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Analysis of the Relationship Between Selected Aspects of CSR Activity and Competitiveness of Enterprises Using Statistical Tools

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Abstract:

Purpose: *This paper attempts to identify and quantify the relationship between corporate social responsibility and the competitiveness of enterprises operating in the European Union. The aim of this article is to assess the relationship between selected CSR indicators and the competitive position of enterprises, taking into account environmental, social, and economic aspects.*
Methodology: *This article analyzes CSR activities in the context of enterprise competitiveness in EU countries. First, a critical review of the relevant literature was conducted, followed by the selection of four predictors of enterprise competitiveness. Source data was obtained from the Eurostat database. Calculations were then performed using basic descriptive statistics. Six CSR indicators were then arbitrarily defined. The research culminated in determining the direction and strength of the relationship between CSR indicators and the competitiveness of enterprises in the EU. The Pearson correlation coefficients were grouped into four categories.*
Findings: *The analysis of the indicators allowed for the assessment and comparison of the level of competitiveness of enterprises in EU countries. The obtained results revealed significant variation between countries. The results confirm that the impact of CSR on competitiveness is varied and ambiguous, indicating the complex relationship between social responsibility and economic performance. It was demonstrated that social responsibility can support competitiveness, but its impact depends on the type of indicator and the specific nature of the economic sector being analyzed.*
Practical implications: *The research provided a synthetic understanding of the complex aspects of CSR in the context of enterprise competitiveness in EU countries. The results of the analysis can provide a valuable source of knowledge for managers and decision-makers, enabling them to: make more informed strategic decisions regarding investments in CSR activities that have a real impact on increasing enterprise competitiveness; and build a competitive advantage based on sustainable development and social responsibility, which is particularly important in the face of increasing pressure from customers, investors, and regulatory institutions.*
Originality/value: *The article contributes to the literature by empirically determining the strength of the relationship between CSR activities and enterprise competitiveness in EU*

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countries. Combining CSR and corporate competitiveness quantitatively (using statistical tools like correlations) is unusual, as most studies focus on qualitative analysis of CSR impact. Analysis of correlation coefficients allows for measurable confirmation and interpretation of the relationships studied, which can contribute to further research or implementation in the business environment.

Keywords: *Corporate Social Responsibility (CSR), Competitiveness, Business Performance Statistical Analysis, Sustainable Development.*

JEL codes: *M14, L25, C38, Q56, O12.*

Paper type: *Research article.*

1. Introduction

Contemporary enterprises operate in a dynamically changing socio-economic environment, which increasingly requires them to not only focus on economic efficiency but also on social and environmental responsibility.In this context, the concept of corporate social responsibility (CSR) is particularly important, responding to growing stakeholder expectations regarding the role of organizations in society.CSR is evolving from philanthropic activities towards comprehensive management strategies, integrating ethical, social, and environmental issues with business goals.

The research includes an assessment of the relationship between selected aspects of CSR activities and the competitiveness of enterprises operating in the EU.The analysis was conducted based on arbitrarily selected CSR indicators, including greenhouse gas emissions, the use of closed-loop materials, the occupational accident rate, the gender pay gap, the level of migrant employment, and the corruption perception index.

Adopting this approach will enable a multidimensional approach to CSR and the identification of those areas that can most significantly impact the competitiveness of enterprises in the context of sustainable development.

On the one hand, the considerations are a literature study that attempts to systematize knowledge in the researched area and indicate directions for further analyses, while on the other hand, they are a response to the need for empirical verification of the impact of CSR activities on the results and competitive position of enterprises.

2. The Concept of Corporate Social Responsibility

The concept of corporate social responsibility (CSR) stems from centuries-old ethical and philosophical traditions, dating back to antiquity and religious thought.The Bible and the writings of the Church Fathers, such as Clement of Alexandria, already contained the concepts of responsibility for the community and acting for the public good (Ratajczak and Stawicka, 2011, pp. 97-98).

CSR began to be perceived in its modern sense in the 19th century, thanks in part to A. Carnegie, who in "The Gospel of Wealth" (1899) formulated the principles of philanthropy and fiduciary responsibility as the duties of the wealthy to society (Ratajczak and Stawicka, 2011, p. 98).

After World War II, CSR began to gain theoretical and scientific dimensions.Howard R. Bowen, generally considered to be the father of the modern concept of CSR, emphasized in his book Social Responsibilities of the Businessman (1953) that businesses should make decisions consistent with social values (Farcane and Bureana, 2015, pp. 32-33). However, as observed by Wolak-Tuzimek (2023, pp. 23-36), in the following decades, the concept evolved from philanthropy to comprehensive management strategies that consider stakeholders, human rights, and the environment (Grima *et al.,* 2024).

The contemporary understanding of CSR is based on the assumption that economic activity cannot be detached from the social context, and that businesses have both economic and moral obligations to the broader social environment (Pagkalou *et al.,* 2024: Cristea *et al.,* 2022).

Initially, corporate social responsibility was primarily associated with philanthropic activities, donations, assistance to local communities, and charitable activities carried out by entrepreneurs. This model dominated the industrial era and the first half of the 20th century (Mosca and Civera, 2017, p. 17). With the growing awareness of the impact of economic activity on the environment, society, and the economy, CSR began to evolve towards a more integrated and strategic approach.

It was, however, the concept proposed by Carroll (1979) that could be truly named groundbreaking; hisconcept identified the so-called CSR pyramid, whichentailed four levels of responsibility: economic, legal, ethical, and philanthropic. Nowadays, the concepts of "CreatingShared Value" (CSV) and CSR integrated with the core of the company's activities are playing an increasingly important role – not as an addition, but as an integral part of the strategy (Mosca and Civera, 2017, p. 20; Rosińska-Bukowska, 2022, pp. 26-27).

CSR has become a key element in building long-term competitive advantage, brand reputation, and stakeholder loyalty. As observed by Rosińska-Bukowska (2022, p. 29), modern models - such as CSR 2.0 and CSR 5.0 - incorporate innovative,

organizational, and relational aspects into an organization's intellectual capital. Social responsibility is no longer a cost - it has become an investment in sustainable development.

3. Main Theoretical Trends and Approaches to CSR

Corporate social responsibility is a multidimensional approach that assumes that a company does not operate in isolation from society and the natural environment. CSR goes beyond basic economic and legal obligations to encompass ethical, social, and environmental aspects, which intertwine and reinforce each other.

From an ethical perspective, CSR assumes conducting business in a manner consistent with moral norms and social values. As Larsson and Massart (2009, p. 23) point out, an ethical approach to business encompasses responsibility towards stakeholders, fairness in commercial relations, and the elimination of corrupt practices. Ethical companies treat their employees, customers, and suppliers with respect and ensure transparency in decision-making processes.

The economic dimension of CSR refers to the creation of economic value not only for shareholders but also for the entire socioeconomic environment. According to the "Triple Bottom Line" concept, organizations should strive for profitability without compromising social and environmental goals (Nicolaides, 2021, p. 203). Economic responsibility also includes ethical financial management, investing in sustainable development, and supporting local economies.

In its social dimension, CSR concerns the involvement of enterprises in improving the quality of life of local communities, equal opportunities, respect for human rights, and the development of human capital. Enterprises implementing CSR strategies invest in education, health, culture, and civic initiatives, building trust and social bonds (Czarnecki&Marinicova, 2019, p. 68).

The environmental dimension encompasses activities aimed at minimizing the organization's negative impact on the natural environment. Responsible enterprises implement strategies for emission reduction, energy efficiency, recycling, and sustainable resource management (Fedotova *et al.,* 2024, p. 85). The environmental component of CSR is now not only an ethical requirement but also a strategic tool for building reputation and competitive advantage.

The contemporary approach to corporate social responsibility assumes the need to align economic interests with social and environmental expectations. Key concepts in this context include the stakeholder approach, the triple-bottom-line (TBL) model, and the concept of sustainable development.

The stakeholder approach originates from the work of R. Edward Freeman (1984) and assumes that a company should consider the interests of all groups that may

influence or be influenced by its operations – including employees, suppliers, customers, local communities, investors, and non-governmental organizations (Kakabadse *et al.,* 2005, p. 278; Awa *et al.,* 2024, p. 2). According to this approach, CSR cannot be merely a response to market expectations but must be part of a strategy for building long-term relationships and trust.

Triple-Bottom-line (TBL) is a concept proposed by John Elkington in the 1990s, according to which companies should measure their performance not only in financial terms (profit) but also in social terms (people) and environmental terms (planet). TBL has become the basis for many sustainability strategies and ESG reports (Nica *et al.,* 2025, p. 2). In practice, this means integrating ethical values with economic goals and implementing solutions that are socially and environmentally friendly, for example, through recycling, energy conservation, or equality policies.

Sustainable development, the framework for CSR and TBL, is defined as development that meets the needs of the current generation without compromising the opportunities of future generations (Brundtland Report, 1987). It integrates economic, social, and ecological goals, treating them as interdependent and equal. In this approach, CSR becomes a tool for the practical implementation of the concept of sustainable development at the microeconomic level (Chwistecka-Dudek and Korenkiewicz, 2021, p. 116).

These approaches form the foundation of contemporary responsible management, where success is measured not only by increased profits but also by the quality of social relationships, the conservation of natural resources, and the fair fulfillment of obligations to all stakeholders.

Corporate social responsibility finds theoretical justification in various research approaches.Two of the most influential are resource-based view (RBV) and institutional theory. According to resource-based view, companies achieve sustainable competitive advantage through resources that are valuable, rare, difficult to replicate, and non-substitutable (Barney, 1991). In the context of CSR, this means that socially responsible actions can be treated as intangible resources—such as reputation, relational capital, or stakeholder engagement, that enhance innovation and the long-term value of an organization (Gallego-Álvarez *et al.,* 2011).

Institutional theory, on the other hand, focuses on the influence of the institutional environment (norms, values, regulatory pressure) on organizational behavior.CSR, in this approach, is a response to environmental pressures, entities seek to legitimize their actions vis-à-vis various stakeholder groups. As Risi *et al.* (2022) emphasize, values serve as a "bridge" between structure and actions, facilitating the implementation of CSR in accordance with social norms.Both theories, though differing in approach, consider CSR a key element of modern organizational strategy.

RBV emphasizes its intrinsic value and competitive advantage, while institutional theory presents CSR as a means of adapting to societal and regulatory expectations.

4. Review of Selected Empirical Studies

In practice, the implementation of corporate social responsibility (CSR) takes diverse forms, depending on the size, industry, and market context of a given company.Case studies demonstrate that CSR can be both a tool for ethical management and a means of building a competitive advantage.

Research conducted by Badura-Mojza (2017, pp. 6-9) shows that companies listed on the Warsaw Stock Exchange (WIG30) are increasingly integrating non-financial reporting with operational activities.There is a shift away from CSR reporting within financial statements toward separate reports, integrated annual reports, environmental reports, and sustainability reports.For example, entities such as LPP, PKN Orlen, and Orange Polska have implemented transparent ESG reporting systems, which not only improved their image but also increased investor confidence.

In turn, research conducted by Krahel (2023, pp. 137-140) using the example of LEGO indicates that CSR can be strongly integrated into organizational culture. Pro-social, ecological, and educational activities are not only declared but actually implemented, which translates into employee satisfaction and customer loyalty. Furthermore, data analysis indicates the potential positive impact of CSR practices on the company's share value.

Examples of international corporations such as IKEA, Starbucks, and Apple demonstrate the use of CSR in areas such as equal opportunities, ethical supply chains, investments in local communities, and urban reforestation (Buczkowski *et al.,* 2016, pp. 94-97). Starbucks, for example, reinvests a portion of its revenues in the development of local initiatives through its "Community Stores" program, while IKEA is intensifying its climate action, committing to carbon neutrality.

Effective CSR implementation requires, above all, genuine management commitment, collaboration with stakeholders, and coherence between business strategy and social goals. Organizations that view CSR not as a cost but as an investment in relationships and reputation achieve better financial and social results in the long term. Furthermore, corporate social responsibility is becoming a key element of strategies for building brand reputation, customer loyalty, and stakeholder relationships.

As demonstrated in an analysis conducted by Srivastava (2024, pp. 1912-1913), entities actively engaging in CSR activities, such as ethical employment practices, environmental protection, or cooperation with local communities, gain a significantly improved market image and greater consumer trust. CSR acts as an

instrument for building brand reputation by demonstrating commitment to social and environmental values. Islam *et al.* (2020, p. 3) demonstrate that responsible corporate practices support the development of positive brand associations, which in turn strengthens its reputation and competitive position.

In the context of customer loyalty, research by Tran (2022, pp. 4-5) conducted in the jewelry industry in Vietnam confirms that CSR has a direct impact on increased trust, satisfaction, and brand loyalty. Customers who perceive an organization as socially responsible are more likely to repeat purchases and promote the brand through word-of-mouth.

Furthermore, CSR communication plays a key role in building relationships with the community. As Srivastava (2024, p. 1913) and Capriotti (2011) point out, open and dialogical communication on social media can deepen customer relationships and strengthen a sense of community around the brand.

The conclusions from the literature review are clear: an effective CSR strategy can generate added value in the form of a strong reputation, loyal customers, and lasting relationships with the environment. However, this requires authenticity, consistency, and alignment with the values of the target audience.

5. Critical Literature Analysis

The concept of corporate social responsibility is developing dynamically, both theoretically and practically. At the same time, a review of the current literature reveals significant gaps, definitional discrepancies, and methodological limitations that hinder a clear assessment of the effectiveness and role of CSR in contemporary management.

Research gaps primarily relate to the insufficient consideration of the specific cultural and regional context in CSR analyses. Most dominant CSR models and theories originated in highly developed countries, limiting their usefulness in developing countries. Tran (2022) emphasizes the need for more research from areas such as Southeast Asia, Africa, and Latin America, where social, economic, and legal conditions differ significantly from Western standards.

Another problem is the dominance of analyses conducted at the level of multinational corporations, coupled with a lack of research on CSR in small and medium-sized enterprises (SMEs). Meanwhile, the SME sector forms the backbone of many countries' economies, and their approach to social responsibility is often less formalized and more rooted in local values and social relations (Kuna-Marszałek, 2020).

The literature also notes a lack of coherent theoretical models that integrate various approaches to CSR. Although many studies draw on stakeholder, resource, and

institutional theories, few attempt to synthesize them, limiting the possibility of comparisons between results and drawing general conclusions.

Despite widespread interest in CSR, a unified definition of the concept remains lacking. Various organizations and authors employ diverse approaches, ranging from minimalist approaches (focused on legal compliance) to maximalist approaches (taking into account moral responsibility towards all stakeholders and future generations). Such discrepancies hinder the development of standardized CSR measurement tools and the comparison of research results (Risi *et al.,* 2022).

Measuring CSR outcomes poses a particular methodological challenge. The literature uses numerous indicators, ranging from quantitative data (e.g., CSR expenditures, employee volunteer hours, CO_2 emissions) to qualitative assessments (perceived reputation, stakeholder engagement).

However, the lack of uniform measures and criteria results in difficulties in aggregating data and conducting meta-analyses. Furthermore, many studies focus on economic impacts (e.g., increased customer loyalty), marginalizing social and ethical aspects. It is also significant that many organizations use CSR as an image-building tool, leading to so-called "image bias." Greenwashing – declaring pro-social and pro-environmental activities without real changes in business practice. This phenomenon introduces distortions into data and reduces the reliability of analytical results.

CSR research utilizes both quantitative and qualitative methods, but each carries its own limitations. Quantitative approaches allow for the identification of correlations and hypothesis testing based on large datasets. For example, Islam et al. (2020) used regression models to demonstrate the relationship between CSR and customer loyalty.

However, this approach does not take into account the deep cultural and symbolic context of CSR. Qualitative research (case studies, interviews, content analysis), on the other hand, enables a better understanding of the motivations, context, and meanings attributed to CSR practices by stakeholders. An example is the analysis of CSR activities at LEGO (Krahel, 2023), where CSR is an integral part of the organizational culture. However, the results of such studies are difficult to generalize and are subject to subjective interpretation.

Mixed methods, which combine the advantages of both approaches, are gaining increasing popularity. They allow for data triangulation and a more nuanced picture of reality. However, integrating results and maintaining methodological consistency poses a challenge.

A critical analysis of the CSR literature indicates that, despite its dynamic development, research in this area faces a number of challenges. Lack of definitional

consistency, measurement issues, and methodological limitations hinder the comparability of results and the drawing of general conclusions. Future research should strive to integrate approaches, better consider the cultural context, and develop measurement tools that will assess not only the economic effectiveness of CSR but also its social and ethical value.

6. Directions for the Development of the CSR Concept

In recent years, there has been a significant expansion of the scope of CSR, leading to intertwining with other categories such as ESG (Environmental, Social, Governance), sustainable development, and digital transformation. This discussion aims to present current trends in the literature, identify new research areas, and formulate recommendations for further theoretical and empirical studies.

One of the dominant trends in the literature is the growing importance of the ESG concept, which is becoming a new paradigm for assessing organizational responsibility. ESG, as a reporting and rating system, integrates environmental, social, and corporate governance issues into the framework of investment and reputational risk assessment. In this approach, CSR is evolving from a communication tool and image strategy toward measurable indicators included in ESG reports (Nica *et al.,* 2025, p. 2).

Companies are increasingly considering CSR activities as a foundation for achieving ESG goals, for example, through emission reduction, diversity policies, supply chain management, or ethical management practices. Modern reporting standards, such as GRI (Global Reporting Initiative), SASB (Sustainability Accounting Standards Board) or the European ESG Standard, enforce increasing transparency and compliance with regulations (Chwistecka-Dudek and Korenkiewicz, 2021, p. 116).

Contemporary approaches to CSR increasingly incorporate new dimensions of responsibility, including technological, digital, and climate dimensions. The development of new technologies such as artificial intelligence, Big Data, and the Internet of Things raises questions about the ethical limits of their application. The term "techno-CSR" is emerging as a term describing the responsible design, implementation, and monitoring of technologies with a focus on social good and the protection of individual rights (Risi *et al.,* 2022, p. 17).

In the digital sphere, issues of data privacy, cybersecurity, and digital exclusion are playing an increasingly important role. Organizations must address the need to create ethical data processing policies and ensure access to technology for all social groups, which is becoming a new dimension of social responsibility.

At the same time, climate and environmental responsibility are becoming a priority. The climate crisis is forcing CSR to shift from a declaration to a strategy and investment level. Entities that take real action towards climate neutrality, a circular

economy, or reducing their carbon footprint are perceived as more credible and competitive.

Digital transformation is changing the way businesses are run, but it's also redefining relationships between companies and their stakeholders. The literature emphasizes the growing importance of digital dialogue, transparency, and information accessibility (Capriotti, 2011, p. 74). CSR in the era of technological transformation should encompass not only communication but also ethical change management, supporting digital education, and mitigating the impact of automation on the labor market.

The COVID-19 pandemic, the energy crisis, and the war in Ukraine have highlighted new dimensions of corporate responsibility. Organizations have had to make quick decisions regarding employee safety, operational flexibility, social solidarity, and cooperation with local governments and NGOs. Global crises have highlighted the importance of organizational resilience and stakeholder trust as key resources in risk management.

In this context, CSR is gaining importance as a tool for building social capital, solidarity, and cross-sectoral responsibility. CSR is no longer merely a "voluntary" addition to operational activities, but is becoming the foundation of responsible management in an uncertain and volatile environment. Despite the development of CSR, many research issues remain unresolved.

Recommendations for further research should include:

- Increasing the number of contextual studies that take into account the specificities of developing countries, small and medium-sized enterprises, and previously neglected sectors (e.g., agriculture, public transport).
- Developing standardized CSR measurement tools that incorporate social, ethical, and environmental indicators, not just financial ones.
- Greater integration of theoretical approaches, such as stakeholder theory, resource theory, institutional theory, and ESG. Hybrid models are worth exploring that better capture the complexity of the phenomenon.
- Research on the effectiveness of CSR communication in digital channels, especially social media, podcasts, and visual forms (infographics, storytelling).
- Analyzing the role of organizational leaders in CSR implementation and their ethical and communication competencies.
- Transdisciplinary research approaches, combining economic, social, cultural, and technological perspectives.

CSR as a field of knowledge requires further systematization, unification of concepts, and a deeper understanding of its multidimensional nature. Both literature

and empirical research should strive to better understand how CSR can realistically contribute to solving contemporary social and environmental problems.

7. Business Competitiveness in Numbers

The competitiveness of EU-27 companies plays a key role in shaping the European Union's position in the global market.This community brings together economies with diverse levels of development, sectoral structure, and innovation, which influences their ability to compete both internally and with external partners. High competitiveness is a prerequisite not only for economic growth but also for maintaining stable employment, innovation, and sustainable development.

EU-27 companies face numerous challenges, such as the energy transition, digitalization, an aging population, and growing expectations related to corporate social responsibility.The growing importance of ESG (Environmental, Social, Governance) factors compels organizations to seek new advantages based not only on cost efficiency but also on values and stakeholder relationships.

Table 1. *Research and development expenditure 2015-2023 (% of GDP).*

Country/year	2015	2016	2017	2018	2019	2020	2021	2022	2023	Average	Median	Kurtosis	Standard deviation
UE-27	2,1	2,1	2,14	2,17	2,21	2,28	2,24	2,23	2,24	2,19	2,21	-1,37	0,06
Belgium	2	3	3	2,86	3,15	3,37	3,41	3,29	3,32	3,04	3,15	-1,71	0,36
Bulgaria	0,95	0,77	0,74	0,76	1	0,85	0,77	1	0,79	0,85	0,77	2,14	0,06
Czech Rep.	1,91	1,65	1,75	1,88	1,9	1,95	2	1,89	1,83	1,86	1,89	1,48	0,09
Denmark	3,06	3	2,94	2,98	2,95	2,97	2,74	2,87	2,99	2,94	2,97	1,58	0,10
Germany	2,88	2,88	2,99	3	3,11	3,09	3,08	3,07	3,11	3,02	3,07	-0,45	0,09
Estonia	1,44	1,22	1,25	1,38	1,59	1,73	2	1,76	1,84	1,58	1,59	-1,70	0,22
Ireland	1,14	1	1,21	1,08	1,14	1,12	1,07	1,53	1,58	1,21	1,14	0,53	0,18
Greece	0,97	1,01	1,15	1	1,26	1,49	1,43	1,48	1,49	1,25	1,26	-1,55	0,19
Spain	1,21	1,18	1,2	1,23	1	1,4	1,4	1,41	1,49	1,28	1,24	-1,79	0,11
France	2,22	2,22	2,2	2,2	2,2	2,27	2,21	2,22	2,19	2,21	2,21	4,21	0,02
Croatia	0,82	0,85	0,84	1	1,08	1,24	1,24	1,42	1,39	1,10	1,08	-1,80	0,23
Italy	1,33	1,36	1,36	1,42	1,46	1,5	1,41	1,37	1,31	1,39	1,37	-0,45	0,06
Cyprus	0,48	0,52	0,54	0,61	0,7	0,83	0,78	0,7	0,68	0,65	0,68	-1,16	0,11
Latvia	0,64	0,45	0,53	0,66	0,66	0,76	1	0,81	1	0,72	0,66	-0,43	0,12
Lithuania	1,04	0,84	0,9	0,93	0,99	1	1,1	1	1,05	0,98	1,04	-0,80	0,09
Luxembourg	1,25	1,27	1,24	1,17	1,18	1,1	1,03	1,07	1,01	1,15	1,17	-1,66	0,09
Hungary	1,34	1,18	1,31	1,5	1,46	1,58	2	1,39	1,38	1,46	1,39	-0,26	0,13
Malta	0,7	0,54	0,53	0,55	0,55	0,6	0,6	0,58	0,64	0,59	0,58	0,91	0,05
Netherlands	2,12	2	2,14	2,1	2,14	2,27	2,22	2,18	2,23	2,16	2,14	-1,03	0,06
Austria	3,07	3,13	3	3,11	3,14	3,21	3,26	3,18	3,29	3,15	3,14	-0,99	0,07
Poland	1,	0,96	1,03	1,19	1,31	1,37	1	1,44	1,56	1,21	1,31	-1,56	0,20
Portugal	1,25	1,28	1	1,35	1,39	1,61	1,67	1,69	1,69	1,44	1,39	-2,24	0,18
Romania	0,49	0,49	0,51	0,5	0,47	0,46	0,47	0,46	0,52	0,49	0,49	-1,31	0,02
Slovenia	2,22	2,03	1,88	1,96	2,06	2,16	2,14	2,1	2,13	2,08	2,10	0,03	0,10
Slovakia	1	0,79	0,88	0,83	0,82	0,89	0,9	0,98	1,03	0,90	0,89	0,65	0,11

Finland	2,89	2,75	2,75	2,78	2,82	2,93	3,01	2,98	3,09	2,89	2,89	-1,22	0,12
Sweden	3,24	3,26	3,39	3,35	3,4	3,5	3,42	3,47	3,6	3,40	3,40	-0,14	0,11

Source: *Own elaboration.*

Table 1 presents research and development (R&D) expenditure in the EU-27 from 2015 to 2023. The average for the European Union as a whole was 2.19% of GDP, while the median was slightly higher at 2.21% of GDP, indicating stability and limited variation in R&D expenditure across the EU.

The highest average values were recorded in Sweden (3.40%), Austria (3.15%), and Belgium (3.04%), confirming their technological advancement and innovativeness. The lowest expenditure was recorded in Romania (0.49%), Malta (0.59%), and Cyprus (0.65%), which may indicate a lower innovation potential in these economies.

In most countries, the median and mean values were similar, suggesting a lack of significant extreme deviations. Kurtosis reveals that most countries had negative values for this indicator, such as Portugal (-2.24) and Poland (-1.56), indicating flatter distributions and a lack of dramatic changes in the analyzed aspect over the years. Positive kurtosis values occur sporadically, including in Bulgaria (2.14) and Denmark (1.58), indicating greater concentration around the mean or single deviations.

The standard deviation confirms the low variability of R&D expenditure in most countries – the lowest is found in France (0.02), Romania (0.02), and Malta (0.05), indicating a very stable level of the analyzed predictor.Slightly higher deviations, though still low, were recorded in countries such as Bulgaria (0.06) and Poland (0.20), which may suggest slow changes in the approach to R&D funding.

It is worth noting that highly developed countries, such as Sweden, Finland, and Germany, maintain stable R&D spending, which is crucial for maintaining their technological advantage and innovation.For countries with low R&D spending, even small changes can have a significant impact on their long-term competitiveness.

Overall, the data indicate persistent differences in the level and dynamics of R&D spending among EU member states, which translates into varying economies' adaptability and innovation capacity.

Table 2. *Research and development personnel 2015-2023 (percentage of workforce population)*

Country /year	2015	2016	2017	2018	2019	2020	2021	2022	2023	Average	Median	Kurtosis	St. dev.
UE-27	1,21	1,24	1,3	1,37	1,4	1,44	1,49	1,53	1,56	1,39	1,40	-1,28	0,12
Belgium	2	2	2	1,77	1,85	1,92	2,33	2,41	2,48	1,95	1,85	-1,57	0,34
Bulgaria	0,69	0,78	0,71	0,8	1	0,87	0,85	1	0,86	0,81	0,85	-0,72	0,07

Czech Rep.	1,28	1,26	1,33	1,42	1,51	1,55	2	1,68	1,7	1,48	1,51	-1,66	0,16
Denmark	2,15	2	2,1	2,07	2,12	2,12	2,11	2,36	2,36	2,18	2,12	-0,17	0,10
Germany	1,58	1,59	1,66	2	1,76	1,78	1,81	1,86	1,91	1,74	1,76	-1,08	0,11
Estonia	0,86	0,87	0,91	0,93	0,96	0,97	1	1,19	1,24	1,00	0,96	-0,04	0,13
Ireland	1,45	2	1,48	1,35	1,4	1,5	1,55	1,55	1,46	1,47	1,48	-0,14	0,06
Greece	1,05	0,88	1,01	1	1,16	1,32	1,37	1,5	1,6	1,22	1,16	-1,05	0,23
Spain	0,88	0,91	0,96	1	1	1,03	1,08	1,13	1,19	1,02	1,01	-0,52	0,09
France	1,45	1,47	1,5	1,53	1,57	1,62	1,68	1,67	1,67	1,57	1,57	-1,82	0,09
Croatia	0,58	0,66	0,68	1	0,87	0,93	0,98	1,01	1	0,83	0,87	-1,62	0,15
Italy	1,05	1,16	1,27	1,38	1,43	1,43	1,38	1,38	1,34	1,31	1,38	0,80	0,12
Cyprus	0,3	0,33	0,37	0,43	0,48	0,5	0,49	0,47	0,46	0,43	0,46	-0,97	0,07
Latvia	0,58	0,54	0,57	0,62	0,64	0,71	1	0,76	1	0,66	0,64	-1,53	0,08
Lithuania	0,74	0,76	0,82	0,85	0,92	1	1,05	1	0,98	0,91	0,92	-1,50	0,12
Luxembourg	1,92	1,95	1,94	1,85	1,9	1,86	1,78	1,91	1,84	1,88	1,90	-0,14	0,05
Hungary	0,8	0,77	0,86	1,16	1,21	1,27	1	1,32	1,25	1,10	1,21	-1,58	0,21
Malta	0,69	0,7	0,68	0,63	0,62	0,69	0,72	0,75	0,74	0,69	0,69	-0,53	0,04
Netherlands	1,55	2	1,66	1,71	1,73	1,79	1,85	1,92	1,98	1,75	1,73	-0,94	0,14
Austria	1,65	1,7	2	1,79	1,86	1,84	1,94	2,02	2,13	1,85	1,84	-0,50	0,15
Poland	0,65	0,67	0,86	0,98	0,97	1,03	1	1,13	1,15	0,95	0,98	-0,68	0,17
Portugal	0,98	1,03	1	1,18	1,24	1,36	1,41	1,47	1,54	1,26	1,24	-1,40	0,19
Romania	0,39	0,4	0,4	0,4	0,39	0,41	0,42	0,43	0,44	0,41	0,40	-0,63	0,02
Slovenia	1,45	1,48	1,47	1,56	1,69	1,67	1,74	1,72	1,78	1,62	1,67	-1,91	0,12
Slovakia	1	0,63	0,68	0,73	0,76	0,82	0,83	0,86	0,89	0,76	0,76	-1,55	0,09
Finland	1,95	1,83	1,88	1,9	1,95	2,04	2,11	2,1	2,19	1,99	1,95	-1,16	0,11
Sweden	1,67	1,79	1,73	1,77	1,75	1,81	2,18	2,25	2,25	1,91	1,79	-1,59	0,23

Source: *Own elaboration.*

Table 2 summarizes data on research and development personnel for the EU-27 from 2015 to 2023. The average share of R&D employees for the EU as a whole during the period under review was 1.39% of the population, with a median of 1.40%, indicating stable and moderate growth of this sector at the EU level.

The highest averages were recorded in Denmark (2.18%), Finland (1.99%), Belgium (1.95%), and Sweden (1.91%), confirming the strong concentration of human resources in research activities in the most innovative economies.The lowest values were recorded in Romania (0.41%), Cyprus (0.43%), and Malta (0.69%), indicating a limited role for R&D in these countries.

For most countries, the medians and means are similar, suggesting an even distribution without extreme values. The kurtosis index shows that negative values dominate (e.g., Slovenia -1.91; France -1.82; Czech Republic -1.66), indicating a flattened data distribution and a lack of sharp fluctuations in the number of R&D employees. Positive kurtosis occurs sporadically, for example, in Italy (0.80), indicating a greater concentration of data around the mean.

The standard deviation indicates relatively low variability in most countries – the lowest in Romania (0.02), Malta (0.04), and Luxembourg (0.05), confirming the stability of this index.Higher variability was observed in Belgium (0.34), Greece (0.23), and Sweden (0.23), which may indicate dynamic changes in the number of people employed in R&D.Poland achieved an average of 0.95%, with moderate variability (0.17), indicating the gradual but slow development of this segment of the labor market.

The high share and stability of R&D personnel in countries such as Finland, Sweden, and Austria demonstrates a sustained commitment to innovation. Meanwhile, the low levels and limited changes in Central and Eastern European countries may contribute to their lower competitiveness and ability to adapt to the challenges of a knowledge-based economy.A comprehensive analysis indicates persistent disparities in R&D personnel across EU countries.

Table 3. *Multinational enterprise groups in the EU-EFTA countries by controlling country in 2018-2023*

Country /year	2018	2019	2020	2021	2022	2023	Average	Median	Kurtosis	Standard deviation
UE-27	88 435	90 267	89 519	102 626	93 759	96 218	93470,67	92013,00	0,69	4876,61
Belgium	4 360	4 423	4 976	5 458	4 966	4 903	4847,67	4934,50	-0,37	370,63
Bulgaria	772	902	878	1 078	1 044	798	912,00	890,00	-1,70	114,62
Czech Rep.	3 526	3 823	3 946	4 570	3 623	3 752	3873,33	3787,50	3,06	339,41
Denmark	3 592	3 633	3 378	3 895	3 673	3 672	3640,50	3652,50	1,96	151,73
Germany	13 819	14 099	13 716	16 775	15 471	15 484	14894,00	14785,00	-1,00	1110,14
Estonia	1 529	1 390	1 113	1 070	1 052	1 220	1229,00	1166,50	-0,91	176,10
Ireland	1 978	2 440	1 460	2 117	1 680	2 344	2003,17	2047,50	-1,25	346,42
Greece	422	894	715	1 203	1 064	1 094	898,67	979,00	0,08	264,28
Spain	3 048	3 086	2 885	3 487	2 765	3 334	3100,83	3067,00	-1,01	246,94
France	5 944	5 934	6 081	7 873	7 355	7 648	6805,83	6718,00	-2,95	834,46
Croatia	514	592	575	609	624	636	591,67	600,50	1,60	40,04
Italy	7 970	6 693	6 957	7 585	6 940	7 353	7249,67	7155,00	-0,88	434,63
Cyprus	5 196	5 089	5 924	4 280	3 579	3 260	4554,67	4684,50	-1,54	937,68
Latvia	634	651	718	872	724	718	719,50	718,00	2,41	76,68
Lithuania	845	873	890	967	976	1 035	931,00	928,50	-1,50	66,56
Luxemburg	5 204	4 625	4 750	4 825	4 293	3 771	4578,00	4687,50	0,71	450,40
Hungary	1 225	1 032	1 418	1 673	1 433	1 626	1401,17	1425,50	-0,64	221,00
Malta	1 232	954	1 137	855	570	574	887,00	904,50	-1,80	253,47
Netherlands	9 962	11 664	11 595	14 261	13 114	13 372	12328,00	12389,00	-0,51	1415,41

Austria	4 052	3 972	3 782	4 574	4 477	4 500	4226,17	4264,50	-2,32	303,07
Poland	1 575	1 744	1 683	2 113	1 970	2 044	1854,83	1857,00	-2,14	198,25
Portugal	1 258	1 275	1 299	1 337	1 418	1 480	1344,50	1318,00	-0,86	79,79
Romania	547	621	475	663	633	709	608,00	627,00	-0,11	76,84
Slovenia	741	822	834	952	818	825	832,00	823,50	2,86	61,95
Slovakia	2 627	2 818	2 200	2 429	2 603	2 962	2606,50	2615,00	-0,28	247,75
Finland	1 479	1 470	1 588	1 690	1 639	1 712	1596,33	1613,50	-1,99	94,67
Sweden	4 384	4 748	4 546	5 415	5 255	5 392	4956,67	5001,50	-2,52	414,07

Source: *Own elaboration.*

Table 3 presents the number of multinational enterprise groups in the EU-EFTA countries by controlling country for the period 2018-2023, taking into account the mean, median, kurtosis, and standard deviation.The average number of such enterprises in the EU-27 was approximately 93,471, with a slightly lower median of 92,013, indicating stable development and a significant presence of multinational entities in the region.

The highest average numbers of groups were recorded in Germany (14,894), the Netherlands (12,328), Italy (7,250), and France (6,806), confirming the dominance of large European economies in international business.The lowest average values were recorded in Croatia, Romania, and Latvia, where the number of such companies remains relatively low.

In most countries, the mean and median are very similar, indicating stable data without significant extreme deviations.However, kurtosis reveals variation in the distributions, positive values in the Czech Republic (3.06), Slovenia (2.86), and Latvia (2.41) suggest greater concentration around the mean and possible single periods of exceptionally high or low performance. Negative kurtosis values, prevalent in most countries (e.g., France -2.95, Sweden -2.52, Poland -2.14), indicate flattened distributions and a lack of extreme changes.

The standard deviation reveals differences in variability – the highest values were observed in the Netherlands (1,415), Germany (1,110), and Cyprus (937), indicating significant fluctuations in the number of enterprise groups in these countries. The greatest stability was observed in Lithuania (66.56), Slovenia (61.95), and Croatia (40.04), where the number of multinational enterprises changed within a limited range.Poland, with an average of 1,855 groups and a variance of 198.25, demonstrated moderate growth, indicating a gradual increase in the importance of international entities.

The data confirm that the presence of multinational groups strongly correlates with the size and openness of the economy, and the level of volatility reflects both business cycles and restructuring processes. Differences between countries indicate

diverse institutional, investment, and market conditions that influence the attractiveness of individual countries for cross-border activity.

Table 4. *Total industry turnover in 2015-2023 (Index, 2021=100)*

Country/year	2015	2016	2017	2018	2019	2020	2021	2022	2023	Average	Median	Kurtosis	Standard deviation
UE-27	85,9	85,9	91,8	95,2	95,6	86,5	100,	119,9	118,1	115,50	95,20	-0,20	12,31
Belgium	75	74	81	83,8	86,6	76,1	99,6	126,3	118,7	113,70	83,80	-0,25	18,40
Bulgaria	72,9	74,7	83,9	87,6	92	83,9	100,5	137	129,2	128,60	87,60	0,02	21,49
Czech Rep.	85,3	85,9	92,5	96,	96,5	89,8	100	114,6	118,3	120,20	96,00	-0,18	11,07
Denmark	85,2	87	90,7	93,5	98,	89,9	100,	118,4	122,2	131,50	93,50	-0,01	12,58
Germany	93,6	93,7	99,6	102	100,8	90,4	99,3	115,7	115,9	111,70	99,60	-0,25	8,59
Estonia	71,7	73,4	78,4	83,4	87,2	84,1	100	118,6	109,6	105,90	84,10	-0,51	15,37
Ireland	78,8	76	76,7	77,7	79,5	82,7	100,	122,9	112,8	114,70	79,50	-0,17	16,73
Greece	79,4	76,2	83,	91	90,8	79,8	100,	130,3	126,	128,50	90,80	-0,16	18,96
Spain	85,8	86,6	93,5	97,6	98	85,9	100,	121,2	120,	119,70	97,60	-0,28	12,77
France	90,7	90,9	96,5	99,5	102,1	88,7	100,	116,2	119,5	118,80	99,50	-0,25	10,30
Croatia	87,3	84,1	89,3	93	91,2	84,5	99,3	121,3	126,2	128,30	91,20	0,25	14,81
Italy	84,3	84,9	89,9	92,3	92,	81,6	100,	118,3	117,4	112,30	92,00	-0,34	12,93
Cyprus	67,4	72,7	80,5	87,9	95,3	89,8	100,	115,	124,4	130,00	89,80	-0,45	17,58
Latvia	64,2	65,5	72,1	78,5	81,	82,9	100	118,1	116	112,90	81,00	-0,99	19,07
Lithuania	64,8	64,	72,1	80,1	82,5	77	100,	130	119,	119,10	80,10	-0,34	22,30
Luxembourg	88,8	89,8	94,1	97,9	95,7	82,9	100,	115,2	109,8	105,20	95,70	-0,09	9,62
Hungary	85,3	86,3	90,4	93,8	99,8	93,8	100	106,1	103,9	98,40	93,80	-1,32	7,01
Malta	85,5	84,4	86,1	89,4	95,8	94,5	100,	124,5	136,2	144,30	94,50	0,81	17,37
Netherlands	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
Austria	81,2	81,2	87	93,2	93,5	84,3	100,	116,6	115,7	111,10	93,20	-0,64	12,82
Poland	64,4	67,1	74,2	79,7	83,3	80,4	100	130,9	126,8	120,40	80,40	-0,44	23,09
Portugal	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
Romania	67,5	69,2	78,2	87,3	91,5	85,1	101,4	127,5	129,2	136,00	87,30	-0,56	21,35
Slovenia	72,9	76,7	85,8	91,5	93,7	86,2	99,	117,6	117,1	117,40	91,50	-0,59	14,87
Slovakia	83	83,9	88,6	95,1	95,6	86,7	100,	122,3	126,	122,20	95,10	-0,06	15,04
Finland	78,3	79,3	85,6	90,8	93,9	88,6	99,8	122,4	111,2	107,10	90,80	0,25	13,77
Sweden	75,	76,2	83,7	91,2	93,	86,8	99,4	118,6	125,3	124,50	91,20	-0,23	16,52

Source: *Own elaboration.*

Table 4 summarizes data on total industrial turnover from 2015 to 2023 in the EU-27.The EU average was 115.5, with a median of 95.2, indicating a significant increase in industrial turnover after 2021, resulting from factors such as the post-pandemic recovery and dynamic economic changes.

The highest average values were recorded in Malta (144.3), Romania (136.0), Denmark (131.5), and Cyprus (131.0), indicating a strong increase in industrial activity in these countries.The lowest averages were recorded in Hungary,

Luxembourg, and Estonia, where turnover remained relatively low for a prolonged period.

Kurtosis indicates a flat distribution of values in most countries – negative values dominate, e.g., Hungary (-1.32), Latvia (-0.99), and Slovenia (-0.59), indicating a lack of extreme spikes in the data. The exceptions are Malta (0.81), Croatia and Finland (0.25) and Bulgaria (0.02) where positive kurtosis suggests a greater concentration of results around the averages and the possibility of periods with significantly higher turnover.

The standard deviation reflects significant variation in industrial dynamics – the highest variability was recorded in Poland (23.09), Lithuania (22.30), Bulgaria (21.49), and Romania (21.35), indicating significant volatility in industrial growth rates. The smallest deviations, however, were observed in Hungary (7.01), Germany (8.59), Luxembourg (9.62), and France (10.30), confirming the more stable nature of industry in these countries.

In most countries, the means and medians remained relatively close, indicating a lack of long-term, persistent deviations from growth trends.Countries such as Germany, Austria, and Denmark were characterized by stable, moderate growth in industrial turnover, while Eastern European economies, including Poland, Bulgaria, and Romania, exhibited more dynamic but less stable growth patterns.

Overall, the data point to a marked increase in industrial activity across the EU after 2020, although the pace and stability of this growth remained strongly differentiated between countries, reflecting structural differences and the level of industrial development.

8. The Relationship Between CSR Indicators and Enterprise Competitiveness

Contemporary approaches to enterprise management increasingly recognize the importance of corporate social responsibility as a key factor influencing market competitiveness. The aim of the analysis is to assess the relationship between selected CSR indicators and the competitive position of enterprises, taking into account environmental, social, and economic aspects. The results of the obtained Pearson correlation coefficients are grouped into three categories and presented in Tables 5-8.

Table 5. *Assessment of the Relationship Between Industrial Turnover and CSR Indicators*

CSR Indicators	**r**
Greenhousegasemissions	-0,06
Closed-loop material utilization rate	-0,27
Occupationalaccidentrate	-0,12

Unadjustedgenderpay gap	-0,30
Emigrant employment	-0,07
Corruptionperception index	-0,21

Source: *Own elaboration and calculations.*

In the analysis of the relationship between industrial turnover and CSR indicators (Table 5), weak, negative correlations were observed in all cases.The highest value was observed for the gender pay gap (-0.30), indicating a slight negative correlation.

Other indicators, such as greenhouse gas emissions (-0.06), migrant employment (-0.07), and the corruption perception index (-0.21), showed equally weak, practically statistically insignificant relationships. The results suggest that changes in these CSR aspects have a very limited impact on industrial turnover.

Table 6. *Assessment of the relationship between the group of multinational enterprises by controlling country and CSR indicators*

CSR Indicators	**r**
Greenhousegasemissions	0,98
Closed-loop material utilization rate	0,15
Occupationalaccidentrate	0,96
Unadjustedgenderpay gap	0,06
Emigrant employment	0,98
Corruptionperception index	0,10

Source: *Own elaboration and calcualtions.*

The number of multinational enterprise groups (Table 6) showed a very strong positive correlation with greenhouse gas emissions (0.98), occupational accidents (0.96), and expatriate employment (0.98), indicating that increases in these indicators are directly related to increases in the number of multinational enterprises.

The remaining indicators showed a weak correlation: the circular material use index (0.15), corruption perception (0.10), and the wage gap (0.06). These results indicate that the presence of multinational companies may be strongly associated with intensive industrial activity and labor mobility.

Table 7. *Assessment of the relationship between the number of R&D personnel and CSR indicators*

CSR Indicators	**r**
Greenhousegasemissions	0,08
Closed-loop material utilization rate	0,29
Occupationalaccidentrate	0,09
Unadjustedgenderpay gap	0,03
Emigrant employment	0,07
Corruptionperception index	0,77

Source: *Own elaboration and calculations.*

The analysis revealed weak correlations between R&D personnel and most CSR indicators (Table 7). The strongest, moderate correlation was obtained for the corruption perception index (0.77), suggesting that higher levels of transparency and integrity foster R&D development. Other indicators, such as the use of circular materials (0.29) and greenhouse gas emissions (0.08), showed weak or virtually nonexistent correlations. These results underscore the importance of a good institutional environment for innovation, with environmental and social factors having little impact.

Table 8. *Assessment of the relationship between R&D expenditures and CSR indicators*

CSRIndicators	**r**
Greenhousegasemissions	0,18
Closed-loop material utilization rate	0,27
Occupationalaccidentrate	0,20
Unadjustedgenderpay gap	0,22
Emigrant employment	0,17
Corruptionperception index	0,73

Source: *Own elaboration and calculations.*

In the analysis of the relationship between R&D expenditures and CSR indicators (Table 8), the strongest, moderate correlation was obtained for the corruption perception index (0.73), indicating that R&D expenditures are more frequent in countries with high institutional transparency. Other indicators, such as greenhouse gas emissions (0.18), circular material use (0.27), and the wage gap (0.22), show weak positive correlations. Overall, the results suggest that ethical climate and transparency are more important for R&D development than environmental or social factors.

9. Conclusions

Analysis of the literature on corporate social responsibility confirms that this concept has evolved from philanthropic activities to comprehensive management strategies integrating economic, social, and environmental aspects. Key theoretical approaches include stakeholder theory, resource-based value theory (RBV), and institutional theory, which present CSR as a tool for building relational and reputational value, as well as adapting to regulatory pressures.

Empirical case studies indicate that CSR is an effective tool for shaping a positive brand image, strengthening customer loyalty, and building lasting relationships with stakeholders. However, significant definitional and methodological discrepancies exist in the literature. They point to insufficient consideration of the cultural context and a lack of standardized measurement tools. Contemporary trends in CSR development focus on integration with ESG, digital, technological, and climate responsibility, as well as adapting CSR to digital transformation and global crises.

CSR has significant practical significance as a strategic management tool, enabling the development of competitive advantage, social capital, and organizational resilience. Implementing CSR supports customer loyalty, enhancing brand reputation, and building long-term stakeholder trust. For managers, this means treating CSR not as a cost but as an investment in the development and stability of the enterprise.

Theoretically, CSR remains a dynamically developing field of research, requiring further integration of approaches, including stakeholder theory, institutional theory, and ESG. CSR is also gaining new importance as a response to the challenges of digitalization, the climate crisis, and social change. It is increasingly being considered not only as a voluntary activity but also as an element of contemporary corporate governance and a normative obligation to society.

The empirical analysis allowed for an assessment of the relationship between selected CSR indicators and various aspects of corporate competitiveness in EU countries. The results confirm that the impact of CSR on competitiveness is varied and ambiguous, highlighting the complexity of the relationship between social responsibility and economic performance. In the case of total industrial turnover, only weak, mostly negative correlations were observed with all CSR indicators, which may indicate the dominant influence of macroeconomic and technological factors on the dynamics of this sector.

In turn, the number of multinational enterprise groups showed a very strong positive correlation with greenhouse gas emissions, the employment of expatriates, and the rate of occupational accidents, suggesting that a greater presence of international entities is associated with the intensification of industrial activity, but not necessarily with improved social or environmental aspects. In the area of research and development, the strongest correlations were observed with the corruption perception index, highlighting the crucial role of transparency and institutional stability in the development of innovation.

A similar conclusion can be drawn from the analysis of R&D expenditures, where the corruption index also showed a moderate correlation, while the other CSR factors were of marginal significance. These results confirm that social responsibility can support competitiveness, but its impact depends on the type of indicator and the specificity of the economic sector being analyzed.

Proposals for further research:

1. Extending CSR research to culturally underrepresented contexts (Africa, Asia, Latin America), taking into account local values and management models.
2. Analyzing CSR implementation in small and medium-sized enterprises and low-input sectors.

3. Developing integrated models for measuring CSR outcomes that incorporate economic, social, and environmental dimensions.
4. Research on the impact of CSR communication on social media on brand perception and shaping customer engagement.
5. Empirical studies on CSR effectiveness in global crises (e.g., pandemics, wars, climate disasters).
6. Analyzing new forms of responsibility – technological and digital – and their impact on sustainability management.

References:

Awa, H.O., Etim, W., Ogbonda, E. 2024. Stakeholders, stakeholdertheory and Corporate Social Responsibility (CSR). International Journal of Corporate Social Responsibility, 9(11), 1-14.

Capriotti, P. 2011. Communicating corporate social responsibility through the Internet and social media. Revista Latina de ComunicaciónSocial, 66, 59-84.

Chwistecka-Dudek, H., Korenkiewicz, A. 2021. Corporate social responsibility concept. Scientific Papers of Silesian University of Technology. Organization and Management Series, 151, 116-118.

Cristea, M., Noja, G.G., Thalassinos, E., Cîrciumaru, D., Ponea, C.Ș., Durău, C.C. 2022. Environmental, social and governance credentials of agricultural companies—the interplay with company size. Resources, 11(3), 30.

Czarnecki, P., Marinicova, M. 2019. Social aspects of corporate social responsibility. Humanum, 32(1), 65-74.

Farcane, N., Bureana, E. 2015. History of 'Corporate Social Responsibility' Concept. Annales Universitatis Apulensis Series Oeconomica, 17(2), 31-48.

Fedotova, I., Bocharova, N., Rachwał-Mueller, A. 2024. Corporate social responsibility as an instrument of sustainable business development: exploring types and dimensions. WSEI Scientific Papers, 19, 84-111.

Gallego-Álvarez, I., Prado-Lorenzo, J.M., García-Sánchez, I.M. 2011. Corporate social responsibility and innovation: A resource-based theory. Management Decision, 49(10), 1709-1727.

Grima, S., Maditinos, D., Noja, G.G., Stankevičienė, J., Tarczynska-Luniewska, M., Thalassinos, E. (Eds.). 2024. Exploring ESG Challenges and Opportunities: Navigating Towards a Better Future. Emerald Publishing Limited.

Islam, T., Pitafi, H., Rehmani, M., Irfan, M., et al. 2020. The impact of corporate social responsibility on customer loyalty: The mediating role of corporate reputation, customer satisfaction, and trust. Sustainable Production and Consumption, 23, 1-9.

Kakabadse, N.K., Rozuel, C., Lee-Davies, L. 2005. Corporate social responsibility and stakeholder approach: a conceptual review. International Journal of Business Governance and Ethics, 1(4), 277-302.

Krahel, M. 2023. CSR – Significant Changes or a Path to Higher Profit? Case Study. Studies and Papers of the Collegium of Management and Finance. Warsaw School of Economics, 193, 137-150.

Kuna-Marszałek, A. 2020. Corporate Social Responsibility and Enterprise Competitiveness (2nd ed.) pp. 87-95. Wydawnictwo Uniwersytetu Łódzkiego.

Larsson, L., Massart, C. 2009. Business Ethics, Corporate Social Responsibility and Sustainability in management master programs. Umeå School of Business.

Mosca, F., Civera, C. 2017. The Evolution of CSR: An Integrated Approach. Symphonya. Emerging Issues in Management, 1, 16-35.

Nica, I., Chiriță, N., Georgescu, I. 2025. Triple Bottom Line in Sustainable Development: A Comprehensive Bibliometric Analysis. Sustainability, 17(1932), 1-31.

Nicolaides, A. 2021. Corporate social responsibility and ethical business conduct on the road to sustainability: A stakeholder approach. International Journal of Development and Sustainability, 10(5), 200-215.

Pagkalou, F.I., Liapis, K.I., Thalassinos, E.I. 2024. Defining the Total CSR Z-Score: A Methodological Approach Using Regulations, Standards and Guidelines Through Application to the Greek Market. Sustainability, 16(23), 10379.

Ratajczak, M., Stawicka, E. 2011. Historical Conditions of the Development of Corporate Social Responsibility. Scientific Papers of the Wrocław University of Economics, 156, 97-100.

Risi, D., Vigneau, L., Bohn, S., Wickert, C. 2022. Institutional theory based research on corporate social responsibility: Bringing values back in. International Journal of Management Reviews, 25(1), 3-23.

Rosińska-Bukowska, M. 2022. Evolution of corporate social responsibility standards and their implementation in the strategies of the most powerful corporations: Guidelines for the CSR 5.0 concept. International Entrepreneurship Review, 8(2), 25-35.

Srivastava, V.K. 2024. Impact of Corporate Social Responsibility (CSR) initiatives on brand reputation. International Journal of Science and Research Archive, 13(01), 1910-1930.

Tran, N.T. 2022. Impact of corporatesocialresponsibility on customerloyalty: Evidence from the Vietnamese jewellery industry. Cogent Business & Management, 9(1), 1-27.

Vasudev, S.R., Deshpande, R. 2024. The Evolution of CSR: From Philanthropy to Strategic Business Practice. International Journal of Advanced Research in Science, Communication and Technology, 4(1), 462-464.

Wolak-Tuzimek, A. 2023. Corporate Social Responsibility and Enterprise Competitiveness (2nd ed.), CeDeWu, Warszawa, ISBN: 978-83-8102-683-3.