INTERNATIONAL SCIENTIFIC CONFERENCE

ACCOUNTING
AUDITING
ANALYSIS

# THE MODERN ECONOMIC, TECHNOLOGICAL AND SOCIETAL TRENDS: NEW CHALLENGES OR OPPORTUNITIES

**CONFERENCE PROCEEDINGS**

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Faculty of Economics and Business Administration

LIETUVOS BUHALTERINĖS APSKAITOS ŠVIETĖJŲ IR TYRĖJŲ ASOCIACIJA

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# Keynote presentations

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PhD **Ranadeva Jayasekera** is a professor of Accounting at the Trinity Business School, University of Dublin, and an associate in Finance at the Judge Business School, University of Cambridge. He also serves as a Lead researcher in Accounting at the Vilnius University, Lithuania, visiting Professor at Poznan Economics University (Poland) and Linkoping University (Sweden). He holds a PhD in Accounting & Finance from the University of Cambridge. He is a professionally qualified accountant with the Chartered Institute of Management Accountants (CIMA) and has served at a senor capacity in three (Deloitte, Ernst & Young, PwC) of the Big Four global accounting firms in London, Auckland and Colombo. He is widely published with over 25 publications in highly ranked international refereed journals (all of which are ABS ranked 3 and 4), on the broader role played by financial markets and economic agents on the creation of information asymmetry that effects positive and negative outcomes to the society. He has been awarded research grants in excess of £150,000 and is currently conducting research with the Asian Development Bank in the areas of Environment, Social and Governance (ESG)/climate change. Ranadeva has lectured at undergraduate, postgraduate and executive education levels, and has won numerous awards (e.g., British Chevening Scholarship, Cambridge Commonwealth Trust Award, Trinity Research excellence award, Trinity teaching excellence award) for scholarly research and teaching. His current research interests include intersections of climate finance, Environmental Accounting, Real options, risk management, renewable energy, Accountability and Existentialism.

# Call for Urgency in this Environmental Emergency: A Tool to Understand the Impact of Emissions

We see that there is an unambiguous corelation (and plausible causality) between the increase in the wealth creating human activity and the increase in the CO2 emitted to the atmosphere, where science alarmingly tells us the planet will not be habitable for human life if the global temperature rises above 2 degrees Celsius relative to the preindustrial levels. Tregida and Laine (2022), see a lack of urgency in our response to this climate / environmental emergency and call for research to investigate on the type of environmental accounting numbers would serve in creating positive intervention in societies. I propose one such measure capable of revealing the true value of the emissions data reported by firms. Applying a real options framework, on Scope 1 and Scope 2 emissions data reported by 72 firms from the Euro Stoxx 500 from 2006 to 2019, I develop a methodology that the underlying potential of the reported emissions by firms and demonstrate that in certain cases the reported emissions figures paint a misleading picture. The proposed method is robust and flexible and demonstrates how successful a firm is in reaching it's net zero targets through the reported emissions figures. This study has important implications to policy makes, lenders and other stakeholders. For example, it can be used by policymakers as a basis to work out an equitable carbon tax regime, carbon credits or any tax concessions to incentivise performance, or by lenders in a funding decision, akin to reduced mortgage rates for A+ energy efficient residencies. The measure has managerial implications as well since it can be used as a basis for performance measurement and structuring rewards or academics can use it to test the validity of theories and highlight firms engaged in Greenwashing.

Jonas Akelis
EY Assurance Partner in the Baltic States

**Jonas Akelis** is a Partner at EY Lithuania with 32 years of experience. He has significant experience in audit, reorganization and privatization, transactions, strategy, performance improvement and measurement engagements for local, international, public and private companies and NGOs. He has experience in a range of industries – Technology and Communications, Media and Entertainment, Financial Services, Transportation, Production and others.

Jonas is a Certified Public Auditor of the Republic of Lithuania and a fellow member of the ACCA (UK). He has been a board member of the Investors' Forum in Lithuania since 2009. Jonas earned a Master's degree in Accounting and Auditing from Vilnius University, Lithuania.

# The Reinvention of Audit Methodologies and Practices Through the Adoption of New Technologies

It is truly exciting to see the way technology is revolutionizing the landscape for preparers of financial reporting and equipping auditors with powerful tools to ask better questions and carry out a number of audit procedures in a way that was never possible during the whole history of our profession. Artificial Intelligence and other revolutionary technologies will continue revolutionizing the audit industry and helping auditors to analyze huge amounts of data in an efficient, anomaly-detective as well as predictive manner, and help them provide valuable insights to their clients. At the same time, technology is making the skills our profession is built on - independence, objectivity, and critical thinking - even more valuable. This noble profession should be proud for what it is doing to position the audit teams to continue to promote trust within our economies and thrive in this dynamic and exciting work environment.

Kelum Jayasinghe
Professor in Accounting and Development Policy at the University of Sheffield Management School

**Kelum Jayasinghe** is a Professor in Accounting and Development Policy at the University of Sheffield, UK. He has worked as an expert panel member of the working group established for the development of UN's Sendai Framework Words into Action implementation guides for accountability and governance, UNSIDR and conducted many contract-research projects to World Bank-PEFA and UK local governments. Kelum is globally known as a critical researcher in accounting and development policy. His international visibility is evidenced in his extensive profile of publications in reputed journals, including Accounting, Auditing and Accountability Journal (AAAJ); Critical Perspectives on Accounting (CPA); Accounting Forum etc. Currently, he serves on the editorial boards of AAAJ, JPBAFM, JAEE and AAFJ. He has obtained research grants from JSPS (Government of Japan), ADB, JCDR; World Bank - PEFA and GCRF on accounting and development policy; participatory budgeting; and public financial management and climate change respectively.

# Beyond NPM/NPG in Public Sector Accounting Research – 'Publicness' and 'Localised-led Development'

The blending of 'publicness' and 'localised-led development' discourses in public sector accounting scholarship will allow researchers to undertake significant studies across all contexts which were inadvertently marginalised or neglected previously. Therefore, it is important to advance our conceptualisations of building on 'publicness' and 'localised-led development' as theoretical approaches. First, there is a need for widening the scope of public sector accounting research, connecting it with public administration, policy, and practice, and enhancing its theorising by focusing on "publicness" as a concept, or a series of concepts in order to cover generic umbrella terms such as neoliberalism, As a concept, "publicness" captures wider issues of relevance covering how public values can be generated and maintained, how public service can be co-produced and hybridised, and how uncharted situations such as austerity, crises and pandemic can be managed. Our knowledge on the economising potential of accounting has been enriched by a focus on NPM as a reform movement inspired by specific values of managerialism, rationality, efficiency, market-driven behaviours. At the same time, this leaves a scope for exploring the potential of accounting for accommodating other arenas and taking new directions towards producing new research. Along these lines, there is a scope for exploring the role (or weaknesses) of accounting not only as an economising tool, but also as a way of bringing forward alternative values, giving voice to vulnerable actors, operationalising coproduction in policy-making and service delivery and shaping the ways in which the overall public value (beyond narrow economic and financial consideration) is decided upon, eroded, or generated, and made more (or less) visible, manageable, and knowable. Second is the embracement of the notion of development. Recent studies in developing countries, demonstrate that neoliberal oriented public sector accounting reforms had unintended consequences, including the marginalisation of relatively 'good' accounting practices at mundane levels. Similarly, in the West, there were some forced accounting reforms with such unintended consequences, especially in localised practices within organisations and extra-organisational apparatuses. Hence, the notion of development has become more an analytical content despite the context in which such reforms take place. Moving forward, the notion of publicness can thus be a useful phenomenon for a better understanding of how accounting reforms are implicated in localised development and the consequences thereof. Such possibilities may lead to develop more localised types of accounting issues surrounding democratic, resilience, participative, dialogic, and accountable features.

Jonas Balsys
Capital markets transactions, technical accounting, ESG, structuring
Director, Broader Assurance Services leader, PwC Lithuania

**Jonas Balsys** is a tenured consultant and a trusted adviser to many business leaders. He accumulated diversified experience in professional services and finance over a successful 20 years' career, including 8 years spent in the world's leading hubs of Silicon Valley, California, U.S. and London, U.K. Currently Jonas leads the Broader Assurance Services business unit at PwC Lithuania. He is the market-leading technical accounting & external reporting expert and focuses on execution of capital markets transactions, accounting advisory, internal controls and ESG propositions, while also often supporting other countries in the Baltics and the broader CEE region.

# Raising the Bar for Qualify of Sustainability Information – are Companies Prepared to Withstand External Audit Scrutiny?

Today companies are no longer evaluated only based on financial information. Sustainability reporting standards are improving, and the EU Corporate Sustainability Reporting Directive will oblige many companies not only to submit sustainability reports, but also to obtain mandatory assurance from auditors on sustainability information. So far, the quality of sustainability information and the level of maturity of the processes and internal controls used by companies to prepare such information is significantly lower than that of financial information, although the requirements according to European Sustainability Reporting Standards and the expectations of market participants are the same. Therefore, it is important for companies to pay more attention to sustainability reports now, which will help them better prepare for the audit in the near future. Similarly, auditors need to upskill and develop methodologies on how to audit sustainability information which is inherently different from financial information.

Jonas Drasutis
Country Manager & Chief Financial Officer at Nikulipe

**Jonas Drasutis** is a seasoned professional with a proven track record in both traditional finance and the FinTech industry. He holds a Bachelor's degree from Vilnius University and a joint Executive MBA from ISM and KTU. Jonas is also a fellow member of ACCA. Currently, he serves as Country Manager & Chief Financial Officer at Nikulipe, a global FinTech company simplifying cross-border payments and enhancing access to fast-growing and emerging markets for PSPs and merchants.

With over 10 years of experience, Jonas has led assurance projects for SMEs and PLCs across the EU. In recent years, he has played a pivotal role in scaling FinTech start-ups by developing business models that drive impact, financial sustainability, and customer value.

## AI's Role in Education

Jonas's session will offer a dual focus, merging his expertise in FinTech and finance with insights into AI's role in education. His presentation will explore how artificial intelligence is transforming finance education and professional training, particularly in helping accountants and finance professionals adapt to rapidly advancing technology. By leveraging AI-driven learning models, ACCA and other institutions are creating adaptive, data-rich educational experiences that personalize learning, track progress, and enable deep specialization in areas like digital literacy, data science, and financial analysis.

Additionally, Jonas will dive into practical applications of AI in professional development, such as machine learning for skill assessments, intelligent tutoring systems, and virtual simulations. These technologies are reshaping how finance professionals build their careers, enabling a responsive education model that aligns closely with industry demands. He will also discuss the importance of responsible AI in education, with a focus on balancing technical skills with ethical considerations to build trust in AI-enhanced learning environments.

# Abstracts

# The Impact of Lithuanian Auditors' Personal Attitudes towards Business Ethics on the Ethical Assessment of Earnings Management

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**Keywords**: accrual-based earnings management, real earnings management, earnings management detection, ethical position of Lithuanian auditors.
**JEL code:** M41, M42, D91.

The ethical assessment of earnings management is the subject of considerable scientific debate. On the one hand, it is considered unethical. On the other hand, it is morally right, as a small profit smoothing to reduce risk is justified (De Jong et al., 2013). Elias (2022) notes that the ethical assessment of earnings management is influenced by the assessor's personal ethical perception, education, work experience and workplace culture. In addition to high qualifications and experience, the auditor's personal traits, such as ethical idealism and professional scepticism, should guide the auditor in detecting fraud (Verwey & Asare, 2022).

*Aim of the study:* to determine the impact of Lithuanian auditors' personal attitudes towards ethics on their assessment of earnings management.

*Objectives of the study:*

1) to investigate the personal attitude of Lithuanian auditors towards business ethics;
2) to identify the differences in the ethical assessment of auditors between accrual based and real earnings management;
3) to assess the relationship between auditors' personal perception of ethics and their assessment of earnings management.

*Research methodology.* In order to assess the ethical idealism of Lithuanian auditors and its influence on their assessment of earnings management, a questionnaire survey, correlation and regression analysis were chosen. The sample consists of 250 licensed auditors. The return rate of the individual questionnaires sent out is 85.2%.

***Results of the study.***

1. The assessment of auditors' personal attitudes towards business ethics found that auditors tend to be ethically idealistic. They are aware of the importance of business ethics and attach great importance to it.
2. The study of the differences between the ethical evaluation of accumulation of accrual based and real earnings management ethics showed statistically significant differences ($t\ stat$ =14.87 > $t_{crit}$ =1.66, $p$=0.00). This shows that the ethical evaluation of earnings management depends on its type. Accrual-based earnings management is seen as more unethical than real earnings management.
3. The study found that perceptions of personal ethics have an impact on the evaluation of earnings management. The higher the ethical idealism of the auditor, the more earnings management is perceived as an unethical phenomenon ($R^2$=0.52, *ANOVA p* =0.00, *regressor coef.* =-0.63, *regressor p*=0.00). This suggests that the auditor's judgment may be influenced by his personal ethical stance.

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# The Impact of Government Financial Support during the Crisis (COVID-19) on the Resilience and Performance of Lithuanian Companies

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**Keywords**: government financial support, corporate profitability, resilience COVID-19.
**JEL code:** M21, M48, L53.

The COVID-19 pandemic caused an unprecedented economic shock, forcing many companies to suspend or significantly reduce their operations, cut jobs and seek ways to survive. This crisis revealed that most companies, especially small and medium-sized enterprises, lacked sufficient financial resources to effectively withstand sudden market changes. This situation necessitated government intervention: during the COVID-19 pandemic, governments worldwide implemented various financial support programs to sustain businesses, preserve jobs, and ensure economic stability. The relevance of this study arises from the question of the long-term impact of government support on businesses: government financial assistance helped companies avoid bankruptcy and survive under extreme conditions, but it may also have led to inefficient public spending and the absence of the so–called Schumpeterian cleansing effect, where the failure of inefficient companies is merely delayed. If the applied government support schemes delay the exit of unsustainable, financially weak companies from the market, there is a risk of long-term negative consequences for the economy, and prolonged suspension of bankruptcy procedures hinders the efficient reallocation of resources. Despite the short-term rescue effect, questions remain as to whether such unprecedented support schemes for all affected companies help them become financially more resilient to future crises. Therefore, it is crucial to examine not only the significance of support during the peak of the pandemic but also its long-term impact on companies' resilience and performance.

The aim of our study is to assess how government financial support during the COVID-19 pandemic impacted the performance of companies in Lithuania's most affected sectors and their ability to generate profit in the future. The object of the study is the effectiveness of government COVID-19 financial support for Lithuanian catering, accommodation, leisure and entertainment companies, and travel agencies. The research tasks included analyzing the scope and distribution of government COVID-19 financial support across Lithuanian economic sectors, evaluating the impact of government support on the financial performance of companies in the sectors most affected by COVID-19, and assessing the impact of government support on company resilience – specifically, the likelihood that government aid, regardless of a company's sustainability, will allow firms to generate positive financial results in the future. The study employed comparative analysis, descriptive statistics, and logistic regression methods to determine the impact of government-provided support and companies' financial performance on the likelihood of generating profit.

It was found that during the COVID-19 period, Lithuania provided €397 million in support to 64,500 businesses, of which 35% was allocated to sectors recognized as the most affected by the pandemic: catering, accommodation, leisure and entertainment companies, and travel agencies. Upon examining 8,028 companies from these sectors, we found that government support helped companies survive in 2020, even though it did not have a significant impact on their financial performance (profitability). However, in 2021, there was a statistically significant decrease in the number of operating and especially profitable companies in all studied sectors. In logistic regression models, the variable of government support was statistically significant for the datasets of catering companies and travel agencies, with the results indicating that government financial support negatively affects the likelihood of generating net profit in the future: in all models, the regression coefficient values were negative, and the Exp(B) adjusted odds ratio values were less than 1. The odds ratio for the government support variable indicates that each thousand euros of government aid is associated with a decrease in the likelihood of profitability.

# The Relationship between Digital Leadership and Employee Well-being: The Mediating Role of Trust in the Leader and Moderated by Digital Competencies

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**Keywords:** digital leadership, digital transformation, employee well-being, trust in leader, digital competence.
**JEL code: M12, J24, O15.**

This study explores the impact of digital leadership on employee well-being, specifically examining trust in the leader as a mediating factor and digital competencies as a moderating factor. With digital transformation accelerating globally, spurred notably by the COVID-19 pandemic, organizations face the dual challenge of maintaining operational efficiency and supporting employee well-being. This research thus contributes to the ongoing discourse (Amankwah-Amoah et al., 2021; Kadir & Broberg, 2020; Roman et al., 2019) on digital leadership, a concept that underscores the need for leaders to possess not only technological proficiency but also the capability to foster trust and mitigate potential stressors arising from digital changes.

The aim of the research is to analyze whether digital leadership significantly influences employee well-being, with a particular focus on how trust in leadership and digital competencies affect this relationship. The study objectives include defining the constructs of digital leadership, employee well-being, and trust in leaders; evaluating digital competencies within the workforce; and testing the moderating effect of digital competencies and the mediating role of trust in the leader.

Previous research has primarily addressed digital leadership in terms of the impact on digital leadership on employees' innovative behavior (Erhan et al., 2021) or organizational performance outcomes (Lathabhavan & Kuppusamy, 2023), with limited focus on its influence on employee well-being. Some studies indicate that that digital transformation has a direct negative effect on employee well-being (Kadir & Broberg, 2020), while others suggest that digital leadership might mitigate these effects by fostering a supportive and trusting environment (Zeike et al., 2019). This research thus fills an existing gap, considering digital transformation's nuanced impacts on individual well-being and the pivotal role of leader-employee trust.

Using quantitative methods, this study applied regression analysis and mediation-moderation models through SPSS to assess data from 243 participants who experienced organizational digital initiatives. Findings indicate a statistically significant positive impact of digital leadership on employee well-being, mediated by trust in the leader. However, the moderation effect of digital competencies on this mediation was not statistically significant, suggesting that while digital competencies are essential, they do not alter the relationship between leadership and trust.

The results underscore the necessity of trust-building within digital leadership frameworks to support employee well-being. Future research may further explore digital competencies' roles in different organizational contexts to refine digital leadership strategies for enhancing well-being.

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# Identification of Earnings Management in Baltic States Listed Companies in Consumer Goods Industry

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**Keywords**: earnings management, Baltic States, consumer goods industry.
**JEL code: M 49.**

Listed companies attract a high level of interest from users of accounting information (Katutytė, 2021), which may create incentives to manipulate financial information. There is a debate in the literature on the application of earnings management in companies. On the one hand, companies that are audited and accounted for in accordance with international accounting standards are less likely to use earnings management (Beke, 2010; Habib et al., 2022). On the other hand, the political cost hypothesis suggests that the higher a firm's visibility, the more likely it will be to apply earnings management (Watts & Zimmerman, 1986; Katutytė, 2021).

***Aim of the study:*** to identify and assess the trends in the application of earnings management among Baltic States listed companies in consumer goods industry.

In order to achieve the objective of the study, the following *objectives are set*:

1) to identify trends in the application of earnings management in Baltic States listed companies in consumer goods industry;
2) to assess the similarities and differences in the application of earnings management across countries by examining the prevalence of earnings management in listed companies operating in the consumer goods sector in the Baltic States;
3) to assess which areas of performance and accounting estimates of listed companies in the daily consumer goods sector in the Baltic States are indicative of the potential use of earnings management.

***Research methodology.***

The research hypothesis H1: the results of the application of earnings management by listed companies in consumer goods industry in the Baltic region are different. Since the study involves three countries – Lithuania, Latvia and Estonia – three sub-hypotheses are proposed.

Given that the Beneish M-score model is used to identify the attributes of earnings management, the study includes an earlier accounting period and will therefore use information from the financial statements for the period 2019-2022.

The general population of the study is companies listed on the Nasdaq Baltic stock exchange. The selection criteria for the sample are: the daily consumer goods sector; the adequacy of the data for the calculations. The sample includes 28 firm-years: 15 Lithuanian, 7 Latvian and 6 Estonian.

***The results of the survey.*** The Beneish M-score model is applied, and the mean M-score is -2.42, the median is – 2.61 and the standard deviation is 0.93. The results of the study show that 75% of the listed companies operating in the daily consumer goods sector in the Baltic States do not show any signs of earnings management. Of the 25% of the years analysed in which signs of earnings management were identified, 18% are attributed to Lithuania and the remainder to Latvia. In Estonia, no signs of the application of earnings management were identified.

The method of analysis of variance was used to assess differences between countries and the statistical hypothesis H0: the variances of the M-score are equal. There is no statistically significant difference between Lithuanian and Latvian companies in the application of earnings management ($F_{stat}$ 0.33< $F_{krit}$ 0.35, p<0.05). However, the study found statistically significant differences in the use of earnings management between Lithuania and Estonia ($F_{stat}$ 6.91> $F_{krit}$ 4.64, p<0.05) and between Latvia and Estonia ($F_{stat}$ 21.07> $F_{krit}$ 4.95, p<0.01).

The following indicators showed unusual values for the companies with earnings management characteristics: sales receivables index (DSRI), gross margin index (GMI), asset quality index (AQI), depreciation index (DEPI), leverage index (LVGI) and, in almost all cases, the accruals to assets ratio (TATA). Analysis of the individual components of the model may indicate areas where financial information is manipulated.

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# The Expanding Horizons of Internal Audit on the Journey toward a Sustainable World

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**Keywords**: internal audit, sustainability, corporate governance, management
**JEL code: M10, M42, Q56**

In today's world, Internal Audit (IA) is expected to become an essential factor in Environmental, Social, and Governance (ESG) and other sustainability activities. Recently, researchers have argued IA is moving from its historical function to become a "Sustainability Business Partner" (Otto-Mentz et al., 2022). Also, its responsibilities now extend beyond focusing on financial metrics, incorporating environmental and social issues to enhance the quality of financial reporting (Alajeli & Wahhab, 2022), and also contribute to the sustainability goals of firms (HaoYue & Loang, 2023). It is also possible to identify management support, risk management, and audit effectiveness as critical factors in enhancing IA's role in sustainability audits (Soh & Martinov-Bennie, 2018). Additionally, internal stakeholders, including the management level, also influence the role of internal audit in ESG, with internal auditors being more involved in reputational risk and governance issues in firms with higher ESG maturity (Rakipi & D'Onza, 2023).

This study discusses the role of IA and their relations with management on matters of sustainability focused on ESG objectives. It also touches on the mentioned question by showing how the development of firm-wide sustainability initiatives is supposed to influence the involvement of IA. To fill the exploratory gap in the literature in this context, the study aims to determine the role of internal audit within the scope of ESG and examine in depth how the attitudes of management level impact the professional practices of internal auditors. In light of this motivation, it was decided to use a qualitative approach with semi-structured interviews conducted with internal auditors and senior managers. The pilot studies had obtained just the preliminary results upon which the applicability and capability of the questions had been tested. While at least 16 participants are targeted for an interview, the main criterion is to reach data saturation (Glaser & Strauss, 1967).

The preliminary results indicate that the process of sustainability management in business life is still in its "infancy" and this makes it even more important to provide a correct picture with a good expression of the current situation to all stakeholders, especially investors. Moreover, though having an internal audit unit, sustainability might seem like a "lip service" in some firms which do not adopt corporate manners. Above all, internal auditors cannot completely perform their consulting duties in this context. Although it may seem beyond the main scope of this study, the importance of "corporate governance", "internal control", and "risk management" – the backbones of internal audit – must be well recognized, particularly at the management level. Contrary to that, though internal auditors serve more as strategic consultants in larger firms, they need to develop their versatility at certain critical levels. One of the main reasons for the lack of this in other firms is that managers or the owners feel that they have more fundamental priorities such as "financial concerns".

It is aimed that these findings be followed by more interviews to arrive at new ones, and then discussed with the main results that have been unfolded so far in the current literature.

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# Diversity, Equity and Inclusion in Business Management Practices: The Bibliometric Literature Review

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**Keywords**: diversity, equity, inclusion, management.
**JEL code: M14, M12.**

Diversity, a defining feature of modern societies, encompasses differences in culture, ethnicity, religion, age, gender, and sexual orientation. At the business level, diversity reflects the heterogeneity of employees, while managing workforce diversity is one aspect of building a just, equitable, and inclusive society—reflecting the social pillar of sustainability.

The diversity management is often perceived through diversity, equity and inclusion (DEI). DEI is understood as a framework, strategy, or practice of an organization aimed at addressing differences in status related to race, gender identity, and other factors (diversity); removing systemic barriers and biases to grant equal opportunities for all (equity); and integrating and valuing all individuals (inclusion). As DEI has been investigated over the past decades, the aim of this presentation is to discover the main topics discussed in this field based on a bibliometric literature review.

To do so, we used the Scopus database to identify publications related to DEI by using the phrase "diversity, AND equity, AND inclusion". The initial search identified over 5,800 publications related to DEI, mainly in social sciences (approx. 2,400) and in medicine (approx. 2,100). We then limited the search to articles published in English over the last twenty five years (2000-2024) and to the discipline of social science, which gave 1524 articles with the most frequently used keywords related to humans, education, gender, adult, leadership, race and racism, and intersectionality. The growing dynamic in the number of these publications was observed, as between years 2000-2005 just 3 articles were published, in years 2006-2010 – 18 articles, in years 2011-2015 – 38 articles, in years 2016-2020 – 187 articles, and 1,279 between 2021 and the end of June 2024.

Then, we limited the search to two disciplines: business, management, and accounting (343 articles identified) and economics, econometrics, and finance (58 articles identified), as we aimed to investigate DEI in the management context, which gave in total 357 articles. After refining the keywords of these articles by removing those repeating DEI terms as well as "article", "COVID-19", and "United States", we conducted a cluster network analysis based on the co-occurrence of keywords using VOSviewer. We used fractional counting and assumed that the minimum number of occurrences was 5.

Based on this approach, we discovered six clusters of topics in DEI literature in the context of management (see Figure 1).

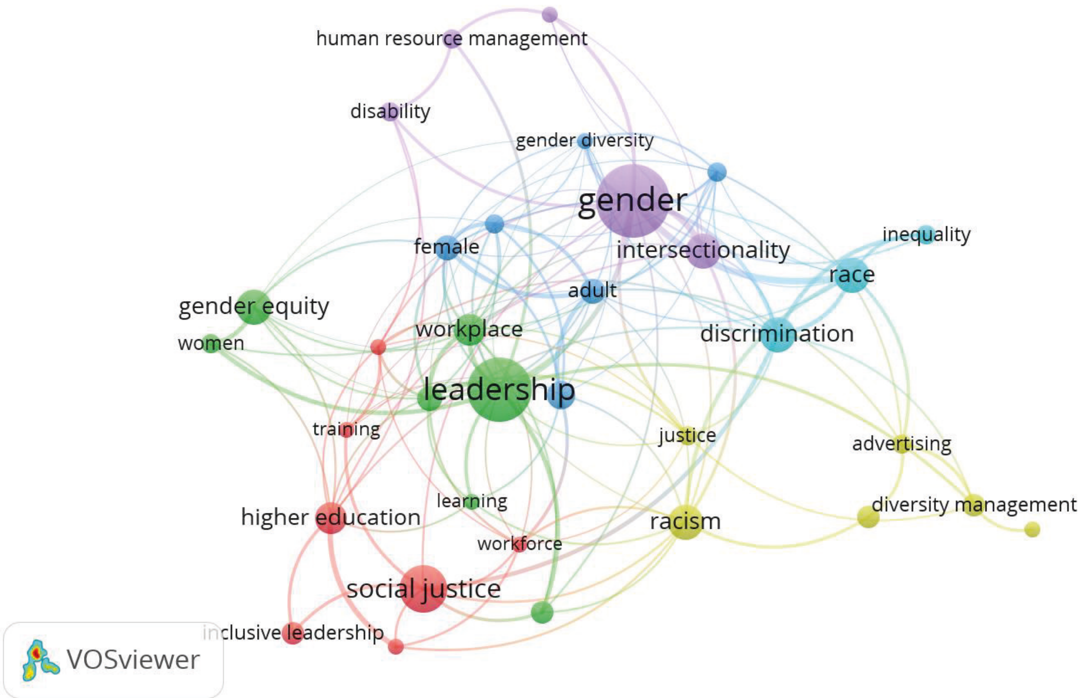


Figure 1. **Clusters of topics in DEI in the management literature**

The first cluster is related to research on gender and intersectionality. Topics related to leadership and the workplace are included in the second cluster. The third cluster of research is dedicated to social justice and higher education. In the fourth cluster, topics related to inequalities, race, and discrimination are discussed. The fifth cluster is devoted to racism, justice, and diversity management, while the sixth and final cluster focuses on females, gender diversity, and adults.

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# Towards a Better Understanding of Climate Disasters and Biodiversity Risk

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**Keywords**: temperature change; climate disasters; biodiversity risk
**JEL code: Q51; Q54; Q57**

Over the past few decades, the issue of global climate change has become a focus of academic research, generating widespread interest and in-depth discussion. Despite differences in scope and focus, studies have collectively revealed some key conclusions and innovative ideas. As early as the last century, numerous scholars have pointed out that global temperature rise is an indisputable fact (Bongaarts, 1992; Jones & Wigley, 1990; Schelling, 1992). Folland et al. (2001) provided quantitative evidence of global warming by analyzing temperature anomalies from 1861 to 2000, confirming a significant increase in global temperature trend. On this basis, Hansen et al. (2006) emphasized the trend of temperature increase of about 0.2° per decade during the last 30 years and warned that a series of serious climate change problems may arise if the global temperature rises by more than 1° relative to 2000. Those studies emphasized the persistence of global temperature change, revealing the urgency and long-term nature of climate change. It is therefore necessary to pay sustained and adequate attention to the issue of climate change.

Firstly, the relationship between temperature changes and climate-related disasters is a key research topic in contemporary climate science and disaster risk management. Van Aalst (2006) noted that climate changes have intensified the risk of natural disasters. Concurrently, Cvetković et al. (2015) further confirmed the link between temperature changes and extreme weather events, particularly the increased frequency and intensity of heatwaves, showing that Europe experiences the most of these events, while Asia suffers the greatest impact. However, Zhu & Fan (2021) found in their analysis of long-term data that while there is a positive correlation between temperature increases and the number of climate-related natural disasters overall, periodic analysis failed to find significant correlations. Instead, temperature decreases were more significantly related to an increase in the number of natural disasters, reflecting the complex nonlinear relationships of climate change.

Secondly, the relationship between temperature change and biodiversity is another important area of research that has attracted our attention due to the increasing impact of climate change on ecosystems. Araújo & Rahbek (2006) showed that climate warming has prompted many species to migrate in search of suitable habitats, which may lead to contraction or expansion of species' ranges. Loarie et al. (2009) proposed a new index, the rate of temperature change (climate velocity in km/year), which aims to measure the rate of migration required for organisms to maintain constant climatic conditions. The study notes that global average temperature change exhibits a high rate, which means that only 8% of the world's protected areas are able to maintain climate persistence for more than 100 years, predicting significant changes in climate conditions in many protected areas in the coming decades. In addition, Koprowski et al. (n.d.) explore the immediate and long-term threats of climate change to wildlife and ecosystems, including changes in species composition, altered fire patterns, increases in invasive species, and the spread of disease, which have the potential to lead to ecosystem destabilization, which could trigger knock-on effects on biodiversity. Nunez et al. (2019) project that if climate change persists, global temperature increases of 1° to 2° will result in a 14% decrease in localized species richness, a 35% reduction in suitable climatic range, and a significant reduction in the proportion of functionally responsive species. Together, these studies suggest that temperature change will not only alter species composition and ecosystem functioning, but is expected to result in large-scale biodiversity loss, making urgent action to study climate change and protect vulnerable ecosystems all the more important.

Analysing the above studies together, we found that basically all the current studies are based on the impacts generated by the average temperature, while the studies on the changes of daily average temperature in climate change are still missing. Instead, our current study aims to provide insight into the explicit relationship between daily temperature change and climate disaster as well as biodiversity risk. To this end, the study will utilize data on daily average temperature change between 1980 and 2023 as a proxy variable for climate change. The choice of this variable aims to provide a more precise quantification of climate change. In addition, the contribution of our study is that, once the significant association between long-term average daily temperature change and climate disaster and biodiversity is confirmed, it can provide fundamental theoretical support for understanding the interactions between these complex ecosystems and provide a scientific basis for the formulation of related policies. This study not only fills the gap in the existing literature, but also lays a solid foundation for future empirical studies.

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# Competence in Accounting: Meeting Professional Requirements and Tackling Challenges

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**Keywords**: competencies, accounting specialist, job announcements, requirement.
**JEL code: M40, M41.**

An accounting specialist is a key member of a firm's management team. They are responsible for various tasks, including organizing essential accounting records and presenting data to both managers and external users. The specialist must be adaptable in a fast-paced work environment, knowledgeable in numerous business management procedures, well-versed in accounting standards, and proficient in utilizing a range of information technologies. Recent global events, such as the COVID-19 pandemic and the Russia-Ukraine war, have rapidly transformed the corporate environment and economy, altering the demands placed on different professions. Accounting professionals face challenges in the labor market due to the continuous advancement of technology. As a result, they must be able to utilize new digital tools and adapt to automated processes. Furthermore, the legal landscape is constantly evolving, with stricter regulations requiring regular updates to their knowledge. In this context, maintaining a high level of professionalism relies heavily on continuous training and professional development. This study examines the competencies that accounting specialists must acquire to remain competitive and professional in their field, as well as how they can adapt their skill sets to meet the demands of the modern market.

The purpose of the study is to identify the most important competencies, requirements, and challenges faced by the profession. The research methods include an analysis of scientific literature, content analysis of job advertisements, semi structured experts' interviews, information comparison, systematization, and summarization. The focus of the research is on the competencies and requirements sought by employers in the city of Vilnius for accounting specialists.

The results revealed that while professional competencies significantly impact the demand and positioning of accountants and chief accountants in the labor market, personal attributes are the most desired and frequently requested qualities in an accounting specialist. The study also identified the most critical qualifications for an accounting specialist and highlighted which types of organizations would provide the best financial opportunities for the desired role.

# Analysis the Impact of Artificial Intelligence on the Optimization of Modern Audit Efficiency

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**Keywords:** audit, analysis, artificial intelligence, data privacy, fraud.
**JEL code: O33, M42, Q55.**

The integration of artificial intelligence in the audit and accounting optimizes verification processes, improves the quality of data analysis and control of financial flows. At the same time, new technologies present challenges regarding data protection and confidentiality. The purpose of this study is to analyze the impact of AI technologies on audit processes and fraud detection. The object of research is modern audit practices using artificial intelligence. Research methods include the analysis of scientific publications and practical cases on the implementation of technology.

***Research results.*** The implementation of artificial intelligence in audit procedures allows the automation of routine tasks, such as processing a large number of transactions, checking compliance with standards, collating data and compiling reports. Technology significantly reduces the likelihood of human error due to fatigue or carelessness. AI is capable of processing large amounts of information much faster than humans, which is especially important when auditing big corporations or institutions (Yakovenko et al, 2024). It helps companies better meet regulatory requirements by automating reporting and compliance processes. AI is able to identify areas where regulatory requirements may not be met and suggest necessary adjustments. Figure 1 demonstrates the benefits of implementing artificial intelligence in audit, such as increased efficiency, reduced risk, and improved decision-making.

Fraud is one of the biggest challenges in today's financial systems. Traditional audit methods are often unable to quickly identify complex fraud schemes due to limited human resources and time. However, machine learning algorithms provide constant monitoring of financial operations and systems in real time, which makes it possible to quickly detect threats and anomalous events. One of the examples of the successful implementation of AI in auditing is the Botkeeper system, which automates most accounting processes and detect possible violations based on automatic transaction analysis. According to Deloitte, the implementation of automated systems based on AI reduced fraud detection time by 50%, and reduced the number of false alarms by 40% in companies that actively use these technologies. Natural language processing (NLP) tools also help detect fraudulent schemes by analyzing textual data such as emails or financial reports. Companies that use NLP detect 25% more fraudulent schemes compared to traditional audit methods (KPMG, 2024). On average, organizations that implement AI technologies detect fraud 40% faster than those that use traditional methods (Statista, 2024).

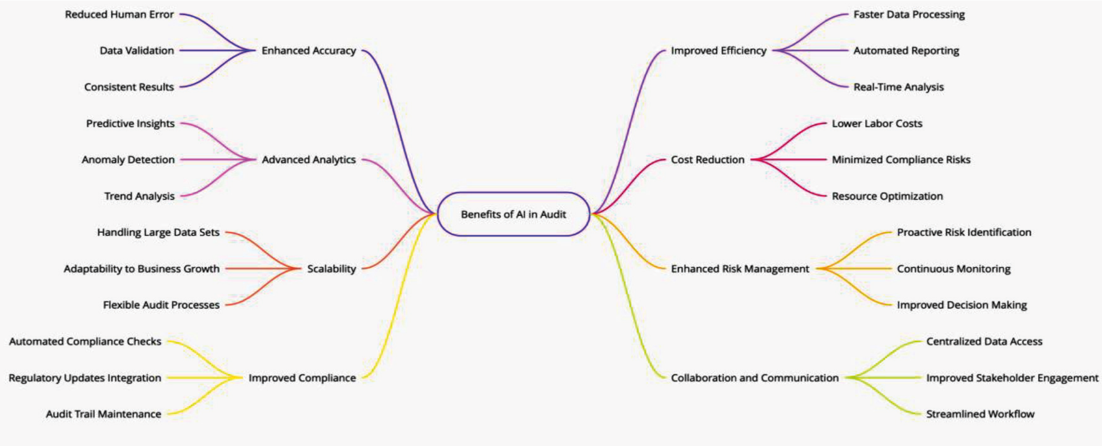


Figure 1. **Benefits of using artificial intelligence in audit**
*Source:* compiled by authors

Data protection is an important issue for companies implementing AI systems. Data encryption is one of the main security measures that protects confidential information during its transmission and storage (Hevlych, 2023). According to a study by the Ponemon Institute, companies that use encryption reduce the cost of responding to security incidents by 60%. Multi-factor authentication is also an important element of data protection, that can block up to 99.9% of automated attacks (Ibrahim, 2024). Companies that use AI in auditing should also conduct regular checks of the system's security status, which will allow prompt detection and elimination of potential threats.

***Conclusions.*** The implementation of artificial intelligence in audit significantly increases its efficiency and quality. Automation of routine tasks, big data analysis and natural language processing allow fraud to be detected at an early stage, reducing risks and increasing the accuracy of results. However, effective use of AI requires a high level of data security through encryption, multi-factor authentication, and regular security audits.

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# Impact of Forensic Accounting on Indian Industry

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**Keywords**: impact forensic, forensic accounting, forensic audit, forensic bookkeeper, Indian industry.
**JEL code:** M49.

India's rapid economic growth relies heavily on investments from both domestic and foreign institutional investors, with significant impacts on the banking, IT, and industrial sectors. As companies strive to attract investments, some have resorted to financial statement manipulation, or "creative accounting", to overstate their financial health, leading to a rise in financial statement fraud. This study investigates the need for forensic accounting in India, a specialized form of accounting that detects and prevents financial irregularities through rigorous analysis rather than traditional transaction recording. Forensic accounting has been instrumental in identifying financial manipulation techniques, such as misclassification of expenses and understated profits, which pose major challenges to stock market regulators, auditors, and public accountants. Unlike conventional financial accountants, forensic accountants use advanced detection methods, including ratio analysis, to identify fraudulent practices.

In response to recent financial scandals, the Indian government has tightened auditing standards, mandating forensic tools in audits to restore investor confidence. This study contributes to existing literature by correlating financial accounting practices with economic impacts and positions forensic accounting as a critical audit tool. Forensic accounting, encompassing litigation support and investigative procedures, is defined as a court-suitable analysis that exposes fraudulent activities in financial records. Previous research primarily addressed the academic concept and tools of forensic accounting; this study, however, establishes its practical necessity for India's regulatory landscape.

In this study a multi-method approach was adopted, including: *document analysis* – analysis of audited and unaudited financial statements of 20 companies across sectors such as banking, insurance, IT, and power. Industry reports of the Chamber of Commerce, Trade Association and the report of the regulatory agencies from the last five years were also reviewed; *investigative analysis* – review of 18 publicly available investigative reports from sources including the Securities Exchange Board of India and the Insurance Regulatory Development Authority, to identify key findings and the type of financial manipulation detected and the modus operandi used to disguise the manipulation; *screening interviews* – structured interviews with Chief Financial Officers, Board of Directors, members of Audit Committees and Public Auditors, public and private investigators, using questionnaires to gather insights on internal controls and forensic practices.

The study identified a significant gap in forensic accounting adoption across industries, with only 5 out of 20 companies fully complying with forensic practices. In many cases, weak internal controls and management pressures led to bypassing audit committee recommendations. Economic pressures and unrealistic performance expectations were primary drivers of financial manipulation, exacerbated by ineffective oversight. Forensic accounting has begun to restore confidence in financial statements but needs broader integration to achieve full transparency across industries.

This study underscores the need to incorporate forensic accounting directly into financial accounting practices, promoting ongoing assessments rather than year-end audits. It recommends establishing internal compliance and monitoring units within companies for continuous oversight, rather than relying on audits that may overlook manipulations occurring throughout the fiscal year. Legal frameworks should also evolve, assigning accountability to top management, auditors, and regulatory agencies for lapses. To enhance transparency and governance, regular corporate audits by independent assessors are recommended, with continuous adaptation of accounting standards to meet the challenges posed by financial manipulation.

# Accounting for Carbon Offsets in Agriculture: Enhancing Sustainability through Soil Organic Carbon (SOC) Sequestration

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**Keywords**: climate change, agriculture, SOC sequestration, carbon offsets, MRV methodologies.
**JEL code: M41, Q14.**

As the third-largest driver of climate change, the agricultural industry accounts for at least 22% of global greenhouse gas (GHG) emissions, making it a major source of carbon emissions. Since soils in agriculture represent the largest terrestrial carbon reservoir that can be enhanced through improved land management practices, these practices have the potential to alter the balance of soil organic carbon (SOC). By adopting climate-smart carbon farming practices (e.g. conservation tillage, organic farming, cover cropping, crop rotations), farmers can mitigate or potentially reverse the loss of carbon from their fields. One approach to facilitate the trading of environmental commodities that represent SOC sequestration in agriculture is through a carbon market, which typically denotes an economic instrument designed to mitigate agricultural emissions by providing financial compensation for each metric ton of $CO_2$ emissions avoided. Agricultural land managers can receive direct compensation for the removal and storage of $CO_2$ in the form of SOC as carbon offsets. As carbon offsets possess monetary value and can be traded as instruments within carbon markets, this mechanism creates a potential mutually beneficial opportunity, where farmers are compensated for SOC sequestration, while other sectors gain the ability to mitigate their $CO_2$ emissions.

Since there is a current lack of focus on specific mitigation techniques and outcomes of carbon offsets in SOC sequestration, the research *aims* to propose comprehensive methodologies for accounting for carbon offsets in agriculture, with a specific focus on both sustainability and simplified Measurement/Monitoring, Reporting, Verification (MRV) processes that enable farmers to actively observe their carbon footprints while contributing to emission reduction efforts. To address this question, the research explores the existing MRV methods and approaches by employing systematic, scoping and critical literature review along with an analysis of current regulatory protocols, guidelines, standards and MRV initiatives for SOC sequestration. As a result, the research outlines a conceptual methodology for an integrated MRV processes designed for agriculture that could facilitate the quantification, monitoring, reporting and verification of carbon offsets and SOC changes.

The *findings* indicate that MRV methodologies for measurement/monitoring part refer to tracking changes in emissions or sequestration levels over time. Reporting involves the structured processes for communicating these findings, while verification plays a crucial role by requiring project administrators or independent auditors to thoroughly assess and confirm the accuracy, completeness, and credibility of the reported results, thereby ensuring compliance with established standards and maintaining the integrity of the carbon offset program. Firstly, accurate accounting of SOC changes in agriculture should utilize established measurement and monitoring approaches (measurement/monitoring part), including field-based direct measurements, modelling techniques, remote sensing or lookup tables. The chosen approach should be simple to implement, considering local conditions, to minimize costs for both administrators and farmers. Once data collection is completed, all relevant information should be compiled and reported (reporting part). For reporting SOC changes, carbon project developers should select the earliest reliable data point available. Reporting periods can range from 1 to 5 years for soil carbon projects. Additionally, when registering a soil carbon project, developers must choose a permanence period of either 25 or 100 years, during which the carbon sequestered in the soil must be preserved. To register a soil enrichment carbon project, developers are required to submit several reports: a re-implementation report, an initial report, bi-annual reports, and a final report. Finally, to ensure compliance with the established requirements, an external auditor should review the measurement and monitoring results and verify the amount of greenhouse gas benefits achieved and documented by the carbon project (verification part). Upon successful verification, carbon credits can be issued using different payment models including action-based, results-based and hybrid payment approaches.

# Digital Sustainability Reporting Driving Digitainability Agenda

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**Keywords:** sustainability accounting, digitainability, general systems theory, iXBRL.
**JEL code: M14, M10, L21.**

***Relevance and novelty of the topic.*** Many studies confirm that achieving Sustainable Development Goals is impossible without digital transition (Müller et al., 2018; Kamble et al., 2018; Jayashree et al., 2022; Ferreira et al., 2023). However, sustainability and digitalisation usually stay unrelated to each other as two different focuses of organisations (Del Río Castro et al., 2021). Digital sustainability reporting (DSR) introduced by the recent Corporate Sustainability Reporting Directive (CSRD) provides the regulatory frame for the synergic approach to sustainability and digitalisation.

The authors select General Systems Theory (GST) by Ludwig von Bertalanffy for its comprehensive approach to recognising relations and interplays among sustainability, digitalisation, and DSR. GST reveals the possibility of merging systems from different disciplines as those have certain unified rules of existence (Kast & Rosenzweig, 1972; Van Assche et al., 2019). GST aims to explain organisation as a complex open system consisting of many mutually interacting elements and their environment, called subsystems (Kast & Rosenzweig, 1972; Van Assche et al., 2019). In the context of sustainability reporting, the GST was first introduced by Aprile et al. (2023). The authors argue that under GST, sustainability, and digitalisation, due to their close impact on each other, could be united into one subsystem that influences the organisation. Thus, GST provides a theoretical ground for digitainability and draws a relation path to the DSR. Thus, the study's analysis shifts from silo-based elements to the systemic mechanisms for introducing DSR.

***The research aim and tasks.*** The research aim is to define the key mechanism for developing digitainability as an assemblage of sustainability and digitalisation (Gupta et al., 2020) as. The research tasks for achieving the aim are: 1) examine the literature supporting the digitainability concept; 2) identify the role of DSR for the mechanisms behind digitainability.

***Research object*** is digitainability process**.**

***Extent of research on topic.*** The foundation for the Digitainability concept is provided by Digitalisation-centric approaches to sustainability outlined by many authors (Fromhold-

Eisebith et al., 2019, George et al., 2021; Pan & Nishant, 2023; Lu et al., 2023). The studies do not sufficiently explore the question *HOW?* or based on what tools, techniques, and technologies the combination of two concepts empower each other.

***Research method.*** The literature review is the main method used to conduct the analyses.

***Main research questions.*** What is the ground for developing digitainability? How DSR impacts digitainability?

***Main results.*** The GST provides theoretical ground for digitainability development, guiding future studies for the notion of a system-based approach. The new European Sustainability Reporting Standards (ESRS) embed iXBRL for sustainability reporting as a holistic part of the annual report, putting it on even with financial reporting. In line with Moneva et al. (2023), the authors argue that a systemised regulatory reporting framework is a step towards developing integrated sustainability accounting (SA). Importantly, the number of potential ESRS financial and non-financial reporting data points is 1200+. Thus, building plausible SA is essential to ensure big data analytics reliability for reporting scale and scope of the metrics. XBRL was invented in 1998 to revolutionise conventional accounting and reporting (Shan et al., 2015) but the market was not ready for it. Today SA requires digital solutions that would ensure clear data definitions and embedded internal data validation processes (Bennett et al., 2013). Merging the requirement for the regulatory iXBRL reporting and literature call for the new SA in the ESRS framework. The authors argue that DSR serves as a *pole star* for reengineering SA based on digital XBRL format as the core mechanism of digitainability.

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# Sustainable Development in the Activities of General Pension Society

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**JEL code: Q01, J32, R53.**

In recent years, numerous initiatives have been undertaken to address the issue of sustainable development in the context of investment, including investments in pension funds. As Aburto Barrera & Wagner (2023) noticed: "insurance companies and pension funds are strategic players in building socio-economic and sustainable development".

Notable examples include the United Nations' Principles for Responsible Investment, the Global Impact Investing Network, the Impact Management Project and the European Venture Philanthropy Association. Researchers studying the functioning of pension security systems are increasingly focusing on sustainable development (Xiaran, 2023; Alshater et al., 2021). Given that retirement investment represents one of the longest financial processes, it is critical to generate sustainable, long-term returns on pension investments while concurrently managing investment risk levels. This is essential from the standpoint of both individual welfare and societal well-being (Owadally et al., 2021; Miglietta et al., 2023).

Applying non-financial criteria (environment, society, and corporate governance (ESG)) in the investment process can thus pertain to the management of pension funds (Shevchenko et al., 2015; Melas et al., 2017; Peng et al., 2024). The application of responsible investment principles in this case depends not only on investors but also on legislators and the design of the pension system itself, which may encourage competition or cooperation between institutions managing pension funds (Väänänen, 2021). As indicated by Molthan-Hill & Winfield (2023), making poor decisions in pension fund management that harm sustainable development can pose a risk of asset loss for organizations. At the same time, Ijzereef et al. (2023) point out that if sustainable development is not integrated into the functioning of a given organization, efforts towards sustainability may even harm the financial performance of pension funds.

The objective of this article is to evaluate the reporting practices of general pension society (GPS) in the domain of sustainable development and socially responsible investing, and to propose recommendations for improvements in this area. GPSs were established in the

Polish market in 1999 as a consequence of pension system reform. Their primary purpose was to manage and invest open pension funds (OPF) as part of the so-called second pillar of the pension system. From the 21 entities that began operating then, 8 GPSs remain in Poland in 2024.

The research methodology used in this article includes analysis of information contained in secondary sources, as well as assessment of the response to the inquiry sent via e-mail regarding ESG strategy. The assessment will be conducted by analysing non-financial reports, information on websites, investment policy materials, and materials received from email inquiries. Taking into account the time scope of the analysis, materials available on the PTE website in 2024 will be taken into account (they include all publications - regardless of the time of their publication), while e-mail inquiries were sent in August 2024 (institutions that did not respond in August were re-emailed in October).

The analysis reveals that GPSs adopt one of three reporting strategies in their operations: 1) A comprehensive presentation of activities by the GPS as a financial market entity, with explicitly described practices within the frameworks of CSR and ESG; these activities are presented either in a standalone GPS report or as clearly delineated actions within a larger corporate entity; 2) A brief mention on the website, typically in a few sentences, indicating that sustainable development is a concern for the GPS's leadership; in such cases, the description of activities is rather general; 3) The absence of any information regarding sustainable development.

In examining "responsible investing", some GPS managers explicitly recognize that ESG factors can significantly affect the financial value of assets and thereby have a substantial impact on long-term performance. This recognition is crucial in the context of long-term savings aimed at securing retirement. The challenge for pension funds concerning sustainable development lies in balancing societal pressure for sustainable investment practices with the imperative to achieve robust financial returns. An additional critical challenge is fostering collaboration between those managing sustainability issues and investment managers.

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# Evaluation of Sustainability Solution through the Lens of CO2 Emissions, Investments in Environmental and CSR Disclosures of the Listed Companies in Baltic Region

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**Keywords**: social responsibility, disclosure, CO2, investments in environmental solutions, Baltic listed companies, CSR.
**JEL code:** M21, M41, M48.

In an ever-changing market landscape, managers must innovate to boost company efficiency and stay competitive, balancing both financial and non-financial factors. The rising emphasis on corporate sustainability and strict environmental regulations necessitates integrating sustainability into financial management. Thus, assessing the extent of CSR disclosures and their correlation with corporate performance, CO2 emissions, and environmental investments is crucial.

Literature review highlights the importance of corporate sustainability but often focuses on isolated issues. Previous studies have examined CSR disclosures or the relationship between financial performance and sustainability, typically within a single sector. This study expands the scope by using the internationally recognized Global Reporting Initiative (GRI) to define the structural components of the social responsibility index for Baltic countries, considering the unique aspects and regulations of each country studied. Moreover, with the pressing issue of climate change and the role of CO2 emissions, this research aims to establish a connection between CO2 reduction efforts, environmental investments, and corporate financial performance, particularly in the under-researched context of Baltic listed companies.

The research focuses on integrating sustainability solutions into financial management of companies in the Baltic region. The purpose of the research is to identify and evaluate sustainable solutions that are through the lens of CO2 emissions, investments in environmental and CSR disclosures of the listed companies in Baltic region.

The research objectives are involved defining the concepts of sustainable and conventional finance, reviewing laws and models governing corporate sustainability disclosures, and examining the links between corporate sustainability, CO2 emissions, and financial decisions. Additionally, it includes developing a methodology to study the integration of sustainability into corporate financial management and determining the relationship between financial performance and climate change factors, while assessing industry-specific social responsibility disclosures.

The methods of the research include analyses of the theoretical aspects of the integration of corporate sustainability into financial decisions as well as application of comparative and systematic analyses of the literature. This approach allows for the comparison of differing views and the formulation of generalized conclusions. The study also assesses the links between sustainability and financial performance of companies in the Baltic region as well as the level of social responsibility disclosures through correlation and statistical data analysis.

In sum, the literature identifies sustainable and traditional finance as serving the primary function of resource allocation, but sustainable finance also includes decisions oriented towards ESG decisions. Our review of the literature shows that the calculation methodologies used by studies assessing the level of CSR differ because the components of the social responsibility index are based on either international or national standards. The results of our correlation analysis show that there is a mostly negative correlation between net profit and CO2 emissions; suggesting that a reduction in pollution from a company's activities can lead to increased profits. The correlation analysis also reveals that the net profits of Lithuanian and Estonian companies are more strongly correlated with CO2 emissions than with environmental investments. The opposite trend is observed for Latvian companies. The calculation of CSR Index shows that Baltic companies in various sectors disclosed about 50% of CSR criteria in their reports, with an average increase of 5% between 2017-2019 and 2020-2022. The water supply and waste management sector had the highest CSR Index value (78%). The analysis of general trends in corporate social responsibility shows that the level of corporate-social-responsibility engagement varies by country and sector. The study suggests that the upcoming European Sustainability Reporting Standards (ESRS) may standardize CSR disclosures, noting that some sectors have not voluntarily disclosed ESG information.

# Unveiling Fintech Research: A Bibliometric Perspective

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**JEL code: O16.**

This article presents a bibliometric analysis of 2144 articles published from 2005 to April 2024 to objectively assess the evolving landscape of the rapidly expanding literature on FinTech, a sector at the intersection of finance and technology that has significantly transformed financial services since the global financial crisis. While past studies have mostly focused on one specific topic in fintech, this study aims to provide a comprehensive review of the whole FinTech literature, focusing on publication and citation trends, collaboration patterns, and the intellectual structure of the field. In contrast with past studies which rely heavily on one data source such as Scopus or Web of Science, this study utilizes both data sources and uses bibliometric analysis to handle large datasets, employing RStudio and VOSviewer for data analysis. In the data collection process, we also partially follow Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) to ensure its transparency and validity. Key findings include: 1) identifies trends in publications and citations, with a notable increase in recent years; 2) lists the most cited articles, productive countries, authors, and journals and presents the collaboration pattern; 3) conducts a keyword co-occurrence analysis, revealing thematic clusters within the literature. The 5 clusters of critical themes revealed by this study are: 1) blockchain, cryptocurrency, and bitcoin; 2) crowdfunding and p2p lending; 3) financial inclusion, financial literacy, and microfinance; 4) financing constraints, sustainability, and green innovation; 5) China, natural resources, and fintech development. The literature has highlighted both the opportunities and challenges posed by FinTech, such as competition, efficiency, risk, and the necessity for regulatory adaptation. Despite certain limitations, including the searching strings and quantitative methods, this study offers valuable insights into the dynamic and complex nature of fintech, underscoring its growing influence on the global financial system.

# The Causes and Consequences of Manipulation in the Cryptomarket

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**Keywords**: manipulation, cryptomarket, cryptocurrency, MiCa, regulatory requirements.
**JEL code:** M41, M42, D91.

The manipulation of the cryptocurrency market represents a significant challenge, given the rapid evolution of financial instruments and their growing popularity among less sophisticated investors. The value of cryptocurrencies is subject to radical fluctuations, and it is therefore essential to identify appropriate valuation and accounting methods. Governments and regulators around the world are striving to implement effective regulatory frameworks for the cryptocurrency market, with the aim of ensuring safety and transparency. In order to select the most appropriate custody mechanism, it is essential to be fully aware of the nature and extent of potential manipulation in the cryptocurrency market and to conduct a thorough, objective investigation. The objective of this study is to identify the types of manipulation that have occurred in the Lithuanian and global cryptocurrency market and the measures taken by the supervisory authorities. The research employs a range of methods, including scientific literature analysis, documentary research and comparative methods, logical deduction, analogy, systematisation and analysis.

This research presents a comprehensive analysis of crypto-assets, examining their characteristics, regulatory landscape, and broader market implications. Research focuses on the classification of crypto-assets, with particular attention to the forthcoming Markets in Crypto-Assets (MiCA) regulation, which will take effect on December 30, 2024. This regulation will standardize the oversight of crypto-assets across the European Union, moving away from the previous country-specific regulatory frameworks.

Results explore the practical applications of crypto-assets, including their use in transactions, exchanges, and investments. It highlights various methods by which crypto-assets can facilitate the payment for goods and services.

Research investigates the causes behind significant losses of crypto-assets across various cryptocurrencies, both in Lithuania and globally. This analysis reinforces the necessity for stronger protection mechanisms in the evolving crypto-asset landscape.

# Robotic Process Automation in Finance and Accounting: Bibliometric Analysis

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**Keywords:** Robotic Process Automation, bibliometric analysis, literature review, Scopus database.
**JEL code: M21, M41.**

The term "Robotic Process Automation" (RPA) emerged at the beginning of the 21st century and refers to software that replaces humans in performing tasks. Along with this new term, discussions have arisen about the essence of process automation, as well as the benefits, costs, risks, and limitations associated with the practical application of RPA in business (Frey & Osborne, 2017; Geyer-Klingeberg et al., 2018; Van der Aalst et al., 2018; Fernandez & Aman, 2018; Moderno et al., 2021; Remlein et al., 2022; Dubey et al. 2023).

As a relatively new, though partially explored topic, it requires a comprehensive review of existing research and reflection on future directions. Therefore, there is a need for an objective, quantitative analysis to summarize the current state of the literature and identify potential paths for further research in this area.

In the context of scientific research, a literature review plays a fundamental role, serving as a key tool for managing the diversity of knowledge within a specific academic study (Tranfield et al., 2003). At the same time, bibliometric analysis, which focuses on assessing data and identifying trends in publications, becomes an essential research element. Bibliometric analysis is a popular and rigorous method for exploring and analyzing large volumes of scientific data. It enables us to unpack the evolutionary nuances of a specific field, while shedding light on the emerging areas in that field (Donthu et al., 2021). By employing a quantitative approach and statistical methods, bibliometric analysis enables systematic examination of phenomena in the scientific literature, contributing to a better understanding of the dynamics of development in a given field. The main advantage of bibliometric analysis over other review techniques lies in its objectivity (Aria & Cuccurullo, 2017). It highlights the most influential works and maps the research field without subjective bias (Zupic & Čater, 2015).The aim of this article is to carry out a bibliometric analysis of the research carried out to date in the area finance and accounting, highlighting, in turn, future lines of research.

To achieve this objective, a systematic literature review was conducted using bibliometric analysis with VOSviewer software. In the process of sample selection for the study, the analysis for this literature review began with a broad dataset that was gradually narrowed down in subsequent stages. The starting point was a bibliographic dataset from the Scopus database, an online service indexing scientific citations managed by Elsevier – one of the largest abstract and citation databases in the world containing peer-reviewed scientific literature (Chicksand et al., 2012). The study was divided into five main stages. The first stage involved searching for literature for analysis. The next stage entailed selecting publications in the database by applying chosen search filters. Stages three and four were dedicated to bibliometric analysis, focusing respectively on fundamental elements of the analysis and citation analysis. The fifth stage involved the analysis of clustering relationships.

Selected keywords appearing in the titles, keywords and summaries of the articles were used to choose the literature. The search phrase was "Robotic Process Automation". The second criterion for selecting articles is the relationship between RPA and Business and Management. On a sample of almost 200 articles, scientific productivity in the field of Robotic Process Automation was assessed based on the annual number of publications. Leading countries in RPA study highlighted. The authors' publication activity was analyzed and a bibliometric citation analysis was performed. The most frequently cited authors, articles and leading journals were highlighted. In the next stage, an analysis of word co-occurrence was carried out and research clusters were determined on its basis.

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# Determinants of Mandatory and Voluntary Non-financial Reporting in Lithuanian Companies

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**Keywords**: non-financial reporting, Lithuania, determinants, mandatory, voluntary.
**JEL code: M41, M14, L25.**

In recent years, non-financial reporting has gained significant importance in corporate communication and stakeholder engagement. This study examines the determinants of mandatory and voluntary non-financial reporting practices in Lithuanian companies, addressing a crucial gap in the literature on sustainability disclosure in small CEE markets. As Lithuania aligns its regulations with EU directives, understanding the current state and determinants of non-financial reporting become critical for policymakers, companies, and stakeholders.

The aim of this research is to identify and analyze the determinants influencing non-financial reporting among Lithuanian companies, focusing on both mandatory and voluntary disclosures. The research tasks include identifying trends and assessing the impact of various determinants on the level of disclosure, such as company size, number of employees, leverage, liquidity, profitability, the reporting framework used, etc. This approach provides an in-depth understanding of the country's recent practice of mandatory and voluntary non-financial reporting.

The object of this research is the non-financial reporting practices of Lithuanian companies, specifically the disclosure of sustainability information. The study analyses non-financial information reports of companies from 2017 and 2022. The target population includes the largest Lithuanian companies by revenue, with a sample of 20 companies reporting mandatory non-financial information according to EU Directive 2014/95/EU and 20 companies reporting voluntarily.

The research methods employed in this study include content analysis, descriptive statistics, statistical analysis, and regression analysis. Content analysis is used to evaluate the extent and quality of disclosures, while statistical methods are applied to identify significant determinants and trends. The study examines differences in disclosure levels between mandatory and voluntary non-financial reporting within the analyzed years and trends over time.

The findings reveal no statistically significant differences in the level of disclosure between mandatory and voluntary disclosing companies in both 2017 and 2022. However, a significant increase in the level of mandatory disclosures was observed between 2017 and 2022. Companies have generally enhanced their information disclosure practices, though only a small minority have substantially improved the quality of the information provided. The study also finds that the reporting framework significantly affects disclosure levels. Additionally, the type of report (individual or group) and the size of the company are significant determinants of the level of disclosure.

# The Framework of Public Value as a Prerequisite for Measuring the Impact of Performance Audits on Public Value Creation

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**Keywords**: performance audit, impact of the performance audit, public value creation.
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In research, the impact of performance audits conducted by SAIs has been classified based on measurement complexity, the duration of the effect, and the entities where this impact occurs (Banushi, 2019; Irawan & Mcintyre-Mills, 2016; Van Loocke & Put, 2011). The discourse on the results of performance audit impact assessments provides a basis for further research in this field. According to the theory of Cordery & Hay (2018), next to all other forms of performance audit impact, it is appropriate to introduce a new form of impact – impact in creating public value. To investigate the impact of performance audits on public value creation, it is necessary to develop a system of public value dimensions and use it to evaluate the impact of performance audits on public value creation.

The study seeks to develop a theoretical framework of assessment for public value creation. The research object is the theoretical framework of assessment for public value creation. Content analysis of scientific sources was employed. The works of researchers Moore (1994), Talbot (2007), Puron-Cid et al. (2008), Alford & Hughes (2008), Jain Gupta & Suri (2017), Meynhardt (2014), Cordery & Hay (2018), and others, were selected for content analysis.

Content analysis leads to the identification of four key areas for public value assessment: strategy, governance, consumers and society, and supply chain. *Strategy* involves mission of public entity and long-term objectives formulation in areas like environmental protection and transparency, aiming to enhance public welfare. These objectives must justify public resource use, optimize bureaucratic processes, and ensure continuity beyond political terms. The second dimension is the planning process, which must help achieve the set objectives. *Governance* focuses on management of financial resources, activity, data, information management, accountability and responsibility. The third key direction in the assessment framework of public value creation is *consumers and society*. The first essential component, tied to the rule of law, ensuring that all legal consumers have the right to access public services. This also involves compliance with laws. The second component is participation and engagement, where consumer involvement in public services and activities enhances public value. The fourth direction focuses on the *supply chain*, which ensures that public services are efficiently delivered. Effective supply chain involves management features, human resources, practices of impact evaluation and stakeholder engagement. Together, these directions form a holistic framework that enhances evaluation of public value creation (see Figure 1).

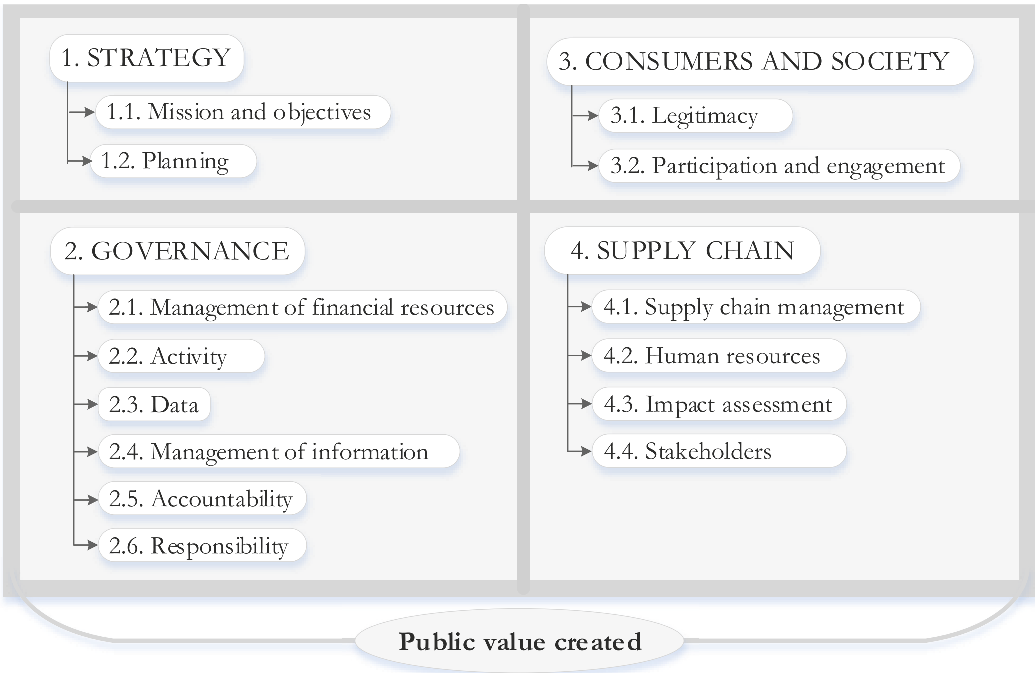


Figure 1. **Theoretical assessment system for public value creation**
*Source: compiled by the authors*

The dimensions of all four directions consist of smaller sub-dimensions, the overall assessment of which reflects the level at which the indicators are achieved. All the directions and elements of the public value creation evaluation system form the foundation for assessing the impact of performance audits from the perspective of public value creation.

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# Integration of Agile Technologies in Internal Audit

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**Keywords***:* internal audit, Agile, Agile audit, Agile methodology, unified work cycle of Agile audit.
**JEL code: M40, M42.**

The study is devoted to the processes of integration of Agile technologies in internal audits. It was determined that Agile is a method and a way of thinking simultaneously, which ensures timeliness of receiving information, quick response to risks, and acceleration of audit cycles, thanks to which the effect of value creation is achieved for both top management and stakeholders. The aim of the study is to examine the theoretical and practical aspects of Agile implementation in internal auditing and to propose recommendations for optimizing its further application in organizations. The objectives of this paper are to analyze the outcomes of Agile implementation in business processes and internal auditing, to identify key conceptual changes in internal audit influenced by the Agile approach, and to propose a unified framework for the work cycles of internal Agile audits. To achieve the research aim and address the outlined objectives the following methods were employed: comparison, generalization, and systematization were applied in the analysis of scientific literature and survey results; grouping was used to identify key changes in internal audit concepts enabled by the Agile approach; and a systems approach was adopted to develop a unified work cycle scheme for internal Agile audits. The analysis of statistical studies of the implementation of Agile technologies allowed the authors to conclude that the Agile approach is increasingly used in enterprises to achieve planned results, and to single out key changes in the concepts of internal audit, which became possible thanks to the implementation of the Agile approach. It is noted that there is no single path for transitioning to the use of Agile methodology for all organisations. In addition, such a transition can cause difficulties associated with rethinking the audit process. That is why the authors attempted to unify the work cycles of the internal Agile audit.

# Actual and Desired Use of Artificial Intelligence in Accounting

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**JEL code: M15, M41.**

The current expansion of artificial intelligence (AI) offers endless business opportunities to enhance efficiency and productivity, improve decision-making, optimize operations and financial management, and enable data-driven decision-making. Accounting is one of the areas where AI can be beneficial. The studies identify how AI can be used in accounting, but they do not assess the size of the companies whose accounts are being kept, or who does the accounting. No studies have been conducted on the actual or desired use of AI in accounting in Lithuania.

***The research aims*** to identify different types and forms of accounting in Lithuania and AI's actual and desired use based on those types and forms.

To achieve this aim, three ***tasks*** have been set:

1) to identify areas of accounting where AI can be used;
2) to establish different types and forms of accounting;
3) to explore the actual and desired use of AI in different types and forms of accounting.

***The object of the research*** is the actual and desired use of AI in accounting in Lithuania.

***Research methods*** are analysis of literature, statistics and market data, and survey.

Various tools, scientific literature, and studies have been analyzed to determine how AI can be used in accounting. Based on that five areas of accounting were distinguished: data entry, process automation, intelligent financial reporting, compliance and risk management, decision support, and advisory. Different AI tools can be used for different accounting functions, which facilitates further research to identify the use of AI tools.

Depending on the size and needs of the business, there are different types and forms of doing that. It has been assumed that different types and forms of accounting can benefit from different AI tools, whose types and forms were categorized: (1) contract accountant; (2) single accountant; (3) small accounting department; (4) medium accounting department; (5) large accounting department; (6) outsourced accounting services; (7) hybrid accounting; (8) centralized accounting functions; (9) decentralized accounting functions.

To identify the relationship between different forms of accounting in Lithuania and the actual and desired use of AI a survey of Lithuanian accountants was conducted from May to June 2024. 476 respondents submitted their answers. The main results of the survey are presented in the table (see Table 1).

Table 1. **Actual and desired use of AI in different types of accounting**

| Type of Accounting | Number of respondents | Data Entry | | Process Automation | | Intelligent Financial Reporting | | Compliance and Risk Management | | Decision Support and Advisory | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Actual, % | Desired, % | Actual, % | Desired, % | Actual, % | Desired, % | Actual, % | Desired, % | Actual, % | Desired, % |
| Contract accountant | 28 | 0 | 60 | 0 | 21 | 0 | 36 | 0 | 5 | 0 | 5 |
| Single accountant | 48 | 0 | 57 | 0 | 49 | 0 | 39 | 0 | 7 | 0 | 12 |
| Small accounting department | 61 | 5 | 69 | 0 | 69 | 0 | 29 | 0 | 12 | 0 | 12 |
| Medium accounting department | 105 | 17 | 59 | 8 | 78 | 0 | 36 | 0 | 49 | 0 | 65 |
| Large accounting department | 81 | 39 | 96 | 27 | 96 | 0 | 65 | 27 | 96 | 33 | 79 |
| Outsourced accounting services | 72 | 22 | 87 | 12 | 82 | 5 | 87 | 0 | 25 | 0 | 25 |
| Hybrid accounting | 17 | 5 | 45 | 5 | 63 | 0 | 5 | 0 | 12 | 0 | 29 |
| Centralized accounting functions | 43 | 12 | 92 | 12 | 92 | 0 | 87 | 0 | 87 | 0 | 87 |
| Decentralized accounting functions | 21 | 0 | 57 | 5 | 63 | 0 | 52 | 0 | 49 | 0 | 69 |

Based on the results of the survey, we see that the gap between the actual use of AI tools and the desire to use them is present in all areas of accounting and in all forms and types of accounting. This means that there is potential for the development of AI in Lithuanian accounting.

Where the difference between the two numbers is greatest, the greatest potential for AI development can be seen. Based on the survey results, in all types and forms of accountancy AI in the areas of process automation (average gap 60%) and data entry (average gap 58%) has the greatest potential. Looking at the types and forms of accounting the greatest potential is the centralized accounting function (average gap 84%) and large accounting departments (average gap 61%).

# The Impact of Licensing for Outsourced Accounting Services on Service Providers and Service Recipients

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**Keywords**: outsource accounting, bookkeeping, licensing, AML, outsourcing, accounting.
**JEL code: M40, M41.**

The outsourced accounting industry is rapidly growing and becoming an essential part of business operations both in Latvia and globally, there is a need to regulate the provision of such services and ensure high service quality. One way to regulate the industry and guarantee the provision of services that comply with legislative requirements is through the introduction of licensing. Since July 1, 2023, all outsourced accounting service providers in Latvia are required to be licensed. Until today, not all service providers have received the necessary license, therefore this research outlines challenges faced by service providers in obtaining an outsourced accountant's license. Licensing of outsourcing accountants has contributed to reducing the number of service providers, leaving the strongest providers in the market, thus ensuring that clients receive quality services. One of the reasons why the number of service providers has decreased is that the State Revenue Service has stopped the economic activity of relatively large number of service providers who have not met the licensing requirements. The other reason for decrease is that quite a few outsource accounting providers have changed their activity to data entry operators, thus bypassing the requirements of the law and are no longer subject to licensing. Before the licensing process, any interested party could provide these services, even without proper education and experience, but the introduction of licensing has eliminated this shortcoming.

***The aim*** of article is to examine the dynamics of the licensing process in Latvia and analyse its impact on service providers and recipients.

To achieve this goal, the following *tasks* have been set:

- analyse statistics on companies and self-employed individuals working in this sector;
- gather information on service providers in various EU countries;
- compare requirements for outsource accounting providers in different EU countries;
- outline how licensing and additional requirements for service providers regulate market saturation;
- outline challenges that service providers face during licensing process.

The ***methods used*** in the study are the descriptive method, the logical constructive method, and the mathematical statistics method.

The research provides suggestions on what processes should be implemented to streamline the industry and improve licensing coverage.

# The Impact of Process Measures – Work Process Clarity and Process Flexibility – on Employee Job Satisfaction and Job Performance

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**Keywords:** work process, process clarity, process flexibility, job satisfaction, job performance.
**JEL code: M19, M50.**

Employee job satisfaction and employee job performance have been researched for a long time for their importance in increasing company performance. Businesses continue focusing on process management seeking to exploit their companies' profitability and staying competitive in the market. Work process clarity and process flexibility appear to be the core characteristics in the employees' everyday work process management that play their role in creating employee job satisfaction and job performance, however these relationships have seen very little research. In our work, we aim to evaluate the interplay between work process clarity, process flexibility, employee job satisfaction and job performance. We propose a scale to measure the process flexibility construct. Furthermore, we test the scale by empirically evaluating the relationship of the process flexibility construct with the other constructs that are built on the background of the existing measurement scales. We adapt the Sawyer's (1992) process clarity scale, and we use the Cammann et al. (1983) job satisfaction scale and the Loan's (2020) job performance scale. We conduct regression analysis and test the following hypotheses: the impact of work process flexibility of employee job satisfaction; the impact of work process flexibility on employee job performance; the impact of work process clarity on employee job satisfaction; work process clarity on employee job performance.

After conducting research (N=412), where all the constructs had a Cronbach's alpha above 0,7, we concluded that work process clarity and work process flexibility have a significant impact on employee job satisfaction and that work process clarity also impacts employee job performance, while work process flexibility has no statistically significant impact on employee job performance. In this research, a new work process flexibility construct scale was developed and successfully tested.

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# Generation Alpha Financial Inclusion Solution: Smart School Case Study in Uganda

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**Keywords**: financial inclusion, generation Alpha, financial assets, digital servicing.
**JEL code:** G40.

Generation Alpha financial inclusion solution has an objective to present a theoretical framework that explains the possibility of the financial inclusion of the generation Alpha age-gap. The smart school solution that leads to a financial inclusion examines the challenges and solutions associated with limited financial services of financial participation in financial and monetary institutions provided a limited access to financial assets from the index, for financial assets such as saving, investing, planning and budgeting, which was used as a sample to generate alpha in Uganda, this study recommends that Ugandan schools formulate and strengthen facilities to address challenges such as gender disparity in the financial infrastructure to a basic facility in secondary school. The total number of participants was 315, filled with a printed questionnaire that found out the awareness, knowledge and relevancy of financial assets and the discussion of the findings raised a concern relevant to the financial inclusion. The findings and outcome showed that there is a depth of illiteracy in the financial asset such as basic knowledge of the accounts that financial institutions offer, currency conversation knowledge and the saving culture among the selected generation Alpha found in Ugandan's secondary school however much more willing to adopt to the current and updated trend in the financial sector as new technology evolve in this economy.

Theoretical frameworks such as the use of Diffusion of Innovations Theory, Financial Inclusion Theory to analyse the adoption of financial technologies and their impact on student behaviour, and Inclusive Innovation Theory to understand how Uganda's cultural and inclusivity context influences the integration of financial tools into the education system, which facilitate the elaboration of the variation caused by this robust challenge, which is addressed in this research paper and the study argues that the solution should be adopted by the government and financial institutions, thus reducing the frictions holding back financial inclusion, rather than targeting specific levels in financial inclusion.

This study reveals the significant potential of smart schools to address financial exclusion by fostering early engagement with financial systems, improving financial literacy, and promoting long-term economic participation and contributes to the emerging theoretical literature on financial inclusion in Uganda and Africa by presenting a digital servicing perspective on how to accelerate digital financial inclusion.

# Employees from Generation Z about Quiet Quitting

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**JEL code:** M14, M12

For many years, there has been ongoing discussion about how Generation Z would adapt to the labor market, considering that this is the first generation deeply immersed in the virtual world and significantly impacted by the COVID-19 pandemic. Currently, members of Generation Z are active in the labour market. Research conducted within this group indicates the presence of a newly identified phenomenon known as quiet quitting (QQ). As Scheyett (2022) defines it, quiet quitting is a work-related phenomenon where "one does not literally quit one's job, but rather simply does the work that is expected of the position, without going above and beyond what is expected".

Quiet quitters are employees who are disengaged at work and do not intend to exceed their job duties. Research conducted by the Gallup Institute among US employees indicates that the percentage of employees experiencing quiet quitting has significantly increased, while the percentage of engaged employees has substantially decreased (Harper, 2022). This phenomenon stands in opposition to the expected increase in employee engagement, where employees would independently initiate actions beyond the minimum requirements of their job responsibilities. Meanwhile, in many industries, such as tourism, much greater employee engagement in customer service is expected. Additionally, employee withdrawal and minimal engagement negatively impact relationships among employees.

Researchers also point to employees' aversion to existing organizational cultures, which are predominantly directed toward high-performance work systems and competition among employees, and are detrimental to employees' morale, well-being, and work-life balance. It is worth noting, however, that employees engage in quiet quitting due to poor extrinsic motivation, burnout, and grudges against their managers or organizations. Moreover, there is a reverse side to quiet quitting: while it helps workers avoid burnout, engaging in this behavior may jeopardize their professional careers (Serenko, 2024). Factors that significantly impact the concept of quiet quitting include poorly valued employees, lack of organizational commitment to employee career development, lack of empowerment, exclusion of employees in organizational decisions, lack of autonomy at work, and a decline in trust in the organization (Pevec, 2023).

In light of the aforementioned observations, a pertinent question arises regarding the extent to which quiet quitting is associated with Generation Z compared to its prevalence in older generations, such as Generation Y. This is particularly significant as the labor market will increasingly be populated by Generation Z in the coming years. Consequently, their approach to work will impact the efficiency and effectiveness of organizational functioning.

To address this question, a representative study was conducted among members of both Generation Y and Generation Z, focusing specifically on individuals working full-time. The following hypotheses were formulated:

H1: Quiet quitting is significantly more noticeable in Generation Z.
H2: The phenomenon of quiet quitting differs as far as demographic variables are concerned.

***Methodology of research.*** In 2024, a representative study was conducted with a sample of 630 respondents from Poland using the Computer-Assisted Web Interviewing (CAWI) method. Validated scales were employed to measure quiet quitting (Anand et al., 2024; Galanis et al., 2023). The analysis of results is limited to respondents from generation Z, represented by 204 respondents.

***Results of research.*** The conducted research indicates that the phenomenon of quiet quitting is not highly noticeable among Generation Z employees (table 1). The mean values in many responses hover around 4, suggesting that respondents do not have a clear opinion on the matter—they neither agree nor disagree with the presented views. The high standard deviation values lead to another observation, that there is considerable diversity in attitudes within the surveyed group.

Table 1. **Descriptive statistics for QQ in generation Z**

| | Mean | Median | Mode | Stand. dev. | Asymmetry | Kurtosis |
|---|---|---|---|---|---|---|
| I do the basic or minimum amount of work without going above and beyond | 3,91 | 4 | 3 | 1,68 | 0,15 | -0,82 |
| If a colleague can do some of my work, then I let him/her do it | 4,26 | 4 | 4 | 1,54 | -0,44 | -0,19 |
| I take as many breaks as I can | 4,18 | 4 | 4 | 1,75 | -0,14 | -0,93 |
| I don't express opinions and ideas about my work because I am afraid that the manager assigns me more tasks | 3,58 | 4 | 4 | 1,76 | 0,11 | -0,89 |
| I don't express opinions and ideas about my work because I think that working conditions are not going to change | 3,88 | 4 | 4 | 1,67 | 0,00 | -0,71 |
| I find motives in my job | 4,50 | 5 | 5 | 1,55 | -0,65 | 0,03 |
| I feel inspired when I work | 4,18 | 5 | 5 | 1,63 | -0,45 | -0,54 |
| I often avoid working more hours, if there is no additional pay | 4,17 | 4 | 7 | 2,02 | -0,05 | -1,15 |
| I am doing the bare minimum work to avoid being fired | 4,01 | 4 | 4 | 1,86 | 0,08 | -0,98 |
| I feel there is a lack of opportunities to learn and grow in my organisation | 4,05 | 4 | 4 | 1,85 | 0,06 | -1,06 |
| I feel there is a lack of meaningfulness at work | 3,63 | 4 | 4 | 1,81 | 0,26 | -0,81 |
| I feel I have a lack of interest in attending meetings | 3,92 | 4 | 4 | 1,78 | 0,01 | -0,80 |
| I feel there is a lack of passion and enthusiasm in me to work above and beyond | 4,03 | 4 | 4 | 1,74 | -0,05 | -0,78 |
| I feel there is a lack of feeling regarding my employer's caring for me | 3,80 | 4 | 4 | 1,75 | 0,17 | -0,75 |

An in-depth analysis considering demographic criteria such as age, gender, education, place of residence, and nature of work reveals weak internal differentiation in respondents' attitudes. It is possible that the relatively short tenure of these employees and their insufficiently defined expectations of their employers result in cautious responses. It's interesting conclusion due to fact, that employees from gen Z seems to be strongly connected with QQ, while our research reveals different results.

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# Impact of Global Economic Changes on Lithuanian Business Services Sector

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**Keywords**: Business service center, globalization, economic changes.
**JEL code:** M21, M40.

Business service centers are a popular form of business operation abroad, which in recent years has also begun to significantly penetrate the Lithuanian economy. As of 2023, Lithuania attracted 96 foreign investors, 13 of whom are listed on the Fortune 500 and have established business service centers in the country (Invest Lithuania, 2023).

Foreign researchers have examined business service centers from a management perspective, but there is a lack of research from a financial analysis standpoint. The impact of global economic changes or comparative analysis between companies with international and national capital has not been explored yet. So, the aim of this study is to analyze the business model of service centers, identify the reasons for their growing popularity, and assess the impact of global economic changes on their operational efficiency, considering both national and international business service centers.

The research process involves such stages as: analysis of the trends in the establishment of business service centers abroad and provision an overview of the business service sector in Lithuania; identification of global factors influencing international and national business service sector companies on a theoretical level; conduction of an expert survey to substantiate the financial and macroeconomic indicators for evaluation of impact of global economic changes on business service centers.

The first and the second stages of this study involve collecting, systematizing, analyzing, and interpreting information, statistical data, and scientific literature. In the third stage, an expert survey questionnaire is developed and proceeded.

Based on the analysis of scientific research, it is concluded that authors (Alarusi, 2021; Effendie et al., 2022; Tanjung, 2024) commonly suggest evaluating classical financial indicators, categorized into profitability, solvency, and turnover ratios. Authors (Trapane & Pelse, 2019; Grachova, 2022) also recommend assessing the impact of global economic changes using key macroeconomic indicators. However, preliminary results from the expert evaluation show that not all financial indicators are recommended for assessing the performance of business service centers. Short-term solvency ratios are not considered relevant, and turnover ratios for assets, cash, and working capital are not recommended. Nevertheless, profitability indicators, such as gross profitability, EBITDA, and profit margin, play an important role. Additionally, key indicators identified for evaluating the performance of business service centers include the equity-to-capital ratio, cost-to-revenue ratio, and cost per employee. For assessing the impact of global economic factors, the most important indicators highlighted are IT development conditions, wages, inflation, education levels, foreign language proficiency, unemployment rate, and foreign investments.

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# Non-Financial Performance Indicators: A Bibliometric and Systematic Literature Review

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**Keywords:** non-financial indicators, performance, systematic literature review.
**JEL code: M40, M41.**

Non-financial performance indicators (NFPIs) have gained increasing relevance as businesses are driven to measure their performance beyond traditional financial metrics. While environmental, social, and governance (ESG) indicators have received substantial attention, other NFPIs such as operational efficiency, quality management, and employee turnover are equally important for driving company success. Existing research has largely focused on ESG indicators due to growing regulatory and societal pressure for transparency in sustainability reporting. However, there is limited research investigating into non-ESG indicators, such as those related to operational and employee performance, despite their significant role in ensuring long-term competitiveness. This study addresses this gap by investigating both types of NFPIs and their combined influence on corporate success. The aim is to identify key non-financial performance indicators for the manufacturing sector related to ESG factors and beyond. The research employs a several-step approach. First, a search of scientific papers was conducted using the Web of Science (Clarivate) database. The search criteria included the term "non-financial performance indicators" and categories such as Management, Business, Business Finance, Green Sustainable Technology, Economics, and

Environmental Studies, focusing on the last five years. The search yielded 255 papers, and their bibliometric data was analyzed using the VOSviewer to map keyword co-occurrences. The bibliometric analysis of keywords revealed five clusters containing 63 items, 653 links, and a total link strength of 1,195. The strongest keywords include performance, impact, management, corporate social responsibility, quality. Second, a systematic literature review follows a structured protocol to gather and critically evaluate relevant studies on both ESG and non-ESG indicators in the manufacturing sector. The selected 255 papers were screened using the RAYYAN.AI tool. The papers were filtered and manually analyzed, resulting in 45 papers selected for further detailed analysis based on criteria such as topics, research aims, research objects, research methods, and main results.

Research results show that most studies aim to: assess the use and disclosure of non-financial performance indicators (NFPIs) in corporate reporting; evaluate the relationship between NFPIs and financial performance; analyze the impact of regulations on non-financial reporting practices; explore how NFPIs contribute to corporate sustainability and decision-making. Although studies seek to examine the use and disclosure of NFPIs beyond ESG, such as those measuring operational performance, innovation capabilities, and internal business processes. Additionally, the studies analyze how non-financial factors such as employee engagement, stakeholder satisfaction, and quality consciousness contribute to overall company performance, and explore the role of these indicators in strategic decision-making. The research primarily focuses on companies from various sectors, with some studies concentrating on specific regions (e.g., Italy, Spain, Poland). The methods employed include content analysis of company reports, bibliometric analysis, regression analysis, and structural equation modelling (SEM). Surveys and interviews are frequently used to gather managerial insights, along with statistical tools. Findings indicate that NFPIs, particularly those related to sustainability and corporate social responsibility (CSR), are becoming increasingly important for companies. Many studies show a positive relationship between NFPIs and financial performance, though some report mixed results depending on the specific indicators or regional context. Regulatory pressure, such as that stemming from the EU Directive, is driving improvements in NFPI disclosure, though variations exist across sectors and regions. Non-ESG-related NFPIs, such as quality management, employee turnover, and customer satisfaction, are emerging as critical determinants of business success. The studies also suggest that focusing on these indicators alongside financial metrics can assist companies gain a competitive advantage, improve operational efficiency, and enhance stakeholder relationships.

The research reveals that while companies recognize the importance of both ESG and non-ESG indicators, the integration of these metrics into corporate reporting and decision-making processes needs to be more balanced. This highlights the need for a more comprehensive and standardized approach to non-financial performance measurement in the manufacturing sector.

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# A Multi-Criteria Model for Assessing Competence of Modern Management Accountants: A Comparative Study of Future Professionals in Lithuania and Latvia

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**Keywords:** management accounting, competency level, competencies, multi-criteria model, Lithuania, Latvia.
**JEL code: M41, M53.**

The importance of the competence of accounting professionals has been extensively studied by many researchers, but it should be noted that most of the time researchers have focused on the competence of professionals who manage financial accounting. However, accounting in companies is managed and information is collected, processed, systematised and presented to users not only by specialists in financial accounting, but also by specialists in management accounting. Their level of competence is much more important because these specialists manage much more financial and non-financial information on which managers need to make timely and appropriate decisions. As the role of the management accountant in the organisation evolves, these professionals need to maintain and continually improve their existing skills and acquire new ones to maintain their professionalism and credibility. The majority of conducted research (Birkett, 2002; Mennati & Susanian, 2022, etc.) is focused on assessing the level of skills or personal attributes already available, rather than on their current need. On the other hand, the question arises as to whether the knowledge, skills, abilities and personal qualities identified in the academic literature for a management accounting specialist are equally relevant in assessing the level of competence of these specialists. Some elements are likely to have more importance than others. Therefore, the aim of the study was to reveal the importance of the knowledge, skills, abilities, and personal qualities needed by a modern management accounting specialist for their overall competence, and, using the multi-criteria evaluation method, to quantitatively assess the significance of each element of competence. The developed multi-criteria model for assessing the competence of a modern management accounting specialist can be applied to various cases. One of them is to assess the level of management accounting competence of accounting students. Such assessment is significant in planning a career in management accounting, as it allows students to focus more on the knowledge, skills or attributes that are most important. In addition, the results of the assessment of the level of competence of students could help universities to improve study programs and the curriculum of management accounting subjects.

The purpose of this research is to assess and compare the level of competence of future management accounting specialists studying at Lithuanian and Latvian universities, according to the prepared multi-criteria model for assessing the level of competence of a modern management accounting specialist. Research methods: expert evaluation and questionnaire survey methods were used to collect data, and data were analysed using multi-criteria evaluation, inferential and descriptive statistics, and graphical methods.

The results of the study revealed that various competencies are necessary for a modern management accounting specialist, among which analytical abilities are the most significant. After applying the developed model to assess the level of competence of future management accounting specialists in Lithuania and Latvia, it was found that Vilnius University students lack analytical skills such as financial and non-financial data analysis, visualisation, enterprise risk management, problem structuring, solution analysis. Therefore, it is recommended to strengthen them. In addition, more attention should be paid to the competence of corporate finance knowledge: budgeting and forecasting, and management of functions and organization. It is very important to pay attention to other skills, knowledge and values that strongly contribute to the assessment of the level of competence of a modern management accounting specialist. On the other hand, the abilities of Latvian university students are stronger in other areas. Students in Latvia have acquired strong financial reports preparation and analysis, accounting literacy skills. In addition, cost accounting and management skills are high level, therefore strategic and tactical planning, strategic cost management skills are recommended to be strengthened. Although both Lithuanian and Latvian students have acquired strong financial and non-financial data management skills.

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# Regulatory Green Credit Mechanisms and Their Influence on Renewable Energy Progress

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**Keywords**: green lending, renewable energy financing, carbon neutrality, financial instruments, green energy policy.
**JEL code:** Q42, O13, G21.

One of the key roles in financing renewable energy projects and reducing greenhouse gas emissions is played by green lending. In 2023, the global issuance of green bonds and loans exceeded 700 billion USD, demonstrating the growing interest of investors in financing sustainable development. In the context of ongoing climate change and the internationally declared goals of achieving carbon neutrality by 2050, stimulating the development of green energy has become a priority task for many governments and financial institutions. According to the International Energy Agency, achieving global decarbonization will require annual investments in renewable energy to reach 1.5 trillion USD by 2030.

This study is devoted to the analysis of the mechanisms of the influence of green credits on the dynamics of the development of the renewable energy sector, as well as to the determination of the most effective policy instruments for supporting the green economy. The purpose of the study is to analyze the impact of green loans on the development of green energy and to identify effective tools for stimulating investments in this sector. The main tasks of the research include analysis of theoretical approaches to understanding the essence of green loans, research of international experience in the application of financial instruments to support green energy, assessment of the impact of green loans on the development of renewable energy sources, and identification of factors that increase the effectiveness of financing green projects. The object of the study is the process of financing renewable energy projects through the mechanism of green credits. The assessment of the impact of financing on the development of renewable energy, as well as the modeling of possible scenarios for the development of green energy support policy, was carried out using quantitative and qualitative methods of analysis (methods of comparative analysis and econometric modeling).

The study found that green lending has a significant stimulating effect on the development of renewable energy, particularly by providing long-term loans with preferential interest rates. The use of combined financing mechanisms, such as subsidies and tax incentives alongside green loans, increases the efficiency of renewable energy projects and reduces investment risks. Based on the analysis, the study concludes that activating public-private partnership mechanisms and expanding green energy lending programs are essential steps to improve green financing policy in the country.

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# Regulatory Changes in the Field of Cyber Security: Spatial and Temporal Trends and Interstate Interaction

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**Keywords:** transnational cybercrime, regulatory changes, cyber security, artificial intelligence.
**JEL code: F52, O17, F36.**

The rapid development of digital technologies not only creates new opportunities for economic and social development but also creates new risks and threats to various aspects of national security in every country. Each year, organized and transnational cybercrime poses an increasingly significant threat, causing substantial damage to government institutions, businesses, and citizens. Criminal groups exhibit a high degree of adaptability, continuously altering their tactics and operational methods in response to changes in the technological and regulatory environment, using innovative tools such as artificial intelligence and cryptocurrencies. Global economic losses from cyberattacks attributed to the Petya virus alone are estimated at $850 million, while annual losses from cybercrime already exceed $1.5 trillion. The proliferation of ransomware attacks and the increase in phishing cases underscore the need for the continuous improvement of regulatory measures, which is essential to ensure cyber security and the stable functioning of the economy. Furthermore, the global nature of cybercrime necessitates the coordination of actions among regulatory authorities across different countries for effective control, prevention, and investigation of crimes. At the same time, national legal systems often struggle to adapt to new challenges arising from rapid changes in the technological landscape. The absence of coordinated international cooperation and the uneven level of cyber protection across regions create "white spots" in the global security system, which criminals actively exploit to carry out attacks.

The purpose of the study is to identify spatial and temporal patterns of regulatory changes in the field of combating organized and transnational cybercrime and to determine the most effective strategies for international cooperation. The novelty of the study lies in its comprehensive approach to exploring the evolution of regulatory strategies through the integration of geographic and time-trend analysis. The main tasks of the research include the analysis of spatial features of the development of regulatory approaches in different countries and regions, the study of time trends in the evolution of regulatory measures, the identification of the main stages of the development of the regulatory and legal framework, the assessment of key challenges in the field of combating transnational cybercrime, the determination of the most effective methods of international cooperation for countering new cyber threats. The object of the research is the processes of development and evolution of regulatory approaches to organized and transnational cybercrime in the period from 2000 to 2024. Research methods include content analysis for the analysis of international documents and regulatory acts, comparative analysis for comparing the approaches of different countries and regions, time-series analysis to identify the dynamics and key trends in the development of the legal framework, synthesis and generalization for the formulation of effective recommendations.

The results of the study demonstrate that cybercrime has evolved into complex, transnational forms that require new approaches to international cooperation. EU countries have shown leadership in implementing modern regulatory frameworks (GDPR, NIS2), while the Budapest Convention remains a key document for international collaboration in cyber security. Additionally, the importance of regulating cryptocurrencies and leveraging artificial intelligence for threat monitoring and attack prevention has been highlighted. The study proposes deepening international cooperation and fostering private-public partnerships as a foundation for effective cybercrime prevention. Coordinated regulatory measures and the integration of advanced technologies into cyber security systems will help enhance national and global security.

# Bibliometric Analysis of Infrastructure and Sustainable Infrastructure Projects: Implications for Ukraine's Reconstruction and Sustainable Development

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**Keywords:** bibliometric analysis, infrastructure project, sustainable infrastructure project, sustainable development.
**JEL code: Q01, F63.**

In the current realities of a full-scale war, economic, political and environmental crisis in Ukraine, the issue of post-war recovery and further sustainable economic development is highly relevant and requires significant attention from both the Ukrainian community and international partners. The path to sustainable recovery depends to a large extent on the end of the war, successful joint reconstruction efforts and further international support.

Ukraine considers infrastructure to be one of the key drivers of effective economic growth, which contributes to the welfare of the population, and therefore infrastructure facilities have become the main target of attacks by the aggressor. According to the "Report on direct damage to infrastructure from destruction as a result of russia's military aggression against Ukraine as of the beginning of 2024" since the beginning of hostilities, the total amount of direct losses from damage and destruction of transport infrastructure is $ 36.8 billion; 25.4 thousand km of roads and 344 bridges were destroyed, which is estimated at $ 26.7 billion in losses in the road sector and $ 2.6 billion in bridge infrastructure; direct losses in the railway industry amount to $ 4.3 billion, approximately $ 2.04 billion in the aviation sector, $ 0.85 billion in the port sector; among telecom operators - $ 510 million, in addition to the damage in the energy sector - $ 9 billion.

The reconstruction of such facilities through the implementation of infrastructure projects is not just a task, but an important mission and one of the strategic directions of economic development, new opportunities for regional development, energy independence, social well-being of the country and the population, strengthening of the state, and thus further sustainable and stable development of Ukraine. This is a significant opportunity to create a modern, inclusive and sustainable infrastructure that will meet the needs of people in the 21st century and the challenges of the modern world, which will contribute to the country's better integration into the international community.

Nevertheless, a thorough and systematic analysis of any phenomenon is crucial. In the research, the main theoretical principles of infrastructure projects as a driver for the sustainable development of Ukraine are presented. In the scope of researched issue bibliometrics analysis of the essence of the terms "infrastructure project" and "sustainable infrastructure project" was held.

The first stage of the research was held with the help of the built-in analysis tools of the Scopus database. It was identified around 9,481 scientific publications for the query "infrastructure project" and 55 scientific publications for "sustainable infrastructure project" in the search field with a search filter in article titles, abstracts, keywords, which was carried out using the built-in tools of the Scopus database. The second stage of the study was a deeper analysis of the concept of "infrastructure project" and "sustainable infrastructure project" using the VosViewer 1.6.20 software to build keyword relationships with further visualization and clustering separately for each keyword. Using the software, 35,239 keywords related to the concept of "infrastructure project" were generated, but only 568 keywords with a total frequency of use of at least twenty-five were selected for further analysis and accuracy of cluster formation.

The VosViewer analysis highlights the critical need for further research into infrastructure and sustainable infrastructure projects. This research should delve into various aspects, including project management strategies, investment analysis, public-private partnerships, decision-making processes, infrastructure sector analysis, sustainable infrastructure, social and economic impacts, and environmental and climate change considerations. By conducting a comprehensive study of these areas, it could be contributed to the development of more effective and sustainable infrastructure projects.

# The Integrated Reporting-Based Maturity Model for Attaining SDG8 at an Organisational Level

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**Keywords:** integrated reporting, maturity model, SDG8, organizations.
**JEL code: G30, L25.**

Integrated reporting serves as a comprehensive tool for organizations to articulate their deployment of six distinct types of capital in fostering long-term value creation. These capital types encompass not only financial resources but also manufacturing/procedural assets and human-related capitals, forming an interconnected network within the organization's activities. By integrating these various forms of capital, businesses can enhance the clarity of their business model and bolster transparency in their reporting practices, thereby mitigating the risks associated with misreporting on both financial and sustainability development. Importantly, due to the connection of financial and non-financial capitals, integrated reporting aligns with Sustainable Development Goal 8 (SDG8), which emphasizes the importance of promoting decent work conditions, which, in turn, facilitates economic growth. While major consulting firms, such as Ernst & Young, Deloitte, and KPMG, advocate for integrated reporting, adoption rates vary among organizations. Various organizations, such as airports, banks, transport and telecommunication companies, etc., have been embracing integrated reporting, but the breadth and depth of its application vary across different companies. To facilitate the adoption of integrated reporting and its subsequent use in more effective ways, our research *aimed* to develop an integrated reporting-based maturity model that organizations could use to advance toward achieving SDG8. Maturity models, commonly used in various contexts, provide a roadmap for assessing an organization's current level of operations and performance relative to predefined criteria. By leveraging this maturity model, organizations can identify their current standing, understand the requirements for progressing to higher levels of integrated reporting, and ultimately enhance their contribution to SDG8. Two primary research questions guided this study: (1) to identify the key performance indicators (KPI-IR) corresponding to each capital type for integrated reporting, and (2) to develop levels and descriptions for these KPI-IRs. Addressing the first question involved employing distant reading, a text analysis method encompassing keyword extraction and concordance analysis. The corpus for this analysis comprised integrated reports spanning various industries –transportation, financial institutions, telecommunication, construction, manufacturing, and education – from the years 2021 to 2023. The second research question was tackled by examining scientific literature on integrated reporting and maturity models, sourced from databases such as Scopus and Science Direct. Additionally, expert interviews were conducted with academics and professionals actively engaged in integrated reporting practices. The outcome of these research activities included the developed maturity model centered around integrated reporting.

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