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EVALUATING ESG PRACTICES AND FINANCIAL IMPACTS: A COMPREHENSIVE ANALYSIS OF LEADING EUROPEAN ENTERPRISES UNDER CSR EUROPE'S FRAMEWORK

GABRIELA DUBCOVÁ¹, EMIL VELINOV², MARTINA KOSIKOVA³

Abstract

This study investigates the integration and impact of Environmental, Social, and Governance (ESG) practices within large European enterprises from different industries affiliated with CSR Europe Initiative, which is an influential network championing sustainability. With the impending 2025 requirement for integrated annual reports combining ESG and financial disclosures under the Corporate Sustainability Reporting Directive (CSRD), this research evaluates how these enterprises adhere to and implement ESG principles in their operations. Focusing on a selected group of companies, including financial institutions governed by the Sustainable Finance Disclosure Regulation (SFDR), the study provides a detailed analysis of ESG behaviors using a structured set of seven criteria: Corporate Governance, Responsible Financing, Environmental Behavior, Social Behavior, Quality of Sustainability Reporting, Verification of Institutionalized ESG Strategy, and Annual Turnover. The results emphasize the pivotal influence of environmental strategies on revenue generation, while simultaneously uncovering significant disparities in ESG integration across firms. By addressing a critical gap in the literature regarding the financial implications of ESG engagement, the study contributes nuanced insights into how leading European corporations - specifically those affiliated with the CSR Europe Initiative - can strengthen their sustainability strategies and financial resilience. Furthermore, the findings underscore the necessity of a well-structured ESG framework not only for achieving long-term corporate sustainability, but also for ensuring alignment with evolving European Union regulatory requirements and stakeholder expectations.

JEL classification: M14, Q56

Keywords: ESG Practices, Corporate Governance, CSR behaviour, Integrated Report, Sustainable Business

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INTRODUCTION

In recent years, the integration of Environmental, Social, and Governance (ESG) principles into corporate strategy has emerged as a critical factor in determining the long-term sustainability and success of enterprises (Annesi et al., 2024). The emphasis on ESG has been particularly pronounced in Europe, where the European Commission has instituted comprehensive legislation to ensure that businesses operate in a manner that is not only financially viable but also socially responsible and environmentally sustainable. Among the various organizations championing this cause, CSR Europe stands out as a pivotal association that brings together thought leaders and enterprises committed to advancing sustainability. As a community of leading companies and institutions, CSR Europe plays a crucial role in institutionalizing CSR and ESG principles in daily business practices, aligning corporate strategies with broader societal and environmental goals. In an era defined by a global push towards sustainability, the role of Corporate Social Responsibility (CSR) and Environmental, Social, and Governance (ESG) standards in shaping business practices cannot be overstated (Kandpal et al., 2024). With the increasing integration of these principles into corporate strategies, research has pivoted towards evaluating the extent and efficacy of such integrations. Particularly, CSR Europe, recognized as a 'community of Thought Leaders setting the new frontier of sustainability', has been instrumental in championing these causes within the European context (CSR Europe, 2024). This study delves into the structured assessment of ESG behaviors across a select group of large European companies which are aligned with the rigorous ESG legislation promoted by the European Commission.

The backdrop for this investigation is the upcoming regulatory requirement, as of 2025, mandating these large entities to produce an integrated annual report that harmoniously combines ESG achievements with financial performance, as stipulated by the Corporate Sustainability Reporting Directive (CSRD) (Hummel & Jobst, 2024). Furthermore, this analysis extends to specific financial institutions within the EU, governed by the Sustainable Finance Disclosure Regulation (SFDR), emphasizing the integrated reporting process already in practice (Garcia-Torea et al., 2024; Cerrato, 2024). This research aims to dissect and evaluate the implications of ESG behaviors on financial metrics at both micro and macro levels, offering a granular look into how these practices interplay with financial outcomes in leading European companies.

This research focuses on the ESG behaviors of large companies associated with CSR Europe, all of which are headquartered within the European Union (EU) and are thus subject to the stringent ESG legislation imposed by

the European Commission. These companies are required to meet rigorous standards of corporate governance, responsible financing, environmental stewardship, and social responsibility. Moreover, by 2025, these enterprises must comply with the Corporate Sustainability Reporting Directive (CSRD), which mandates the integration of ESG and financial reporting (Scamans, 2024). The study also includes an analysis of banks that are subject to the Sustainable Finance Disclosure Regulation (SFDR), which imposes even more precise requirements for integrated annual reporting (Rant, 2024).

The primary objective of this research is to diagnose, analyze, and evaluate the ESG behaviors of these companies using a structured system of seven detailed criteria: Corporate Governance, Responsible Financing, Environmental Behavior, Social Behavior, Quality of Sustainability Reporting, Verification of the Institutionalized ESG Strategy, and Annual Turnover. The study seeks to understand how these criteria interact to create a synergy effect that enhances overall corporate performance. Furthermore, this research aims to bridge a gap in existing literature by examining the relationship between ESG behavior and financial indicators at both the macro and micro levels, thereby providing a comprehensive assessment of how leading European companies are financing and implementing their ESG strategies.

LITERATURE REVIEW

The growing importance of ESG principles in corporate governance has been widely recognized in academic and policy discussions. Scholars have increasingly focused on how ESG factors influence corporate performance, risk management, and long-term sustainability. According to Friede et al. (2015), a meta-analysis of over 2,000 empirical studies found a positive correlation between ESG factors and corporate financial performance, indicating that companies with robust ESG practices tend to outperform their peers in terms of financial returns. This finding underscores the importance of integrating ESG considerations into corporate strategy, particularly for companies aiming to achieve sustainable growth.

The role of CSR Europe in promoting ESG practices cannot be overstated. As a leading association of companies committed to sustainability, CSR Europe has been instrumental in shaping the ESG landscape in Europe. The organization's efforts to institutionalize CSR and ESG principles have been supported by the European Commission's legislative framework, which mandates that large companies in the EU adhere to stringent ESG reporting standards. The Corporate Sustainability Reporting Directive (CSRD), set to take effect in

2025, is a key piece of legislation that will require companies to produce integrated reports combining financial and ESG information. This directive reflects the European Commission's broader strategy to promote transparency and accountability in corporate governance, ensuring that businesses operate in a manner that is aligned with the EU's sustainability goals.

The inclusion of banks in this study is particularly relevant given the critical role that financial institutions play in advancing sustainability. Under the Sustainable Finance Disclosure Regulation (SFDR), banks and other financial institutions are required to disclose how they integrate ESG factors into their investment decision-making processes. This regulation is part of the EU's broader effort to channel capital towards sustainable investments, thereby fostering a financial system that supports the transition to a low-carbon economy. According to Schoenmaker and Schramade (2019), sustainable finance is becoming increasingly mainstream, with financial institutions recognizing the need to incorporate ESG considerations into their risk management frameworks to ensure long-term stability and resilience.

The relationship between ESG behavior and financial performance has been a focal point of research in recent years. Eccles et al. (2014) argue that companies with strong ESG performance are better positioned to manage risks and capitalize on opportunities, leading to superior financial outcomes. This perspective is supported by the findings of the Global Sustainable Investment Alliance (2018), which reported that sustainable investment strategies are growing rapidly, driven by the recognition that ESG factors can enhance investment returns and mitigate risks.

The discourse surrounding CSR and ESG practices has evolved considerably, moving from peripheral corporate philanthropy activities to central strategic elements within corporate governance. The literature frequently highlights the institutionalization of CSR and ESG within corporate entities as crucial for long-term sustainability (Carroll & Shabana, 2010; Porter & Kramer, 2006). According to Crane et al. (2008), the integration of these practices is not merely ethical but strategic, impacting financial performance, brand reputation, and stakeholder trust.

The CSR Europe initiative stands out as a pivotal influence in shaping European corporate behavior concerning sustainable practices. As a network that connects companies across Europe to enhance their sustainability agendas, CSR Europe has been crucial in promoting a standardized approach to implementing CSR and ESG principles (CSR Europe, n.d.). These principles have been more rigorously defined and enforced following the European Commission's directives aimed at strengthening the transparency and accountability of corporate sustainability reporting.

A significant strand of the literature focuses on the relationship between ESG performance and financial outcomes. Numerous studies suggest that high ESG ratings correlate with various positive financial indicators, including enhanced market value and profitability (Friede et al., 2015). This correlation is attributed to the effective management of operational risks and the ability to harness ESG-driven innovation leading to better resource efficiency and market positioning.

Further exploration is found in studies examining specific aspects of ESG integration, such as corporate governance, responsible financing, and environmental stewardship. Aguilera et al. (2007) emphasize that robust corporate governance structures that incorporate ESG principles tend to enhance decision-making processes and strengthen compliance with regulatory standards. On the financing side, Scholtens (2013) notes that responsible investment strategies aligning with ESG criteria tend to yield sustainable returns, mitigating risks associated with environmental liabilities or social discontent.

Moreover, the operationalization of these ESG criteria often requires significant adjustments within company practices, which has been detailed by various authors. For instance, the environmental criterion within ESG often necessitates a comprehensive reevaluation of corporate policies concerning resource usage and waste management (Hart & Milstein, 2003). Social behaviors, another crucial ESG facet, encompass aspects like fair labor practices and community engagement, which not only improve stakeholder relations but also enhance corporate reputations (Brammer et al., 2007).

Despite the abundant literature supporting the positive impacts of ESG adoption, there remains a gap in research specifically looking at the direct financial implications of ESG behaviors at both the macro and micro levels within the European context. This study aims to fill this void by applying rigorous analytical methodologies to evaluate how ESG behaviors influence financial performance in companies that are not only subject to the European Commission's stringent ESG legislations but also stand as paragons within their sectors. By focusing on enterprises that are benchmarked against such high standards, the research endeavors to delineate clear correlations between ESG practices and financial health, thereby providing a nuanced understanding of the ESG-financial nexus within Europe's leading companies.

This study has set the stage for a comprehensive analysis of ESG behaviors within selected large companies under CSR Europe's influence, exploring the depth of their integration and the breadth of their impact on financial performance, thus contributing valuable insights to both academic and practical fields of sustainable corporate strategy.

However, the literature also highlights challenges in implementing and measuring ESG practices Acar and Coskun (2023). One of the key issues is the lack of standardized metrics for assessing ESG performance, which can lead to inconsistencies in reporting and difficulties in comparing ESG outcomes across companies. Despite these challenges, there is a growing consensus that ESG factors are critical to corporate success in the 21st century. The work of Porter and Kramer (2011) on creating shared value (CSV) emphasizes that companies can achieve competitive advantage by addressing social and environmental issues in a way that enhances their profitability. This approach aligns closely with the goals of CSR Europe, which seeks to integrate ESG principles into the core strategies of its member companies.

In addition to the direct impact of ESG behavior on financial performance, there is also evidence to suggest that ESG practices can influence macroeconomic indicators. For example, the European Commission (2020) has highlighted the potential for ESG investments to drive economic growth by fostering innovation and creating new markets for sustainable products and services. This perspective is echoed by studies that have examined the relationship between ESG performance and country-level economic indicators, such as gross domestic product (GDP) and unemployment rates. According to Capelle-Blancard and Monjon (2014), countries with higher levels of ESG investment tend to experience stronger economic growth and lower unemployment rates, suggesting that ESG practices can have a positive impact on macroeconomic stability.

Despite the growing body of literature on ESG practices, there remains a gap in research that directly links ESG behavior with financial indicators at both the macro and micro levels. This study aims to address this gap by analyzing the ESG practices of large European companies associated with CSR Europe and examining how these practices influence financial performance. By focusing on a group of leading companies that are subject to the EU's rigorous ESG legislation, this research provides valuable insights into the ways in which ESG practices are being implemented and financed in the European context.

In conclusion, the integration of ESG principles into corporate strategy is becoming increasingly important for companies seeking to achieve sustainable growth and long-term success. The role of organizations like CSR Europe in promoting these principles is critical, particularly in light of the European Commission's legislative efforts to institutionalize ESG practices across the

EU. This research contributes to the existing literature by providing a detailed analysis of the ESG practices of leading European companies and exploring the relationship between ESG behavior and financial performance. Through this analysis, the study offers important insights into the ways in which ESG practices can enhance corporate sustainability and contribute to broader economic and financial stability.

HYPOTHESES

- H₁: Companies that perform best according to ESG criteria also achieve the highest annual revenues.
- H₂: The ESG performance of international corporations, measured by six specific criteria, has a balanced impact on their annual turnover.
- H₃: The sustainable ESG behaviour of CSR Europe international corporations affects macro financial indicators in the relevant EU countries.
- H₄: The influence of international corporations within CSR Europe affects how much is spent on ESG initiatives in relevant EU countries.
- H₅: The relationship between ESG expenditures across different EU countries remains consistent, as they share the same goal of promoting business sustainability.

DATA AND METHODOLOGY

The main study aim is to analyse the impact of ESG management for improvement of the financial situation in the leading companies in CSR Europe as of year 2024. CSR Europe is the leading European business network dedicated to Corporate Sustainability and Responsibility. It collaborates with corporate members, National Partner Organisations (NPOs), and Associated Partners to support over 10,000 enterprises at local, European, and global levels. These are multinational companies from various sectors and regions that collaborate with CSR Europe to advance sustainability and corporate responsibility initiatives. The network comprises 37 corporate members (see: Table 1).

The data have been collected from the TOP company members in the CSR Europe Initiative with headquarters or subsidiaries in EU countries (because they have the highest ESG regulation. Thus, these firms were analysed and evaluated and with a very demanding approach assigned adequate points. The list of TOP companies in CSR Europe with headquarters or subsidiaries in the EU is (see: Table 1) as follows:

Table 1: Top (Leading) companies in CSR Europe with headquarters or subsidiary in EU countries as of year 2024

Corporation Members of CSR Europe	Country of the Headquarters
ArcelorMittal	Luxemburg
Autostrade per l'Italia	Italy
BASF	Germany
BBVA (Banco Bilbao Vizcaya Argentaria)	Spain
BNP Paribas	France
Bridgestone	Japan
Cargill	US
Coca Cola	US
Cummins	US
Enel	Italy
Engie	France
Epson	Japan
HELLENiQ ENERGY	Greece
Here Technologies	Netherlands
Hitachi	Japan
Honda	Japan
Huawei Technologies	China
Iberdrola	Spain
IBM	US
Iveco Group	Italy
Johnson & Johnson	US
Komatsu	Japan
Leonardo	Italy
LKQ	US
Orange	France
Pirelli	Italy
ΔEH	Greece
Raja Group	France
SES	Luxemburg
Société Générale	France
Solvay	Belgium
State Street	US
Syensqo	Belgium
Titan Cement	Greece
TotalEnergies	France
Toyota	Japan
Unipol Gruppo	Italy

Source: Authors' own work.

The selection of companies for this study is grounded in their affiliation with CSR Europe. This membership served as a key inclusion criterion, as companies within this network are recognized for their commitment to aligning with the European Commission's evolving ESG legislative framework, particularly the upcoming Corporate Sustainability Reporting Directive (CSRD). By focusing on enterprises either headquartered in or operating substantial subsidiaries within EU member states, the study ensures that the selected firms are directly subject to the EU's most rigorous ESG compliance and reporting standards. This strategic focus allows for a coherent analysis of ESG behavior within a uniform regu-

latory environment. Furthermore, the selection captures companies operating across diverse sectors, providing a cross-sectional view of ESG practices among established corporate leaders. While the financial and ESG data referenced in the study pertain to the most recent available reporting periods, typically encompassing fiscal years 2022 - 2024, this temporal scope ensures relevance to the 2025 regulatory milestone. Therefore, although not initially detailed, the sampling logic is consistent with the research's objective to examine ESG-financial interdependencies within a context of high regulatory scrutiny and strategic sustainability alignment.

Table 2: ESG evaluation criteria

ESG evaluation criteria	
Corporate Governance. The quality of instruments and standards for institutionalisation of ESG management.	Strategy of ESG/SDGs management, ethical committee/ESG commission, code of conduct, rules of procedure for ethical committee/commission, operative ESG plan/ SDGs plan: 9p. - 10p. one of the tools is missing: 7p. - 8p. 2 of the tools are missing: 5p. - 6p. 3 of the tools are missing: 3p. - 4p. 4 of the tools are missing: 1p. - 2p.
Responsible financing. The declared accountability and transparency in all organisation financial processes from rules/ guide into realisation: transparent rules for organisation financing and investment, project financing, integrated annual report.	An organisation whose financial and investment processes have met the given objectives/rules and its realisation has a long-term development character generating further innovation development: 9p. - 10p. An organisation whose financial and investment processes have fully met its objectives; the financing has a long-term development character at a comparable level: 7p. - 8p. An organisation whose financial and investment processes have partially met its objectives, but the financing is long-term in nature: 5p. - 6p. An organisation whose financial and investment processes have fully met the objectives, but the financing is of a short-term nature: 3p. - 4p. An organisation whose financial and investment processes have only partially met the objectives and the financing is of a short-term nature: 1p. - 2p.
Environmental behaviour. The declared conduct accountability and transparency in all organisation environmental activities from rules/guide into realisation.	All standards of environmental management have been performed: positive impact to climate change and pollution, water saving, energy saving, saving other resources, positive impact to biodiversity and ecosystems, conduct according to the circular economy: 9p. - 10p. 1 part is missing: 7p. - 8p. 2 parts are missing: 5p. - 6p. 3 parts are missing: 3p. - 4p. 4 parts are missing: 1p. - 2p.
Social behaviour. The declared conduct accountability and transparency in all organisation social activities from rules/guide into realisation.	All standards of human capital management have been performed: conduct to employees, clients/consumers, customers, cooperating human capital categories, other stakeholders: 9p. - 10p. 1 part is missing: 7p. - 8p. 2 parts are missing: 5p. - 6p. 3 parts are missing: 3p. - 4p. 4 parts are missing: 1p. - 2p.
Quality of sustainability report. The declared conduct responsibility, quality and transparency in preparation and publishing the requested sustainability/ESG/ SDGs report.	All standards of the requested published sustainability report have been performed: completed all parts of ESG conduct related to the principles of the CSR Europe membership, completed all standards for the audit of quality annual report, identity rate of period ESG plans and published report, language, report published on the website of corporate headquarters: 9p. - 10p. 1 part is missing: 7p. - 8p. 2 parts are missing: 5p. - 6p. 3 parts are missing: 3p. - 4p. 4 parts are missing: 1p. - 2p.
Verification of the Institutionalised ESG Strategy. Evaluation of quality implementation of ESG principles in the organisation.	All standards of ethical management have been performed: corporate government, responsible financing, environmental part, social part, published audited annual report: 9p. - 10p. 1 part is missing: 7p. - 8p. 2 parts are missing: 5p. - 6p. 3 parts are missing: 3p. - 4p. 4 parts are missing: 1p. - 2p.

ESG evaluation criteria	
Annual turnover (in € Mil.). Indicator characterising what volume of value (financial) per- formance is generated by the executive institutionalised ESG system and its proportionality respecting the stimulation with legislation demands.	from 176,044 to 220,000: 8.01p. - 10p. from 132,083 to 176,043: 6.01p. - 8p. from 88,122 to 132,082: 4.01p. - 6p. from 44,161 to 88,121: 2.01p. - 4p. from 200 to 44,160: 0p. - 2p.

Source: Authors' own work.

In the paper the analysis was conducted according
to the ESG criteria in Table 2 above.

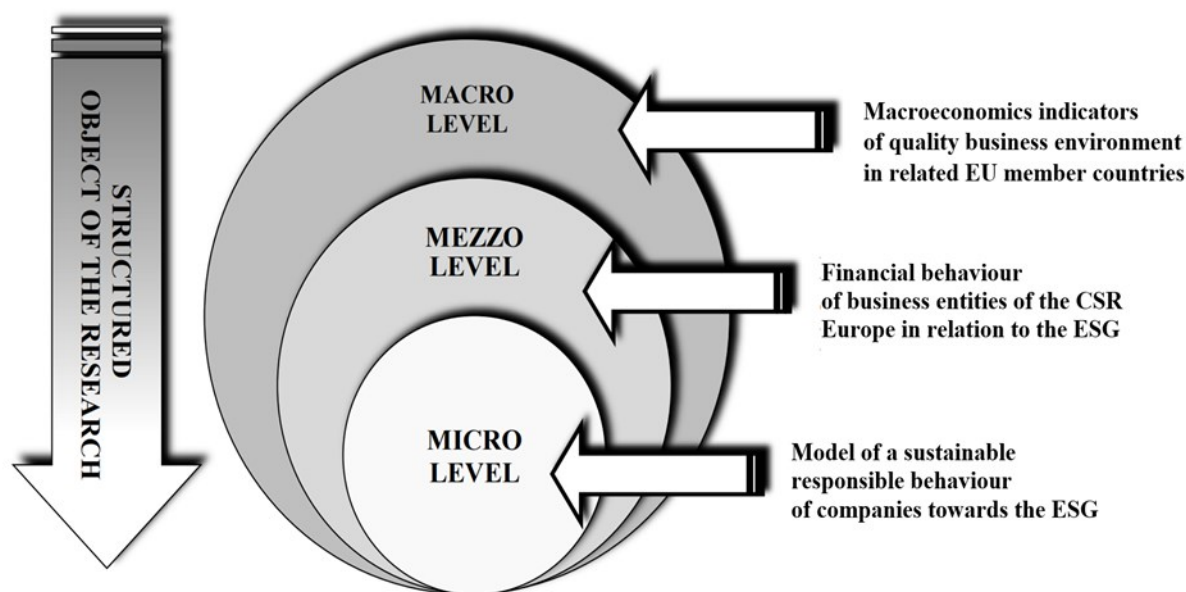
Due to the complexity of the analysis, a selected
logical system of macroeconomic financial indicators
was used as in Table 3.

Table 3: Selected logical system of macroeconomic financial indicators

Applied Macroeconomic Financial Indicators	
GERD	Gross domestic expenditures on research and development by sector of performance [Euro per inhabitant], 2022
BERD	Business Enterprise expenditure on research and development by NACE Rev. 2 activity [Euro per inhabitant], 2022
Outward FDI stocks of GDP	Outward foreign direct investment stocks of gross domestic product [stocks in % of GDP], 2022
Foreign control of EU enterprises and domestic affiliates (FCEUEDA) by NACE Rev. 2 activity, 2022	Enterprises - number (FCEUEDA)
	Persons employed - number (FCEUEDA)
	Net turnover - million euro (FCEUEDA)
(COFOG) General government expenditure by function [% of GDP], 2022	Environmental E(COFOG)
	Social S(COFOG)
	Governance G(COFOG)

Source: Authors' own work based on: OECD (2015). *Frascati Manual 2015: Guidelines for Collecting and Reporting Data on Research and Experimental Development, The Measurement of Scientific, Technological and Innovation Activities*, OECD Publishing, Paris .

Figure 1: The Logical Structured System Framework of Methodology



Source: Authors' own work based on Crane, A., Matten, D. & Spence, L.J. (2008). *Corporate social responsibility: Readings and cases in a global context*. Routledge, London and Crane, A., Matten, D. & Spence, L.J. (2014). *Corporate social responsibility: Readings and cases in a global context*. Routledge, London.

The study focus is on estimating a linear regression model to determine whether there is a relationship between the dependent variable (annual turnover / Sum Σ Comp. Rating) and selected independent variables (6 ESG indicators / 9 macro financial indicators). The total composite rating (Σ = sum) of a company or set of companies, is calculated by aggregating multiple performance or evaluation metrics - possibly ESG-related or financial indicators - into one overall score. Since it was not possible to confidently predict in advance whether this relationship would exist, a key part of the analysis involved assessing the strength and direction of the correlation between these variables. The regression model made it possible not only to estimate the relationships but also to identify the effect of the independent variables on the dependent variable.

In addition to the modeling, the study used Pearson's correlation coefficient to measure the degree of correlation between the variables. This coefficient measures the intensity of the relationships between the individual independent variables and the dependent variable, which was important for gaining a deeper understanding of their interconnections.

In the first model, estimation was made of the relationship between the dependent variable annual turnover and six independent variables, specifically ESG indicators. The existence of a significant relationship was evaluated based on the estimated p-value and the intensity of dependence using the Pearson correlation coefficient among the analyzed variables, using the methods of regression and correlation analysis.

The second model proceeded identically, but with modified input variables. For the considered corpora-

tions, macro-financial indicators were monitored, which entered the analysis as independent variables, while their impact and intensity of dependence was determined in relation to the dependent variable Sum Σ Comp. Rating. Then the relationships among macro financial indicators were evaluated, which revealed mutual connections between them.

Basic descriptive statistics were also employed, such as mode and mean, to provide an overview of the data characteristics. These indicators offered insight into the most frequently occurring values in the dataset and the average state of the data. By summarizing and describing these basic findings, a clearer understanding of the overall nature of the issue was gained, which served as a foundation for further interpretations.

The objective was not only to verify whether these variables are interconnected, but also to understand what significance they have for the observed phenomenon, which provides important information for future decision-making and strategies aimed at optimizing the investigated process.

RESULTS

All analytical procedures were systematically aligned with the primary research objective: to assess the impact of ESG management on the financial performance of leading companies within the CSR Europe network (see: Table 4).

H₁: The leading companies evaluated according to the ESG principles also achieve the highest annual turnover.

Table 4: The Evaluation of ESG Conduct and the Annual Turnover of the European corporations of CSR Europe

Evaluation (in points) Corporation	Annual Turnover	ESG Conduct	Index of the ESG Institutionalisation
ArcelorMittal	2.84	46.00	6.17
Autostrade per l'Italia	0.25	52.60	0.48
BASF	3.13	55.00	5.69
BBVA (Banco Bilbao Vizcaya Argentaria)	0.36	49.60	0.73
BNP Paribas	0.49	50.50	0.97
Enel	4.35	57.20	7.60
Engie	3.75	53.40	7.02
HELLENIQ ENERGY	0.57	46.00	1.24
Here Technologies	0.03	52.10	0.06
Iberdrola	2.24	59.00	3.80
Iveco Group	0.73	58.50	1.25
Leonardo	0.69	55.10	1.25
Orange	2.00	55.50	3.60
Pirelli	0.29	54.60	0.53
ΔEH (Public Power Corporation)	0.09	48.50	0.19
Raja Group	0.07	56.00	0.13

Evaluation (in points) Corporation	Annual Turnover	ESG Conduct	Index of the ESG Institutionalisation
SES	0.08	55.50	0.14
Société Générale	1.13	47.50	2.38
Solvay	0.26	48.50	0.54
Syensqo	0.31	46.00	0.67
Titan Cement	0.11	46.00	0.24
TotalEnergies	9.86	51.50	19.15
Unipol Gruppo	0.00	55.10	0.00

Source: Authors' own work.

According to the evaluation of the ESG conduct and the annual turnover of the European corporations of CSR Europe, it was identified that the leading corporations according to the annual turnover are companies of the energy industry with the best market position and their institutionalised ESG conduct achieved values at standard average values (the average value of the ESG conduct = 52.16 points). Generally, companies within CSR Europe are capable of covering above-standard corporate governance costs with the main aim of assuming leadership in sustainable corporate development with a profitable market position. The best integrated position, according to the indicator 'Index of the ESG Institutionalisation' - the natural ability to generate turnover from Institutionalised ESG conduct was shown by Enel. This corporation earned the highest annual turnover from the largest institutionalised ESG conduct.

After summarisation of the arguments, Hypothesis 1 was rejected, as the leading companies evaluated according to the ESG principles achieved the highest annual turnover. However, companies within the CSR Europe were able to finance above-standard corporate governance costs with the main aim of assuming leadership in sustainable corporate development with a profitable market position.

H₂: The annual turnover of international corporations is balanced in influence by ESG behaviour (expressed in 6 criteria).

Before the analysis of the relations between the annual turnover and the ESG behaviour of European international corporations in CSR Europe the ESG behaviour was analysed via its 6 criteria (see: Table 5).

Table 5: Statistical values of the variables

Variable	Mean	Minimum	Maximum	Mode
Corporate Governance	8.7478261	7.5000000	10.0000000	9.5000000
Responsible financing	8.7391304	6.0000000	10.0000000	9.5000000
Environmental behaviour	8.5956522	7.5000000	9.5000000	8.5000000
Social behaviour	8.9391304	7.0000000	9.6000000	9.5000000
Quality of the sustainability report	8.5000000	7.0000000	10.0000000	9.5000000
Verification of the institutionalised ESG strategy	8.6391304	7.0000000	10.0000000	9.5000000
Annual turnover	1.4621739	0.0000000	9.8600000	-

Source: Authors' own work.

From the point of view of the individual criteria, the paper shows that all the values above the average belong to the Iberdrola and Enel companies. Other-

wise, it concerns the companies Syensqo and Titan Cement, whose point evaluation is below average in all seven cases (see: Table 6).

Table 6: Rating of the ESG behaviour through characteristic statistical values

CMCSR	CHQ	CG	RF	EB	SB	QSR	VIESG	AT
ArcelorMittal	Luxemburg	8.00	6.00	9.00	7.00	9.00	7.00	2.84
Autostrade per l'Italia	Italy	9.10	8.50	8.00	8.00	9.50	9.50	0.25
BASF	Germany	9.50	9.50	8.00	9.50	9.00	9.50	3.13
BBVA	Spain	9.10	9.50	7.50	8.00	7.50	8.00	0.36
BNP Paribas	France	8.50	9.50	7.50	9.50	7.50	8.00	0.49
Enel	Italy	9.50	9.50	9.10	9.60	9.50	10.00	4.35

CMCSR	CHQ	CG	RF	EB	SB	QSR	VIESG	AT
Engie	France	9.20	9.00	9.00	8.50	8.50	9.20	3.75
HELLENiQ ENERGY	Greece	7.50	7.00	8.00	9.00	7.00	7.50	0.57
Here Technologies	Netherlands	8.10	8.50	8.50	9.00	8.50	9.50	0.03
Iberdrola	Spain	10.00	10.00	9.50	9.50	10.00	10.00	2.24
Iveco Group	Italy	10.00	9.50	9.50	9.50	10.00	10.00	0.73
Leonardo	Italy	9.50	9.50	9.10	9.50	8.50	9.00	0.69
Orange	France	9.50	9.50	8.50	9.50	9.50	9.00	2.00
Pirelli	Italy	9.10	8.50	9.00	9.50	9.50	9.00	0.29
ΔEH	Greece	8.00	8.50	8.50	9.00	7.00	7.50	0.09
Raja Group	France	9.50	9.50	8.50	9.50	9.50	9.50	0.07
SES	Luxemburg	9.50	9.00	8.50	9.50	9.50	9.50	0.08
Société Générale	France	7.50	8.00	8.00	9.00	7.50	7.50	1.13
Solvay	Belgium	7.50	8.50	8.50	9.00	7.50	7.50	0.26
Syensqo	Belgium	7.50	8.50	8.50	7.50	7.00	7.00	0.31
Titan Cement	Greece	7.50	7.00	8.50	8.50	7.00	7.50	0.11
TotalEnergies	France	8.50	9.50	9.50	8.50	7.50	8.00	9.86
Unipol Gruppo	Italy	9.10	8.50	9.00	9.50	9.50	9.50	0.00
Mean		8.75	8.74	8.60	8.94	8.50	8.64	1.46

Note: CMCSR - Corporation Members of the CSR Europe, CHQ - country of headquarters, CG - corporate governance, RF - responsible financing, EB - environmental behaviour, SB - social behaviour, QSR - quality of sustainability report, VIESG - Verification of the institutionalised ESG

Source: Authors' own work.

For the evaluation purposes of the relations between the annual turnover and the ESG behaviour of European international corporations in CSR Europe the

Linear Regression Model was applied, as the relevant values are shown in Table 7 as follows.

Table 7: The Relevant Values according to regression and correlation analysis

Parameter Estimates of Linear Regression Model	
Variable	Estimate
Intercept	-12.02888
	0.18130
Corporate Governance	0.42450
	0.78660
Responsible financing	0.77048
	0.41140
Environmental behaviour	2.10211
	0.02740
Social behaviour	-0.92560
	0.28700
Quality of sustainability report	-0.69104
	0.55540
Verification of the institutionalised ESG strategy	-0.10150
	0.93080
Pearson Correlation Coefficient, N = 23 Prob > r under H0: Rho=0	
Variable	Annual Turnover
Corporate Governance	0.10111
	0.64620
Responsible financing	0.21451
	0.32570
Environmental behaviour	0.43058
	0.04030

Pearson Correlation Coefficient, N = 23 Prob > r under H0: Rho=0	
Variable	Annual Turnover
Social behaviour	-0.11641
	0.59680
Quality of sustainability report	-0.04773
	0.82880
Verification of the institutionalised ESG strategy	-0.00832
	0.96990

Source: Authors' own work.

Relation of a dependence between turnover and individual indicators for 6 ESG criteria was demonstrated only between turnover and environmental behaviour. In the respective row in the 'Pearson Correlation Coefficient' table, the value of the correlation coefficient is 0.43058, which indicates a moderately strong direct dependence (the significance of this dependence is confirmed by the p-value is 0.0403). The same result is confirmed by the estimation of the linear regression model with the considered indicators in the 'Parameter Estimates' table. The positive value of the environmental behaviour parameter in the first row (2.10211) indicates a direct relationship between the indicators, and the significant impact on the annual turnover is confirmed by the p-value of 0.0274 in the second row. It means that if the value of environmental behaviour increases by one unit (1 point), then the turnover value also increases (of 2.10211 point), or vice versa, if it de-

creases by one unit, turnover also decreases – direct proportion. It is a very logical phenomenon, as development of ecological investments increases productivity or saving environmental measures lead to higher revenues (also vice versa) and these processes generate better profitability and overall financial situation of each company. In other cases, no significant dependence was found, which led to disproving of Hypothesis 2: The annual turnover of international corporations is balanced in influence by ESG behaviour (expressed in 6 criteria).

H₃: The sustainable ESG behaviour of CSR Europe international corporations affects macro financial indicators in the relevant EU countries.

Applied regression and correlation analysis was applied for adequate solution of this hypothesis with obtained values (see: Table 8).

Table 8: Relevant Values according to the Pearson Correlation Coefficient

Pearson Correlation Coefficients, N = 23 Prob > r under H0: Rho=0	
Variable	Sum Σ Comp. Rating
GERD	-0.13288
	0.54560
BERD	-0.13921
	0.52640
Outward FDI stocks of GDP	-0.09598
	0.66310
Enterprises - number (FCEUEDA)	0.52624
	0.00990
Persons employed - number (FCEUEDA)	0.40976
	0.05220
Net turnover - million euro (FCEUEDA)	0.42797
	0.04160
E(COFOG)	-0.11086
	0.61460
S(COFOG)	0.46407
	0.02570
G(COFOG)	-0.43516
	0.03800

Source: Authors' own work.

During the situation analysis of how the sustainable ESG conduct of international corporations affects the macro financial indicators in the relevant EU countries, the achieved 'p-value' (the second line) was applied between the Sum Σ Comp. rating and the GERD is the weak indirect dependence – that means: if the Sum Σ Comp. Rating increases by one unit, the Gross Domestic Expenditures on Research and development will decrease, as financing of ESG conduct is from internal company sources. Between the Sum Σ Comp. Rating and the BERD is the weak indirect dependence – that means: when the Sum Σ Comp. Rating is higher by one unit, the Business Enterprise Expenditure on Research and Development decreases, because the company's internal resources are used more efficiently. Between the Sum Σ Comp. Rating and indicators FCEUEDA the moderately strong direct dependence is identifiable. This represents a positive fact (in all three indicators: Enterprises, Persons employed and Net turnover) – the higher the company's ESG rating, the greater its impact on ESG controlling (incl. responsible financing/investment) in all its subsidiaries, including abroad. Between the Sum Σ Comp. Rating and the Outward FDI stocks of GDP is the weak indirect dependence – that means: when Sum Σ Comp Rating increases (that is, ESG management is better), more internal company resources are used for the ESG conduct directly and

macroeconomic resources are saved for Outward Foreign Direct Investment Stocks of Gross Domestic Product. When it comes to analysing the dependencies between the Sum Σ Comp. Rating and the E(COFOG) and the G(COFOG), there are visible indirect dependencies, which means: growing corporate ESG conduct in the field of management and environment reduces macro-financing on General Government Expenditure. The evaluation of the dependency between the Sum Σ Comp. Rating and S(COFOG) is characteristic with the direct dependency, which means growing corporate ESG conduct in the field of social activities generate macro-financing on general government expenditure for co-financing o ESG empowerment and improvements, for external usage.

After the argument summarisation, Hypothesis 3 was confirmed: The sustainable ESG behaviour of CSR Europe international corporations affects macro financial indicators in the relevant EU countries.

H₄: The control of international corporations of CSR Europe affects ESG expenditures in relevant EU countries.

Regression and correlation analysis was applied for the adequate solution of Hypothesis 4, as the obtained values are depicted in Table 9.

Table 9: The relevant values for correlation of estimates

Variable	Correlation of Estimates		
	E(COFOG)	S(COFOG)	G(COFOG)
Intercept	-0.3505	-0.7788	-0.5039
Enterprises - number (FCEUEDA)	-0.4875	-0.1120	0.3520
Persons employed - number (FCEUEDA)	0.7016	-0.1227	-0.4534
Net turnover - million euro (FCEUEDA)	-0.5339	0.1396	0.4554

Source: Authors' own work.

From Table 9 are visible interesting relations and dependencies from the control of international corporations affecting ESG expenditures in relevant EU countries. These results shed light on the biggest dependency, where the dependence between indicators for Persons employed (FCEUEDA) and E(COFOG) has a value of 0.7016, which is a strong direct dependence. Through employment and employee costs, international corporations generate requirements for realized environmental expenditures (improvement of ecological conditions of stakeholders). Based on the dependences the study shows how multinational corporations rely on the ESG expectations within the relevant countries.

After summarisation of the arguments, Hypothesis 4 was confirmed: The control of international corporations of CSR Europe affects ESG expenditures in relevant EU countries.

H₅: The dependence among ESG expenditures in the relevant EU countries is the same with respect to the same objective (sustainability of businesses).

Furthermore, regression and correlation analysis were applied, and the obtained values are shown in Table 10.

Table 10: The relevant values for correlation of estimates

Correlation of estimates				
Variable	Intercept	E(COFOG)	S(COFOG)	G(COFOG)
Intercept	1.0000	-0.3462	-0.9185	-0.5862
E(COFOG)	-0.3462	1.0000	0.2073	-0.2800
S(COFOG)	-0.9185	0.2073	1.0000	0.3727
G(COFOG)	-0.5862	-0.2800	0.3727	1.0000

Source: Authors' own work.

Table 10 focuses on the most relevant impacts from statistical dependencies among ESG expenditures: The dependence between indicators the E(COFOG) and the S(COFOG) is 0.2073 a weak direct dependence: Expenditures for improving environmental conduct (new technologies, improved saving ecological practices, etc.) also require human capital costs (and vice versa). The dependence between indicators the E(COFOG) and the G(COFOG) is -0.2800 is of medium strong indirect dependence: Expenditures in the area of management (at each level) generally influence more efficient environmental behaviour, including measures visible in the reduction of expenditures in the environmental field (and vice versa). The dependence between indicators the S(COFOG) and the G(COFOG) is 0.3727 has a moderately strong direct dependence. This means that measures in the social field are in most cases also required at the level of responsible management (and vice versa), which disproved Hypothesis 5: The dependence among ESG expenditures in the relevant EU countries is the same with respect to the same objective (sustainability of businesses). Relations and dependences among ESG expenditures achieve different values with different impact although the objective - the sustainability of businesses is identical.

DISCUSSION

The results of the study indicate a significant relationship between environmental behavior and annual turnover, a finding that aligns with previous literature. For instance, Friede et al. (2015) found that companies with robust ESG practices tend to outperform their peers financially. This suggests that ESG behaviors, especially in the environmental domain, can directly enhance financial outcomes by improving operational efficiency, innovation, and risk management, which supports the study's findings. The positive correlation identified between environmental behavior and annual turnover echoes the idea that investing in sustainable environmental practices can lead to tangible financial benefits, a notion that is strongly supported in the work of Hart and Milstein (2003), who argue that environmental stewardship enhances long-term corporate value.

The use of a linear regression model in this study was primarily guided by the structure and nature of the available data, which included continuous variables

such as annual turnover and six ESG performance dimensions (e.g., corporate governance, responsible financing, environmental and social behavior). Given the objective to assess the extent to which these ESG dimensions influence financial outcomes, linear regression served as a pragmatic analytical tool to estimate direct relationships. While the environmental behavior variable showed a statistically significant and positive relationship with turnover ($\beta = 2.10211$; $p = 0.0274$), none of the other variables reached statistical significance. Additionally, the moderate Pearson correlation ($r = 0.43058$; $p = 0.0403$) reinforces the presence of a meaningful, yet partial, relationship between environmental behavior and financial performance.

The findings also reveal that not all ESG criteria are equally influential in driving financial performance. While environmental behavior showed a significant impact, social behavior and corporate governance exhibited weaker correlations with financial outcomes. This divergence may be attributable to the varied ways in which different aspects of ESG contribute to business performance. Eccles et al. (2014) highlighted that companies with strong ESG practices are better positioned to manage risks and capitalize on opportunities, but the impact of each ESG factor may depend on the specific industry or market context. This is particularly relevant to the sample of European corporations in this study, many of which operate in industries where environmental performance is heavily scrutinized by regulators and consumers, thus making it a more critical driver of financial success compared to other ESG dimensions. Moreover, the study's results underscore the importance of ESG institutionalization within corporate strategies. Companies that scored higher on the "Index of ESG Institutionalization" demonstrated better financial performance. This aligns with Aguilera et al. (2007), who emphasize that embedding ESG principles into corporate governance structures strengthens decision-making processes, ensuring long-term stability and regulatory compliance. The European Commission's Corporate Sustainability Reporting Directive (CSRD), which will soon mandate integrated ESG and financial reporting, further validates the need for such institutionalization, as companies are required to demonstrate clear accountability in their sustainability efforts.

However, despite these positive findings, the study also highlights some limitations. For example, the analysis reveals that ESG expenditures do not always yield uniform outcomes across all financial indicators, particularly when comparing macroeconomic impacts. This result parallels the concerns raised in previous literature regarding the inconsistent metrics used for assessing ESG performance (Acar & Coskun, 2023). The lack of standardized reporting frameworks can lead to discrepancies in how ESG outcomes are evaluated, making it difficult to draw definitive conclusions about their financial impact. Nevertheless, the study contributes to the growing body of research that underscores the strategic importance of ESG, especially as the global regulatory landscape continues to evolve toward greater transparency and sustainability. The paper provides robust evidence of the link between ESG practices - particularly environmental behaviors - and financial performance. It confirms existing literature on the financial benefits of sustainability while also addressing gaps, especially in the institutionalization of ESG. For companies preparing for the upcoming CSRD requirements, these insights offer valuable guidance on where to focus their ESG efforts to achieve both sustainability and financial success.

CONCLUSION

Based on the individual evaluation criteria, the analysis reveals that all values exceeding the average are attributed to the companies Enel and Iberdrola, indicating a consistently high performance across all measured dimensions. In contrast, Syensqo and Titan Cement exhibit below-average scores in all seven assessed categories, reflecting a uniform underperformance relative to the peer group.

The theoretical contribution of this study lies in its integrative analysis of Environmental, Social, and Governance (ESG) practices within major European corporations. By situating the findings within the framework of CSR Europe, the research addresses notable gaps in the literature concerning the intersection of ESG integration and financial performance at both microeconomic and macroeconomic levels. Specifically, it extends existing theoretical models by empirically

demonstrating the relationship between ESG engagement and improved financial outcomes. Furthermore, the study reinforces the strategic significance of embedding ESG principles within corporate governance and operations, thereby advancing theoretical constructs such as Corporate Social Responsibility (CSR) and institutionalized ESG frameworks (Crane et al., 2008). In doing so, it contributes to the evolving discourse on sustainability-oriented management and underscores the long-term value creation potential of ESG integration in contemporary business practices.

STUDY LIMITATIONS

The study lacks an explicit justification for model selection and does not report diagnostic tests typically required to validate regression assumptions—such as linearity, homoscedasticity, normal distribution of residuals, and multicollinearity and the absence of model fit indicators (e.g. R^2 , adjusted R^2) limits the interpretability of the findings.

From a managerial perspective, this research provides practical insights into how companies can optimize their ESG strategies to improve financial performance. The findings suggest that stronger environmental behavior correlates with increased turnover, offering a clear direction for executives to focus on ESG aspects that drive revenue growth. The study's emphasis on the need for comprehensive and standardized ESG reporting also presents actionable strategies for companies preparing for the 2025 Corporate Sustainability Reporting Directive (CSRD).

For future research, further exploration into sector-specific ESG impacts could be valuable, considering the diverse ESG integration across industries. Additionally, examining the long-term financial impacts post-2025 CSRD implementation would provide deeper insights into the evolving relationship between corporate governance and sustainability. Expanding this analysis to non-European contexts would enhance the global understanding of ESG practices.

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