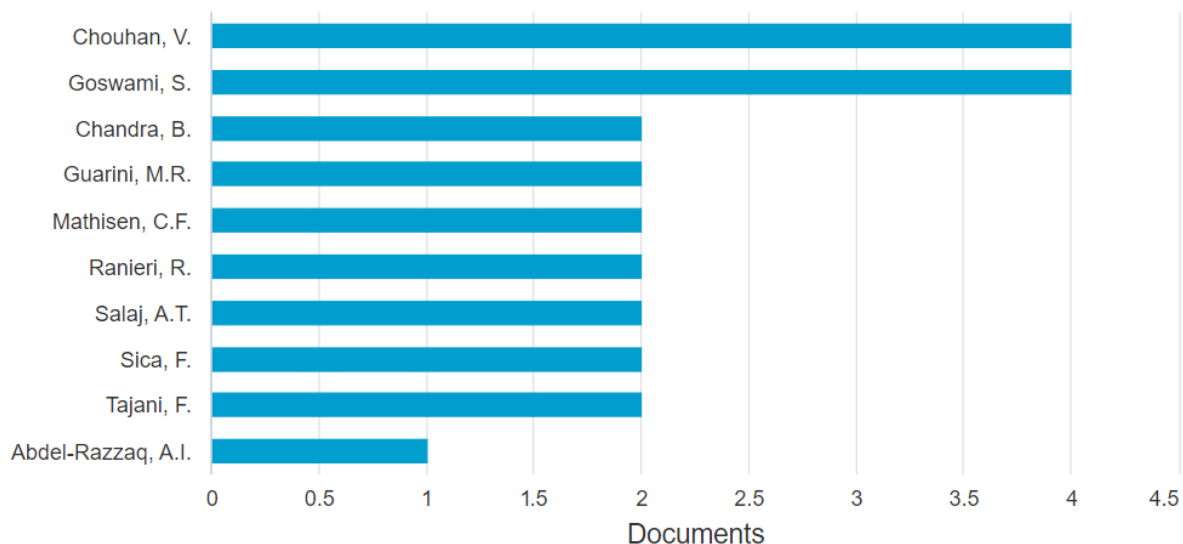


Source: authors (2024)

Regarding authors who deal the most with the research topic and explore sustainable accounting and its connection to sustainable development are Chouhan, V. and Goswami, S. (each 4), Chandra, B., Guarini, M.R, Mathisen, C.F, and others (2 and less). (Figure 6).

Figure 6

Documents by the authors investigating sustainable accounting and its connection to sustainable development in the Scopus database (2008 - June 2024)



Source: authors (2024)

The presented research results show that there are not enough researchers who recognize the importance of sustainable accounting for the sustainable development of the organization, as shown by insufficient data and an insufficient focus in this direction.

Results

Concept and Goals of Sustainable Accounting Regarding Sustainable Development

As the previous chapter shows, there is a visible lack of connection between sustainable accounting and sustainable development. Although a large number of authors study sustainable development and sustainable accounting, their link is still not strong enough. Today, it is imperative to achieve long-term sustainable growth and development of society and companies with an emphasis on achieving and satisfying the ESG concept. Companies respecting the ESG concept in their reporting according to the new directives analyze and inform the public how they deal with climate change and what effects they create on the environment, what kind of relationship they have with employees, clients, suppliers, what kind of corporate culture and management, and the like. The importance of sustainable reporting stems from sustainable accounting in contributing to the achievement of sustainable development. Today there is great pressure but also a great challenge for managers in terms of finding ways to build sustainability into business processes to achieve the goals of sustainable development.

The issue of sustainable accounting and its connection to sustainable development is an area that is not sufficiently researched. This research reveals 46 papers that

connect sustainable accounting and sustainable development. To investigate the area of sustainable accounting in selected papers that are connected to sustainable development, key areas of sustainable accounting are presented (Table 1). Research on sustainable accounting and sustainable development covers various areas, but only a few research areas such as sustainable accounting in education, artificial intelligence, and digital transformation, aligned to ESGs, aligned to SDGs, general data, reporting, standards & framework within sustainable development. (Table 1).

Table 1

Investigated papers in the Scopus database regarding the research approach of Sustainable Accounting in the function of sustainable development

Research approach	Paper ID	#of papers
Sustainable accounting – education (Higher education)	1, 26, 15, 27	4
Sustainable accounting – artificial intelligence, digital transformation, Industry 4.0	2, 30, 15, 26, 27, 31	6
Sustainable accounting aligned to ESG's	– 3, 5, 6, 14,15, 17,18, 19, 20, 21, 25	11
Sustainable accounting aligned to SDG's	– 2, 3, 4, 7, 8, 14, 26	7
Sustainable accounting general data	– 12, 19, 34, 35, 46,	5
Sustainable accounting reporting	– 4, 9, 13, 15, 19, 22, 24, 25, 28, 33, 35, 36, 37, 40, 43, 44, 45	17
Sustainable accounting standards & framework	– 13, 16, 23, 28, 33, 36, 37, 40, 41	9
Sustainable accounting accounting ethics	– 30	1
Sustainable accounting taxation	– 31	1
Sustainable accounting - green financing system	38, 42	2
Sustainable accounting - social and environmental accounting (SEA), Environmental Management Systems (EMS), sustainability management accounting (SMA), environmental management accounting (EMA), System of Environmental-Economic Accounting (SEEA)	10, 11, 15, 19, 27, 29, 32, 39,47	9

Source: authors (2024)

The importance of understanding sustainable accounting in the context of student education and related to sustainable development has so far little reflection and research in this regard. Only the authors Hadi and Abdel-Razzaq (2024), and García and de los Ríos (2021) explore new techniques in terms of sustainable accounting and

focus on the development of new accounting skills considering the complexity of this professional field. The authors da Silva Neiva et al. (2021) believe that higher education institutions have an important role and task in promoting but also achieving sustainable development in the context of collecting and presenting sustainable data resulting from accounting. Furthermore, the importance of the accounting profession is also evident through the professional ethics of accountants. Therefore, in connecting sustainability and the development of sustainable accounting, a sustainable accounting model was developed that consists of four constructs, including personal, social, economic-organizational, and environmental factors (Namazi and Rajabdorri, 2020). The aforementioned model confirms that the development of accounting ethics is supported by personal, social, economic-organizational, and environmental factors and are interconnected and maintain appropriate alignment (Namazi and Rajabdorri, 2020). Appreciation of the importance of sustainable accounting in the context of sustainable development is manifested through the research of Alrowwad et al. (2022) which determines the categories of sustainability accounting and the concept of its reporting in the form of information resulting from the performance of economic, social and environmental activities. By defining the categories of sustainable accounting, the reporting obligation also arises, which also needs to be harmonized according to different criteria and metrics, all to measure the ecological and social initiative in monetary terms, which is limited in the current sense of reporting (Chouhan & Goswami, 2022). Defining the approach and concept of the factors themselves when measuring sustainable (ecological) accounting, such as managerial perceptions of costs and benefits, changes in the environment, characteristics of the scope of production, and business activities of companies, have as elements of reporting a great influence on the development of sustainable (ecological) accounting for sustainable development (Giang et al., 2020).

How important digital technology is and the benefit it provides is also visible in terms of sustainable accounting, and in the context of sustainable development, but still insufficient and currently insufficient. Tavers et al. (2024) reveal the importance of artificial intelligence in the development of sustainable accounting, in the transition from traditional to new, faster, and better ways of collecting information in organizational decision-making, but also promoting responsible reporting and strengthening sustainable practices worldwide.

The connection between sustainable accounting and ESG is presented through research that examines the gender diversity of boards and the influence of women directors on ESG performance, which aims to expand the understanding of the relationship between gender diversity in boards and sustainable accounting and finance (Issa & Hanaysha, 2023). A study by Alakkas et al. (2023) proves that the adoption and application of sustainability accounting can greatly contribute to the achievement of sustainable development goals (SDGs) as one of the key tools, and precisely the adoption of sustainable (ecological) accounting shows greater environmental efficiency in companies. The link between Sustainability Management Accounting (SMA) and Environmental Management Systems (EMS) has also been proven as important tools for promoting the SDGs (Pramono et al., 2023).

Sustainable accounting plays a big role as a prerequisite for achieving sustainable business, and where the 2030 Agenda itself gave an incentive to the use of accounting practices to achieve the goals of sustainable development (Magliacani, 2023). Likewise, sustainable accounting (often in practice green accounting or environmental accounting) provides the analysis, study, and measurement of the control, valuation, and management of natural resources from an accounting

perspective, and is, therefore, an important tool for achieving sustainable development of a company (Alakkas et al., 2023). Sustainable accounting has proven to be a key tool for disclosing information related to environmental sustainability in Asian countries (Wahyuningrum et al., 2023). Several authors who link sustainable accounting and sustainable development combine the same through the fulfillment of the SDGs. Sustainable accounting is of great importance in promoting the SDGs, especially in the manufacturing industry in developing countries (Pramono, 2023).

The connection between sustainable accounting and sustainable development

Although the area of the connection between sustainable accounting and sustainable development is insufficiently connected according to previous research, there are still several key elements that connect them. Table 1. shows the areas and elements between which sustainable accounting and sustainable development are connected, which are areas related to higher education, new and digital technologies, ESG, SDG, reporting, standards & framework, accounting ethics, taxation, green financing system, social and environmental accounting (SEA), Environmental Management Systems (EMS), sustainability management accounting (SMA), environmental management accounting (EMA), System of Environmental-Economic Accounting (SEEA).

When reporting is mentioned and its connection with sustainable accounting and sustainable development, it is important to mention triple bottom reporting (TBL): "TBL refers to a framework for measuring and reporting on a company's business results according to economic, social and environmental parameters" (Dwyer, 2015:35). "The Triple Bottom Line (TBL) idea is increasingly gaining a place in the management of companies and other organizations because TBL captures the essence of sustainable development by measuring the company's success" (Fadli, 2021:2). Understanding TBL implies that, in addition to profit, the success of a company is also measured through its impact on people and the entire planet.

Considering the connection between the ESG and SDG concepts, the ESG concept includes three key pillars: environmental, social, and governance, which are key to achieving sustainable development in today's society, while sustainable accounting uses the same principles, i.e. ESG factors, in its reporting. The Sustainable Development Goals (SDGs) represent a global framework that aims to respond to global challenges through the defined 17 goals. Sustainable accounting has a role here in aligning sustainability concepts with sustainable development goals.

One of the key components of today's reporting and presentation of sustainability reports is proving both double materiality and stakeholder involvement. One of the key elements of accounting, and especially of sustainable accounting and sustainability reports, is materiality (double materiality), which implies the definition of material factors that are important to all stakeholders and that can have an impact on the company's operations. In sustainable accounting, stakeholders are a prerequisite for identifying key areas necessary to improve and maintain sustainability. Integrated reporting as an element of sustainable accounting combines financial and non-financial data and creates a so-called sustainability report. Regulation and standardization of sustainability reports are defined through the Corporate Sustainability Reporting Directive (CSRD). Through the sustainability report, sustainable accounting uses defined metrics and indicators on the company's performance according to the observed three dimensions, namely environmental, social, and governance.

Conclusion

The main goal of the paper was to provide a brief and clear overview of sustainable accounting and sustainable development. Sustainable accounting is also known as environmental, social, and governance (ESG) accounting. This accounting concept, in addition to the company's financial results, takes into account and reports on the company's impact on the environment, society, and management practices. One of the main goals of sustainable accounting is to provide information to all interested stakeholders, which is the understanding of non-financial data that represents the long-term sustainability of the company. On the other hand, sustainable development represents a concept, i.e. a holistic approach that seeks to balance environmental, social, and governance aspects to ensure a better, longer-term, and better quality of life. Sustainable accounting and sustainable development are closely related, but still insufficiently researched and connected areas. Traditional accounting is an approach and concept of financial reporting of companies, while sustainable accounting is a new approach in financial reporting that takes into account the social, environmental, and economic impacts of the organization's activities on the environment and society. Sustainable accounting provides a framework for organizations and a new metric and reporting concept to achieve sustainable development. The goal of understanding and applying sustainable accounting is the adoption of sustainable accounting practices to ensure the sustainable future of organizations and society in general and at the same time ensure long-term competitiveness and prosperity. Although the concept of sustainable development is not a new phenomenon, its growth, and development change how companies operate and do business. On the other hand, sustainable accounting is a relatively new moment that arises with the concept of sustainable development to ensure non-financial information and the impact of business activities of companies on society and the environment.

Due to the main goal of this paper, we can highlight the objectives of this article that were provided and proven: (1) the importance of sustainable accounting and its involvement in the business process of today's organizations (2) the importance of sustainable development in achieving long-term sustainable business through three key pillars: environmental, social, governance (ESG), (3) connection between sustainable accounting and sustainable development, (4) a brief literature review of the research literature in these fields. To achieve the set goals, numerous world literature was analyzed, which explores the field of sustainable accounting in the function of sustainable development. However, after providing data it is obvious that the area is insufficiently researched. Lack of research is evident in the context of the connection between sustainable accounting and sustainable development, i.e., a lack of evidence that sustainable accounting is in function of sustainable development. For further research in this area, more efforts should be focused on the mentioned lack of research to start researching the area more and better and to contribute to a better understanding of the importance and connection of sustainable accounting and sustainable development.

APPENDIX

Table 2

List of selected papers

Paper ID	Paper reference
1	Hadi N.U.; Abdel-Razzaq A.I. (2024). Promoting sustainable learning among accounting students: evidence from field experimental design, <i>Higher Education, Skills and Work-based Learning</i> , 14, (2), pp 479 – 491,
2	Tavares M.C.; Azevedo G.; Vale J.; Marques R.; Bastos M.A. (2024). Artificial intelligence approaches sustainable accounting, IGI Global, DOI: 10.4018/979-8-3693-0847-9
3	Sahu M.; Jee K.; Uddin F.; Sani A.; Tiwari S.C. (2024). Mapping the path to sustainable accounting: a DEMATEL-based analysis of key factors influencing effective extended producer responsibility in the circular economy, <i>Journal of Accounting and Organizational Change</i> , Article in press
4	Mishra P.; Sharma A.; Rabbani M.R.; Khan A.; Kumar S. (2024). Sustainable accounting quality and its impact on financial success aligned with SDGs, <i>Journal of Accounting and Organizational Change</i> , Article in press
5	Bigoni M.; Mohammed S. (2023). Critique is unsustainable: A polemic, <i>Critical Perspectives on Accounting</i> , 97, article number 102555
6	Issa A.; Hanaysha J.R. (2023). Breaking the glass ceiling for a sustainable future: the power of women on corporate boards in reducing ESG controversies, <i>International Journal of Accounting and Information Management</i> , 31 (4), pp. 623-646
7	Magliacani M. (2023) How the sustainable development goals challenge public management. Action research on the cultural heritage of an Italian smart city, <i>Journal of Management and Governance</i> , 27(3), pp-987-1015.
8	Alakkas A.A.; Shabir S.; Alhumoudi H.; Boukhris M.; Baig A.; Khan I.A. (2023). The Impact of Sustainability Accounting on Environmental Performance and Productivity: A Panel Data Analysis, <i>International Journal of Sustainable Development and Planning</i> , 18(8), pp.2431-2441.
9	Wahyuningrum I.F.S.; Humaira N.G.; Budihardjo M.A.; Arumdani I.S.; Puspita A.S.; Annisa A.N.; Sari A.M.; Djajadikerta H.G. (2023). Environmental sustainability disclosure in Asian countries: Bibliometric and content analysis, <i>Journal of Cleaner Production</i> , 411, article number 137195
10	Pramono A.J.; Suwarno; Amyar F.; Friska R. (2023). Sustainability Management Accounting in Achieving Sustainable Development Goals: The Role of Performance Auditing in the Manufacturing Sector, <i>Sustainability (Switzerland)</i> , 15 (13), article number 10082
11	Baker M.; Gray R.; Schaltegger S. (2023). Debating accounting and sustainability: from incompatibility to rapprochement in the pursuit of corporate sustainability, <i>Accounting, Auditing and Accountability Journal</i> , 36 (2), pp. 591-619
12	Sica F.; Tajani F.; Guarini M.R.; Ranieri R. (2023). A Sensitivity Index to Perform the Territorial Sustainability in Uncertain Decision-Making Conditions, <i>Land</i> , 12(2), article number 432
13	Mawani A. (2023). MNEs' Incentives Under a Global Minimum Tax Based on Accounting Standards, <i>Canadian Tax Journal</i> , 17(2), pp.489-516
14	Singh P.; Kushwaha R.; Kushwaha J. (2023). Analyzing Accountability of Weather Index Insurance Service in Attainment of Sustainable Development Goals: A Sustainable Accounting Perspective Review, <i>Contributions to Management Science</i> , pp.221-250
15	Kalbouneh A.; Aburisheh K.; Shaheen L.; Aldabbas Q. (2023). The intellectual structure of sustainability accounting in the corporate environment: A literature review, <i>Cogent Business and Management</i> , 10(2), article number 2211370

- 16 Salaj A.T.; Bjorberg S.; Mathisen C.F.; Akbarinejad T. (2023). Establishing a new housing cooperative sustainable accounting standard as a tool for increasing the sustainable refurbishment practices, IOP Conference Series: Earth and Environmental Science, 1176 (1), article number. 12041
- 17 Weston P.; Nnadi M. (2023). Evaluation of strategic and financial variables of corporate sustainability and ESG policies on corporate finance performance, Journal of Sustainable Finance and Investment, 13 (2), pp.1058-1074.
- 18 da Silva Morales Ú.; Rotta M.A.; Fornari D.C.; Streit D.P., Jr. (2022). Aquaculture Sustainability Assessed by Emergy Synthesis: The Importance of Water Accounting, Agriculture (Switzerland), 12(11), article number 1947.
- 19 Alrowwad A.M.; Alhasanat K.A.; Sokil O.; Halko S.; Kucherkova S. (2022). SUSTAINABLE TRANSFORMATION OF ACCOUNTING IN AGRICULTURE, Agricultural and Resource Economics, 8(2), pp. 5-29
- 20 Al-Abrow H.; Ali J.; Alnoor A. (2022). Multilevel Influence of Routine Redesigning, Legitimacy and Functional Affordance on Sustainability Accounting: Mediating Role of Organizational Sense-making, Global Business Review, 23(2), pp.287-312
- 21 Tajani F.; Guarini M.R.; Sica F.; Ranieri R.; Anelli D. (2022). Multi-Criteria Analysis and Sustainable Accounting. Defining Indices of Sustainability under Choquet's Integral, Sustainability (Switzerland), 14(5), article number 2782
- 22 Chouhan V.; Goswami S. (2022). Developing a Sustainable Accounting Framework in the Indian Cement Industry vis-a-vis Manger Perspectives, International Journal of Social Ecology and Sustainable Development, 13(6)
- 23 Lous M.; Lund S.; Mathisen C.F.; Bjørberg S.; Valen M.S.; Salaj A.T.; Diaconu M. (2022). Sustainable accounting standard for increasing sustainable refurbishment projects, IOP Conference Series: Earth and Environmental Science, 1101(6), article number 62029
- 24 Chouhan V.; Goswami S. (2022). Developing a Sustainable Accounting Reporting Adoption Framework: A Study on Indian Cement Industry, Emerging Trends in Decision Sciences and Business Operations, pp.187-195
- 25 Shrivastava A.; Shekar M.C.; Rebecca K.S. (2022). Sustainable Accounting Practices, Infrastructure Development – Theory, Practice and Policy: Sustainability and Resilience: 2021 Conference Compendium, pp.69-76
- 26 García J.L.; de los Ríos I. (2021). Model to develop skills in accounting students for a 4.0 industry and 2030 agenda: From an international perspective, Sustainability (Switzerland), 13(17), art.no.9699
- 27 da Silva Neiva S.; de Amorim W.S.; Deggau A.B.; de Lima R.G.; do Livramento Gonçalves G.; Ceci F.; Birch R.S.; de Andrade Guerra J.B.S.O. (2021). Sustainable development in higher education institutions: Accounting for sustainability in higher education institutions by a data mining analysis of publications, World Sustainability Series, pp.521-540
- 28 Chouhan V.; Chandra B.; Saraswat P.; Goswami S. (2020). Developing sustainable accounting framework for cement industry: Evidence from India, Finance India, 34 (4), pp.1459-1474
- 29 Capusneanu S.; Topor D.I.; Stefan Hint M.; Ionescu C.A.; Coman M.D.; Paschia L.; Gudanescu Nicolau N.L.; Ivan O.R. (2020). Mathematical model for identifying and quantifying the overall environmental cost, Journal of Business Economics and Management, 21(5), pp.1307-1328
- 30 Namazi M.; Rajabdorri H. (2020). A mixed content analysis model of ethics in the accounting profession, Meditari Accountancy Research, 28(1), pp. 117-138
- 31 Purcinelli L.M.; Abreu R.; Vasconcelos A.L. (2020). Sustainable and Smart System: Rethinking Accounting and Taxation in Portugal, Approaches to Global Sustainability, Markets, and Governance, pp.69-79
- 32 Giang N.P.; Binh T.Q.; Thu Thuy L.T.; Ha D.N.; Loan C.H. (2020). Environmental accounting for sustainable development: An empirical study in Vietnam, Management Science Letters, 10(7), pp.1613-1622.

- 33 Demir M.; Min M. (2019). Consistencies and discrepancies in corporate social responsibility reporting in the pharmaceutical industry, *Sustainability Accounting, Management and Policy Journal*, 10(2), pp.333-364
- 34 Lee N.; Lee J. (2019). Differentiation strategy, R&D intensity, and sustainability of accounting earnings: With a focus on biotech firms, *Sustainability (Switzerland)*, 11(7), art.no.1902
- 35 Vitale G.; Cupertino S.; Rinaldi L.; Riccaboni A. (2019). Integrated management approach towards sustainability: An Egyptian business case study, *Sustainability (Switzerland)*, 11(5), art.no. 1244
- 36 Lee W.J. (2019). Toward sustainable accounting information: Evidence from IFRS adoption in Korea, *Sustainability (Switzerland)*, 11(4), art.no. 1154
- 37 Vallišová L.; Černá M.; Hinke J. (2018). Implementation of sustainability aspects in the financial reporting system: An environmental accounting standard, *Economic Annals-XXI*, 173, pp.55-59
- 38 Ng A.W. (2018). From sustainability accounting to a green financing system: Institutional legitimacy and market heterogeneity in a global financial centre, *Journal of Cleaner Production*, 195, pp.585-592
- 39 Tuccio G.; Bua P.; Teodoro G.; Failla F.; Giuffrida V.A. (2017). *Procedia Environmental Science, Engineering and Management*, 4(3), pp. 191-197.
- 40 Fujii Y. (2016). Carbon liability, *Handbook of Climate Change Mitigation and Adaptation*, Second Edition, 1, pp.527-554
- 41 Homayoun S.; Al-Thani F.F.J.; Homayoun S. (2016). A sustainability accounting: Case study on exploration, production and midstream activities at maersk oil, *International Journal of Energy Economics and Policy*, 6(1), pp. 20-27.
- 42 Ramiah V.; Gregoriou G.N. (2015). *Handbook of Environmental and Sustainable Finance*, Elsevier
- 43 Atkins J.; Atkins B.C.; Thomson I.; Maroun W. (2015). "Good" news from nowhere: Imagining utopian sustainable accounting, *Accounting, Auditing and Accountability Journal*, 28(5), pp. 651-670.
- 44 Khana S.; Chouhan V.; Chandra B.; Goswami S. (2014). Uncertain Supply Chain Management, 2(2), pp.62-72
- 45 Dutescu A.; Popa A.F.; Ponořică A.G. (2014). *Amfiteatru Economic*, 16(8), pp. 1048-1062.
- 46 Devi S.; Wong E.S.K. (2010). Greenhouse emission reduction and sustainable development in South east Asia, *Transformations in Business and Economics*, 9(2), pp.64-85.
- 47 Sengupta R.; Saksena S. (2008). Macroeconomics and sustainable accounting of resources and income, *India Macroeconomics Annual*

References

1. Adams, C.A., Larrinaga, C. (2019). Progress: engaging with organizations in pursuit of improved sustainability accounting and performance, *Accounting, Auditing & Accountability Journal*, Emerald Publishing Limited 0951-3574, 32 (8), pp.2367-2394, DOI 10.1108/AAAJ-03-2018-339932
2. Alakkas, A. A., Shabir, S., Alhumoudi, H., Boukhris, M., Baig, A., Khan, I. A. (2023). The Impact of Sustainability Accounting on Environmental Performance and Productivity: A Panel Data Analysis, *International Journal of Sustainable Development and Planning* 18, (8), pp. 2431 - 2441
3. Alrowwad, A. M., Alhasanat, K. A., Sokil, O., Halko, S., Kucherkova, S. (2022). Sustainable transformation of accounting in agriculture, *Agricultural and Resource Economics*, 8 (2), pp. 5 - 29
4. Annisa, A.N. Sari, A.M., Djajadikerta, H. G. (2023). Environmental sustainability disclosure in Asian countries: Bibliometric and content analysis, *Journal of Cleaner Production*, 411, DOI: 10.1016/j.jclepro.2023.137195

5. Argento, D., Culasso, F., & Truant, E. (2019). From Sustainability to Integrated Reporting: The Legitimizing Role of the CSR Manager. *Organization & Environment*, 32(4), pp.484-507. <https://doi.org/10.1177/1086026618769487>
6. Bebbington J., Österblom H., Crona B., Jouffray J.-B., Larrinaga C., Russell S., Scholtens B. (2020). Accounting and accountability in the Anthropocene. *Accounting Auditing & Accountability Journal*, 33(1), pp. 152–177.
7. Bose, S.; Dong, G.; Simpson, A. (2019). Accounting for Sustainability: Frameworks for the Aggregation of Financial and Non-financial Metrics. In *The Financial Ecosystem*. Palgrave Studies in Impact Finance; Palgrave Macmillan: Cham, Switzerland
8. Broman, G.I., Robèrt, K.H. (2017). A framework for strategic sustainable development
9. Burawat, P. (2019). The relationships among transformational leadership, sustainable leadership, lean manufacturing and sustainability performance in Thai SMEs manufacturing industry. *International Journal of Quality & Reliability Management*, 36(6), 1014–1036.
10. Chouhan, V., Goswami, S. (2022). Developing a Sustainable Accounting Framework in the Indian Cement Industry vis-a-vis Manager Perspectives, *International Journal of Social Ecology and Sustainable Development*, 13, (6), DOI 10.4018/IJSESD.313642
11. da Silva Neiva, S., de Amorim, W. S., Deggau A.B., de Lima R.G., do Livramento Gonçalves, G. Ceci, F., Birch R.S.; de Andrade Guerra, J. B. S. O. (2021) Sustainable development in higher education institutions: Accounting for sustainability in higher education institutions by a data mining analysis of publications, *World Sustainability Series*, pp. 521 - 540
12. Dwyer, L. (2015). Triple bottom line reporting as a basis for sustainable tourism: opportunities and challenges, *Acta turistica*, 27 (1), pp.33-62
13. Egan, M., & Tweedie, D. (2018). A "green" accountant is difficult to find: Can accountants contribute to sustainability management initiatives? *Accounting, Auditing and Accountability Journal*, 31(6), 1749-1773. <https://doi.org/10.1108/AAAJ-03-2017-2891>
14. European Commission, The European Green Deal, available at https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/delivering-european-green-deal_en.
15. Fadli, S. (2021). Sustainability Reporting analysis of Triple Bottom Line Revelations in the Industrial Revolution 4.0, *Bongaya Journal for Research in Accounting*, 4 (1), pp. 1-7
16. García, J.L., de los Ríos, I. (2021). Model to develop skills in accounting students for a 4.0 industry and 2030 agenda: From an international perspective, *Sustainability (Switzerland)*, 13, (17), DOI 10.3390/su13179699, Article number 9699
17. Giang, N.P., Binh, T. Q., Thu Thuy, L.T., Ha, D. N., Loan, C. H. (2020). Environmental accounting for sustainable development: An empirical study in Vietnam, *Management Science Letters*, 10, (7), pp. 1613 - 1622
18. Hadi, N.U., Abdel-Razzaq, A.I. (2024). Promoting sustainable learning among accounting students: evidence from field experimental design, *Higher Education, Skills and Work-based Learning*, 14 (2), pp. 479 - 491
19. Hallinger, P., & Suriyankietkaew, S. (2018). Science mapping of the knowledge base on sustainable leadership, 1990–2018. *Sustainability*, 10(12), 4846.
20. <https://eur-lex.europa.eu/HR/legal-content/glossary/sustainable-development.html>
21. Issa, A. & Hanaysha, J.R (2023). Breaking the glass ceiling for a sustainable future: the power of women on corporate boards in reducing ESG controversies, *International Journal of Accounting and Information Management*, 31(4), pp. 623–646
22. Klarin, T. (2018). The Concept of Sustainable Development: From its Beginning to the Contemporary Issues, *Zagreb International Review of Economics & Business*, 21,(1), pp. 67-94
23. Laine, M., Laine, M., Tregidga, H., Tregidga, H., & Unerman, J. (2021). *Sustainability Accounting and Accountability* (3rd ed.). Routledge. <https://doi.org/10.4324/9781003185611>
24. Magliacani, M. (2023). How the sustainable development goals challenge public management. Action research on the cultural heritage of an Italian smart city, *Journal of Management and Governance*, 27(3), pp. 987–1015
25. Metcalf, L., & Benn, S. (2013). Leadership for sustainability: An evolution of leadership ability. *Journal of Business Ethics*, 112(3), pp. 369–384.

26. Namazi M., Rajabdorri, H., (2020). A mixed content analysis model of ethics in the accounting profession, *Meditari Accountancy Research*, 28 (1), pp. 117-138
27. održivi razvoj. Hrvatska enciklopedija, mrežno izdanje. Leksikografski zavod Miroslav Krleža, 2013. – 2024. Pristupljeno 2.7.2024. <<https://www.enciklopedija.hr/clanak/odrzivi-razvoj>>.
28. Peršić, M. (2007). Zeleno računovodstvo - što je i kome koristi? // *Računovodstvo i financije*, LIII (2007), 12/2007; pp. 47-53
29. Pramono, A.J. Suwarno, A. F. Friska, R. (2023). Sustainability Management Accounting in Achieving Sustainable Development Goals: The Role of Performance Auditing in the Manufacturing Sector, *Sustainability (Switzerland)* 15 (13), DOI: 10.3390/su151310082
30. S., Weiland, Hickmann, T., Lederer, M., Marquardt, J., Schwindenhammer, S. (2021). The 2030 Agenda for Sustainable Development: Transformative Change through the Sustainable Development Goals?, *Politics and Governance*, 9 (1), pp. 90-95, doi.org/10.17645/pag.v9i1.4191
31. Sachs, J.D., Schmidt-Traub, G., Mazzucato, M. et al. (2019). Six Transformations to achieve the Sustainable Development Goals. *Nature Sustainability*, 2, pp. 805–814, doi.org/10.1038/s41893-019-0352-9
32. Silvestre, B.S., Țircă, D.M. (2019) Innovations for sustainable development: Moving toward a sustainable future, *Journal of Cleaner Production*, 208, pp. 325-332, doi.org/10.1016/j.jclepro.2018.09.244.
33. Tavares, M.C., Azevedo, G., Vale, J., Marques, R., Bastos, M.A. (2024). Artificial intelligence approaches to sustainable accounting, *Artificial Intelligence Approaches to Sustainable Accounting*, DOI 10.4018/9798369308479, pp. 1 – 312
34. Wahyuningrum I.F.S.; Humaira N.G.; Budihardjo M.A.; Arumdani I.S.; Puspita A.S.; Annisa A.N.; Sari A.M.; Djajadikerta H.G. (2023). Environmental sustainability disclosure in Asian countries: Bibliometric and content analysis, *Journal of Cleaner Production*, 411, article number 137195

About the authors

Ivana Martinčević (Ph.D. in economics) works as an Assistant Professor at the University North, Department of Logistics and sustainable mobility. She gained her Ph.D. at the University of Applied Sciences Burgenland. She is the author and co-author of numerous domestic and international professional and scientific articles and has participated in several international conferences. The author can be contacted at ivana.martincevic@unin.hr

Dinko Primorac is a Croatian scientist, university professor and entrepreneur. He received his undergraduate education at Webster University, graduated at the Faculty of Economics in Zagreb, and received his PhD from Megatrend University. As a professor he teaches at several Croatian and international universities. He has participated in numerous international scientific conferences and as a reviewer he gives his contribution in scientific journals. As a scientist he participates in several domestic and international economic projects. His specialty are entrepreneurship and macroeconomics. He is member of several supervisory boards of renowned Croatian companies. The author can be contacted at dprimorac@unin.hr

Irena Bilić received her doctorate degree on the topic of Personality traits and diplomacy - Perception of relevant personality traits for selection process in diplomatic profession. She started her career in an international institution and received her master's degree on the topic Examining organizational school students in Croatia. She is lecturer in the field of social sciences and economics with emphasis to employee motivation, selection, performance management and organizational culture. She continuously collaborates with Croatian companies and has many years of managerial experience in human resources management. The author can be contacted at irena.bilic@algebra.hr