

The Conceptual Link between Country Competitiveness and Corporate ESG Performance

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Abstract. *The alignment between environmental, social and governance (ESG) performance and country's competitiveness helps academics and practitioners in observing corporate contributions to sustainable growth, leveraging corporate environments focused on ESG aspects that have a macroeconomic impact, but a limited number of studies analyzes this link. Thus, the aim of this study is to propose a case study for which an original mapping is proposed. Data were collected from Refinitiv Eikon, for two companies (in the oil and gas and financial services sectors), located in Romania, for the financial year 2021, and from the Global Competitiveness Report published by the World Economic Forum in 2019, as it is the latest full report available. Interpretative analysis was applied to the proposed mapping of sustainability practices reflected through ESG indicators, in relation to various relevant components of six pillars from the global competitiveness index. Our qualitative research included the computation of a total score based on the impact of ESG performance in pursuing the country's competitiveness. Our results show that in Romania, the largest oil and gas company disclosed quantitative and qualitative information on ESG indicators and obtained a score (25) which is equal to the one obtained by the analyzed bank, the largest in Romania. The highest contribution to reaching the country's competitiveness is related to the social pillar, especially the workforce dimension, for both organizations. Thus, corporate ESG performance is mapped to six pillars out of 12 regarding country competitiveness, for entities activating in either financial or non-financial industries, with different weight allocated to each of the three ESG pillars. This research is important for various stakeholders, such as governments, business, and civil society, depending on the role within the organization, either direct or indirect.*

Keywords: ESG performance, Country competitiveness, Environment, Social, Governance.

Introduction

In 1971, the World Economic Forum (WEF) was established as a not-for-profit foundation, representing the International Organization for Public-Private Cooperation with the headquarters in Geneva, Switzerland. It engages the foremost business, political, cultural, and other leaders of society to shape worldwide and industry agendas.¹ WEF publishes the *Global Competitiveness Reports* in which the global competitiveness index (GCI) is computed, the latest full report being published in 2019 and analyzing 141 economies, which account for 99% of the world's global

¹ <https://www.weforum.org/about/world-economic-forum>

domestic product. The GCI is a measure of national competitiveness, and it represents the aggregation of 103 individual indicators that are obtained through a combination of data from several international organizations, as well as from the World Economic Forum's Executive Opinion Survey. These indicators are grouped into 12 pillars, as follows: institutions, infrastructure, information and communication technologies (ICT) adoption, macroeconomic stability, health, skills, product market, labor market, financial system, market size, business dynamism and innovation capability.

Environmental, social and governance (ESG) goals create value for all stakeholders and sustainable management practices, if they are clearly defined and communicated within organizations and society, balancing the desirable with the feasible. At the WEF annual meeting held in Davos during 16 and 20 January 2023,² among various topics, it was discussed that ESG: (1) is a leadership issue; (2) is a standing high-priority topic for the supervisory boards; (3) should go beyond "E" and not solely focus on environmental targets; (4) there is no use if only top management knows about ESG goals; (5) can become a power booster in the hiring process.

Our research is motivated by a limited number of studies that analyze the association between corporate ESG performance and the country's competitiveness, as well as the contribution of the company's ESG indicators to its sustainable growth (Dragomir et al., 2022). The research objective is achieved through the results obtained from a case study of two entities, one from the oil and gas sector, and the other from financial services, and our own proposed mapping between ESG indicators and components of six pillars of GCI.

The structure of this study is as follows. A brief review of the literature supports the research objective. The methodology is presented, including the data source and the applied research method. The results and discussions contain aspects for each of the two entities selected for the case study, with respect to each pillar of GCI mapped to ESG indicators. The method includes a comparison based on the score computed by taking into consideration the original mapping. Finally, the last section presents the conclusions.

Literature review

Petrylè (2017) examined the relationship between the GCI and the economic growth, measured through the gross domestic product (GDP) growth, of 27 European Union countries, plus Norway, Switzerland, Iceland, the United States and the Russian Federation, over 2006-2015 and found a weak or no relationship. However, a negative relationship was obtained between the GCI and the standard deviation of GDP's growth of the country. This means that even though the GCI is not capable of forecasting GDP growth, GCI may indicate if the country avoids significant variances in its GDP growth rates and if it maintains the sustainable economic growth over time.

Rusu and Roman (2018), on a sample of ten countries (Bulgaria, Czech Republic, Estonia, Hungary, Lithuania, Latvia, Poland, Romania, Slovenia and Slovakia), for the period 2004-2016, found significant differences between the countries, even though all are considered part of Emerging Europe, when analyzing the main economic factors that influence the competitiveness of Central and Eastern European (CEE) region, the latter being measured through GCI. In addition, for efficiency-driven countries, factors such as GDP, inflation rate, trade, labor productivity and costs represent significant determinants of competitiveness, while for innovation-driven countries the determinants of competitiveness are represented by GDP, inflation rate, tax rate, trade and costs.

² <https://www.weforum.org/agenda/2023/01/esg-business-strategy-north-star-davos23/>

Benítez-Márquez et al. (2022) proposed an alternative competitiveness index to the one computed by the World Economic Forum, which does not include any valuation from opinion surveys given to entrepreneurs and executives, encompassing only quantitative indicators. The results obtained on 79 countries for which data was available for 2007–2008, respectively for 2010–2011 periods, reflected that the composition of the lower quintile for the two time periods is very similar and over 50% of the countries included in this quintile are from Africa. Similarly, all the countries classified in the upper quintile for the 2007–2008 period, except for Israel, remain in the same quintile for the 2010–2011 period. Moreover, the authors found that the most competitive countries include the United States of America, China, Taiwan, and Singapore, as well as other countries located in Central and Northern Europe, such as Germany, Austria, Denmark, Finland, France, Holland, Norway, United Kingdom, Sweden, and Switzerland.

The relationship between environmental, social and financial performance in the banking sector was analyzed by Bătae et al. (2021) in a study that comprised 39 European financial institutions, for the period 2010 – 2019. The results show a positive relationship between emission reductions and financial performance, while corporate governance quality has a negative contribution to accounting performance and market valuation. Moreover, Bătae et al. (2021) noted that the prediction of stakeholder theory regarding the positive relationship between social responsibility and financial performance was rejected. In a study on 108 European banks, for 2018, Bătae et al. (2020) did not observe any significant differences in the environmental and social pillar scores when comparing countries located in Developed Europe to the ones part of Emerging Europe, while the governance pillar score is significantly higher in Developed Europe.

Even though there are studies analyzing GCI and ESG pillars separately (Danila et al., 2022), to the best of our knowledge, there is no research that focuses on the association between GCI and indicators that measure corporate ESG performance.

Methodology

This study is based mainly on data collected from Refinitiv Eikon (formerly Thomson Reuters). The reason for choosing this database is related to its use by many researchers, being one of the most comprehensive ESG databases available for all industries (Radu & Dragomir, 2022). Refinitiv Eikon includes 186 comparable measures of ESG scoring, with more than 630 data points, ratios and analytics, which are grouped in ten categories associated with three pillars. Resource use, emissions and innovation are linked to the environmental pillar, while workforce, human rights, community and product responsibility are included in the social pillar. Management, shareholders and CSR strategy are related to the governance pillar (Refinitiv, 2022). Data from Refinitiv was mapped against the latest available full Global Competitiveness Report issued in 2019 by the World Economic Forum (WEF), which covers 141 economies. Such data refer to the scores registered by different components of the pillars which form the Global Competitiveness Index (GCI).

In order to ensure that sufficient data are available, we considered in our sample the Romanian companies that have detailed ESG information available in Refinitiv. The financial year 2021 was the most recent year for which such information was disclosed. Thus, in the case of Romania, only two entities were selected, the largest listed companies on the Bucharest Stock Exchange. These are OMV Petrom SA, an oil and gas company, respectively, Banca Transilvania SA, the largest financial institution. However, GCI data for Romania is related to 2019, as it represents the year in which the latest available full report published by WEF is available.

To assess the contribution of ESG performance to the country's competitiveness, the qualitative research method was designed using interpretive analysis of the data reported in

Refinitiv. Thus, such an interpretive analysis was applied to our own mapping of sustainability practices reflected through each ESG indicator, in relation to six pillars of the GCI, such as pillar 1 (institutions), pillar 2 (infrastructure), pillar 5 (health), pillar 6 (skills), pillar 8 (labor market), and pillar 12 (innovation capability).

Our qualitative research method includes various steps such as: the identification of the pillars that are relevant to organizations (not only at the macroeconomic level), determining relevant components of the pillars of a country's competitiveness, identifying the scores of such components as reported by WEF, mapping these components to different ESG indicators, by considering the descriptive data included in Refinitiv. Our results used in the mapping process are linked to six out of twelve GCI pillars, as mentioned above. For the components of GCI that could be mapped to different ESG indicators, we assigned the score that represented the number of such indicators that we were able to correlate. Finally, a total score was calculated for each entity to assess the sustainability impact in pursuing the country's competitiveness.

Results and discussions

Our main results are highlighted for both organizations that are part of the case study, for the applicable GCI pillars that were mapped to ESG indicators.

Pillar 1 (institutions) includes security, social capital, checks and balances, public-sector performance, transparency, property rights, corporate governance and future orientation of government, each being represented by various components.

Linked to corruption (1.13), perceptions of corruption in the public sector are measured by the corruption perceptions index, which ranges between 0 (highly corrupt) and 100 (very clean) and aggregates data from multiple sources that include perceptions of country experts and businesspeople. In 2021, the corruption perception index in Romania was 45, while in 2019 it was 47, which suggests that the perception of corruption is quite high.³ OMV Petrom discloses that it achieves the sustainable development goal 16 (peace and justice strong institutions) through its implemented zero-tolerance policy for bribery, fraud, theft and various other types of corruption. Core policies, such as the code of conduct and code of business ethics, help the company to ensure that an ethical behavior is in place, leading to a good reputation which supports the processes of building and maintaining the trust of business partners, customers and stakeholders. In terms of whistleblowing, OMV Petrom has a designated platform, which is available via the internet and is operated by an independent third party, ensuring appropriate levels of confidentiality and anonymity. Also, the company has in place a compliance management system, for which reasonable assurance was obtained through an audit exercise that tested the design, implementation, appropriateness and effectiveness of this system, in line with international standard IDW PS 980. This system contains instructions, internal rules, processes and controls that have the objective to prevent, detect and monitor potential deviations from business ethics. Awareness on ethical values and principles towards employees is ensured through training on antitrust and business ethics.

The strength of auditing and accounting standards (1.17) stores information on how strong financial auditing and reporting standards in Romania are. This indicator ranges between 1 (extremely weak) and 7 (extremely strong), the value recorded for Romania being 4.8. OMV Petrom has an audit committee composed of five independent members, and it has different responsibilities on financial reporting, external audit, internal audit, internal controls and risk

³ <https://www.transparency.org/en/countries/romania>

management, compliance, conduct and conflicts of interest. This committee meets on a regular basis, at least three times per year, and on an extraordinary basis if required.

Regarding conflict-of-interest regulation (1.18), GCI uses an index that measures the protection of shareholders against directors' misuse of corporate assets for personal gain, with values in the interval 0-10 (best), Romania registering 6. The conflict-of-interest index assesses three dimensions of applicable regulation: transparency of related-party transactions, shareholders' ability to sue and hold directors liable for self-dealing, and access to evidence and allocation of legal expenses in shareholder litigation. OMV Petrom discloses information on the internal audit department which reports to the audit committee on various topics, including internal audit, compliance, conduct and conflicts of interest.

Linked to shareholder governance (1.19), the index measures shareholders' rights in corporate governance, with values between 0 and 10 (best), Romania being evaluated at 6. Three dimensions of governance are assessed: shareholders' rights and role in major corporate decisions, governance safeguards protecting shareholders from undue board control and entrenchment, and corporate transparency on ownership stakes, compensation, audits and financial prospects. OMV Petrom has in place the equal voting right policy, observing the one share, one vote and one dividend principle. Also, it is disclosed that the shareholders of the company, regardless of their participation held in the share capital, may ask questions either in writing or verbally regarding the topics from the general shareholders meeting minute. Thus, the shareholder engagement policy may be applicable.

In relation to energy efficiency regulation (1.24), the score ranges from 0 (not conducive) to 100 (very conducive), Romania's value being 85.4, and is based on twelve indicators, including national energy efficiency planning, information provided to consumers about electricity usage etc. OMV Petrom has a policy which governs energy efficiency. An example is represented by the corporate initiatives included the replacing of the classic lighting with LED technology in Petrom City, in order to save energy.

In terms of the renewable energy regulation (1.25), this criterion assesses a country's policies to promote renewable energies, ranging between 0 and 100 (best), in case of Romania being 68.3, which is based on a country's performance regarding seven indicators: legal framework for renewable energy, planning for renewable energy expansion, incentives and regulatory support for renewable energy, attributes of financial and regulatory incentives. In terms of renewable energy use, no information reported was noted for OMV Petrom.

Pillar 2 (infrastructure) comprises transport infrastructure and utility infrastructure. On the exposure to unsafe drinking water (2.11), which considers the extent of exposure by risk level and the severity of that risk's contribution to disease burden, Romania registered a value of 8.5%, which is significantly low. OMV Petrom measures the water discharged, in 2021 being 10,015 megaliters, being represented mainly by surface water (9,110 megaliters). Regarding the reliability of water supply (2.12), Romania recorded a value of 5.2, the range being 1 to 7 (best). Approximately 80% of the priority sites operated by OMV Petrom completed water management plans, while for the remaining ones, such plans are in progress. The key goals in respect to water management are to reduce water consumption, utilize water in an efficient manner and treat wastewater appropriately, in line with the water efficiency policy and defined targets on water efficiency.

Pillar 5 (health) includes healthy life expectancy which is computed as the number of years that a newborn can expect to live in good health, considering estimates on mortality and disability. On healthy life expectancy component (5.01), Romania records a score of 77.2, which is quite high. OMV Petrom discloses that it has in place policies on employee health and safety, follows

standards such as OHSAS 18001 and trains employees in health and safety matters. The company pursued to consolidate the safety culture program at operational sites through different activities, such as: quarterly local safety committees and working groups formed by local employees assigned to improve safety topics, such as slips, falls, work permits, pressure tests etc. Also, in terms of the tone from the top, employees are encouraged to bring to management's attention any unsafe conditions and behaviors. Monitoring is in place, and an example is the third-party risk assessment performed on health, safety, security and environment areas. Good safety behavior is acknowledged within the company through the *Report of the month*. Also, quantitative information is disclosed in terms of health and safety training, 208 employees completing the first aid basic training and approximately 290 employees receiving refresher training, containing both safety alerts and lessons learned sessions. Moreover, in terms of ISO 45001, the certification covers 49% of the company's employees in all OMV Petrom business divisions.

Pillar 6 (skills) is represented by skills of the current and future workforce. The education of the current workforce is measured through the average period of schooling, and skills are measured through different indicators, such as training and its quality, skillset of graduates, existence of digital skills as well as the ease of finding skilled employees.

Concerning the extent of staff training (6.02), the value recorded by Romania is 3.7, considering the range 1 to 7 (best), which suggests that the investment in training and employee development is moderate. OMV Petrom discloses information on policies regarding skills training and career development. There are different programs available, such as *First-time leaders 2.0* designed to build leadership skills, *Leadership essentials* meant to support managers in acquiring people management skills, *Leading remote/hybrid teams* which helps in upskilling current leaders on adapting to various challenges, digital tools, and coaching roles, and *Digital skills for leaders* which helps managers in succeeding in uncertain environments. Also, OMV Petrom offers a three-year professional development plan to its employees, including mentoring, innovative projects, mixt learning methodologies through team interaction, direct professional experience and special training programs. Moreover, corporate contributions to the SDG 4 (quality education) is operationalized through multiple initiatives addressing education, environment and vulnerable people. Appropriate monitoring actions are applied by the company, and awareness is raised through a total number of 110,887 hours of training.

Pillar 8 (labor market) corresponds to flexibility, meritocracy and incentivization. In respect of hiring and firing practices (8.02), the value observed for Romania is 4.4, on a range 1 to 7 (best). Quantitative information is disclosed by OMV Petrom regarding new employees hired, which are categorized by age group (<30, 30-50 and >50) and gender. In Romania, at the level of the OMV Petrom group, there were 139 new employees hired in 2021, mainly between the age of 30 and 50 (74), followed by the ones younger than 30 years (59). In terms of employee turnover, a total of 2580 employees left the company, mainly from the group that includes persons over 50 years (1728).

On the cooperation in labor-employee relations (8.03), the value recorded by Romania is 4.3, on a scale of 1 (generally confrontational) to 7 (generally cooperative). OMV Petrom only discloses qualitative information on the flexi-desk program, which provides more flexibility and ensures a higher utilization of office space. No quantitative information reported was noted.

Relative to workers' rights (8.06), the index for Romania is 73, considering the range 0 to 100 (high protection), and measures the level of protection of internationally recognized core labor standards. Dimensions of labor protection include civil rights, the right to bargain collectively, the right to strike, the right to associate freely, and access to due process rights. OMV Petrom discloses

that it values the employer-union relationship, which is essential in maintaining the company’s social equilibrium, and continues the dialogues with trade unions to find common approaches to new challenges that the business environment and employees are facing. All employees were subject to a collective labor agreement, while 87.39% were represented by the company's local trade unions.

On the reliance on professional management (8.09), Romania scores 3.9, within the range of 1 to 7 (mostly professional managers chosen for merit and qualifications). Training programs are in place for management, as OMV Petrom discloses key programs, such as *Leadership Essentials* or *Digital skills for leaders*.

Regarding the ratio of wage equality gap and salaried female workers to male workers (8.11), Romania’s score is 70.7, which is quite high. OMV Petrom has 27.08% women employees and women managers represent 30.6% of total managers. In terms of new employees, 29.88% are represented by women. OMV Petrom discloses that it is on course to reach its 30% target for 2025, with a proportion of women employees of 27.08%, having established its group diversity, equity and inclusion strategic direction, with a focus on gender and internationality.

Pillar 12 (innovation capability) is linked to diversity and collaboration, research and development and commercialization. On diversity of workforce (12.01), Romania scores 70.9, on a scale of 1 to 100. Concerning research and development expenditures (12.07), the score of Romania is significantly low, 16.1, considering the interval 0-100. OMV Petrom assumes the responsibility of providing high-quality and safe products. Actions are taken in respect of reducing the environmental impact during the product life cycle, by using technologically advanced solutions, while complying with international requirements and performing risk assessments for all products or hazardous substances contained in products. Also, one of the objectives is to continue to minimize the potential chemical hazards and associated risks to products included in the portfolio.

Table 1. Score of the link between Romania’s competitiveness and ESG for OMV Petrom SA

Pillar	Component	ESG Pillars	ESG Indicators	Score
1	1.13	CSR Strategy (G)	SDG 16 - Peace and justice strong institutions	1
	1.17	Management (G)	Audit Board Committee Audit Committee mgt independence	2
	1.18	Management (G)	Internal audit department reporting	1
	1.19	Shareholders (G)	Policy equal voting right Policy shareholder engagement	2
	1.24	Resource use (E)	Policy energy efficiency	1
	1.25	Resource use (E)	Renewable energy use	0
2	2.11	Emissions (E)	Water discharged	1
	2.12	Resource use (E)	Policy water efficiency	1
5	5.01	Workforce (S)	Policy employee health and safety Health and safety training Employees health and safety OHSAS 18001	3

Pillar	Component	ESG Pillars	ESG Indicators	Score
6	6.02	Workforce (S)	Policy skills training Policy career development SDG 4 Quality education Training hours total	4
8	8.02	Workforce (S)	Turnover of employees	1
	8.03	Workforce (S)	Flexible working hours	0
	8.06	Workforce (S)	Trade Union Representation	1
	8.09	Workforce (S)	Management training	1
	8.11	Workforce (S)	Women employees New women employees Women managers	3
12	12.01	Workforce (S)	Policy diversity and opportunity Targets diversity and opportunity	2
	12.07	Innovation (E)	Environmental products	1
Total				25

Source: Authors' own research.

Banca Transilvania (BT) is the largest banking institution in Romania by assets and market share. Therefore, it contributes to the competitiveness of Romania, on multiple aspects. On the matter of tackling corruption (1.13), BT discloses that it achieves SDG 16 (peace and justice strong institutions) and maps it to Global Reporting Initiatives (GRI) Standards: 102-16 *Values, principles, standards, and norms of behavior*, 102-17 *Mechanisms for advice and concerns about ethics*, 102-25 *Conflicts of interest*, 205-2 *Communication and training about anti-corruption policies and procedures*, 205-3 *Confirmed incidents of corruption and actions taken*, 206-1 *Legal actions for anti-competitive behavior, antitrust, and monopoly practices*, and 415-1 *Political Public policy contributions*. Also, a total of 6,604 employees were trained on anti-corruption policies and procedures, while there were no confirmed incidents of corruption which would lead to dismissal or disciplinary actions against employees, termination or suspension of collaboration with business partners or legal actions against group companies or employees alleging corruption.

Regarding the strength of auditing and accounting standards (1.17), BT has an audit committee composed of three independent members, and it has different responsibilities on financial statements, internal control, internal audit, external audit and reporting. This committee meets any time it is necessary.

Regarding the conflict-of-interest regulations and policies (1.18), BT discloses information on the internal audit department which reports directly its findings and proposals for significant improvement of internal controls to the audit committee and the management.

Linked to shareholder governance (1.19), BT has in place the equal voting rights policy. Thus, the right to vote of any shareholder is based on the one share-one vote principle. Also, it is disclosed that the bank has in place processes which support facilitating shareholders to ask a question to the board of management. This is done through the Board of Directors meetings that

are held at least monthly or any time it is considered necessary. The decisions of the Board of Directors shall be taken with an absolute majority vote of the present members, and with a quorum of at least half of the total number of directors. Each such decision must be written in a minute to be signed by the Chairman and the members of the Board of Directors.

In relation to energy efficiency regulation (1.24), BT has a policy which governs energy efficiency and continuously implements measures that contribute to reducing energy consumption, in line with the bank's environmental policy. During 2021, 137,183.51 gigajoules were used by the bank. Moreover, BT has a financing portfolio of BREEAM⁴-certified real estate projects with an outstanding balance of RON 358 million. In addition, the bank is an official partner of the European Energy Efficiency Fund in Romania, granting 161 loans worth RON 436 million at the start of the collaboration, with a balance at RON 31 million as of December 2020.

In terms of the renewable energy regulation (1.25), starting with 2021 the bank contracted renewable electricity supply for some of the administrative offices and agencies. Thus, 87% of BT's electricity consumption came from renewable sources, which is a significant percentage. In addition, 59% of the value of loans granted to electricity production companies represented financing for renewable energy projects.

On the exposure to unsafe drinking water (2.11), BT measures the water discharged, 49,000 cubic meters in 2021. Regarding the reliability of water supply (2.12) in daily activities, the bank uses water only for sanitary purposes, in washrooms and kitchens, and, in order to reduce the water consumption, BT upgraded its facilities, installing sensor taps in the toilets for both employees and customers.

Concerning the healthy life expectancy component (5.01), BT discloses that it has in place policies on employee health and safety, follows standards such as OHSAS 18001 and trains employees in health and safety matters. The Physical Security Directorate is responsible for occupational health, safety (OHS) and emergency situations (ES) rules. OHS and ES activities are coordinated by the Deputy General Manager CRO (Chief Risk Officer) through the Occupational Health and Safety and Emergency Situations Prevention and Protection Service. At the branch level, a person designated with prevention and protection (OHS) and emergency training/coordination on the OHS and ES line is assigned. Reporting lines are defined and communicated appropriately to employees, including an Occupational Health and Safety Committee which meets quarterly or whenever necessary. Thus, the bank has an operational health and safety management system implemented, in line with the provisions of laws and regulations in force. The employees completed a total of 14,186 training hours on occupational health and safety topics.

Regarding the extent of staff training (6.02), BT disclosed the total number of training hours (339,420). Professional development is encouraged by the bank through both internal and external learning programs, in line with trends in the banking sector, as well as best practices. In order to ensure transparency and predictability in promotion and career development opportunities, BT implemented the *BT Career Plan*, from which 701 employees benefited. In addition, in 2021 the bank granted 166 loans in the amount of RON 18.76 million to companies that activate in education and training activities.

In respect of human resource management (8.02), in 2021, BT Group has 11,314 employees, out of which 9,940 are located in Romania and the remaining 1,374 in Moldova. Most employees are on a permanent contract (10,006). In Romania, a total of 1,425 employees were

⁴ <https://bregroup.com/products/breem/>

newly hired in 2021, out of which 912 are younger than 30 years, 460 employees are between the age of 30 and 50, and 53 are included in the category older than 50 years. The total turnover rate in Romania is 12.95%, which is low.

Regarding the cooperation in labor-employee relations (8.03), very limited information is disclosed by BT in terms of flexible working hours. Such a program is applied for both full-time and part-time employees, but no other quantitative information was reported.

Relative to workers' rights (8.06), any employee with a permanent employment contract may apply for a representative role, and in 2021 a total number of 9,915 employees were covered by the collective labor agreement, representing a percentage of 99.75%. The organization discusses with employee representatives before making any reorganization/restructuring decisions which can affect more than 2% of employees, at least 60 days before implementation. Also, the trade union is in place at Victoriabank (a subsidiary), whose role is to support the rights of employees, by collaborating with management and being involved in various corporate activities.

Discussing the reliance on professional management (8.09), various trainings are available for all employees, including management positions. For example, BT disclosed that seven members of the board of directors, 22 executive directors, 106 department managers and 98 regional branch directors were trained on anti-corruption policies and procedures, both online and on-site.

Regarding the ratio of wage equality gap and salaried female workers to male workers (8.11), BT highlighted that 84.44% of total employees are women, while 71.92% are new female employees and 61.16% are female managers.

On the diversity of workforce (12.01), BT aims to have a fair and equitable work environment, characterized by diversity, inclusion, and equal opportunities. Within the BT Group, the gender equality policy is in place. Diversity is part of the 'People' pillar, one of the three main pillars of BT's sustainable development strategy. The implementation of a diversity and equal opportunities awareness program is performed through campaigns and training sessions. However, no information on targets or opportunities was reported.

Concerning research and development expenditures (12.07), as of 2017 the bank had been in partnership with the European Bank for Reconstruction and Development to provide green loans to private individuals, for the purchase of energy-efficient residential properties or goods. BT was one of the first banks to join the *Green Economy Financing Facility* program, granting loans amounting to RON 40 million, most of them being used to purchase residential properties (RON 37.7 million). Also, such facilities also had commercial discounts in terms of interest and fees. In addition, the financing portfolio of BREEAM-certified real estate projects includes an outstanding balance of RON 358 million. Other positive environmental financing initiatives are sustained by BT, such as waste collection, recycling and management. BT subsidiaries support the sustainable strategy at the level of the group. In 2021, BT Leasing financed one out of four electric or hybrid cars in Romania.

Table 2. Score of the link between Romania's competitiveness and ESG for Banca Transilvania

Pillar	Component	ESG Pillars	ESG Indicators	Score
1	1.13	CSR Strategy (G)	SDG 16 - Peace and justice strong institutions	1
	1.17	Management (G)	Audit Board Committee existence Audit Committee independence	2
	1.18	Management (G)	Internal audit department reporting	1

Pillar	Component	ESG Pillars	ESG Indicators	Score
	1.19	Shareholders (G)	Policy equal voting right Policy shareholder engagement	2
	1.24	Resource use (E)	Policy energy efficiency	1
	1.25	Resource use (E)	Renewable energy use	1
2	2.11	Emissions (E)	Water discharged	1
	2.12	Resource use (E)	Policy water efficiency	1
5	5.01	Workforce (S)	Policy employee health and safety Health and safety training Employees health and safety OHSAS 18001	3
6	6.02	Workforce (S)	Policy skills training Policy career development SDG 4 Quality education Training hours total	4
8	8.02	Workforce (S)	Turnover of employees	1
	8.03	Workforce (S)	Flexible working hours	0
	8.06	Workforce (S)	Trade Union Representation	1
	8.09	Workforce (S)	Management training	1
	8.11	Workforce (S)	Women employees New women employees Women managers	3
12	12.01	Workforce (S)	Policy diversity and opportunity Targets diversity and opportunity	1
	12.07	Innovation (E)	Environmental products	1
Total				25

Source: Authors' own research.

The results show a total score of 25 for both OMV Petrom and BT. Also, in the case of OMV Petrom, the information was analyzed for six pillars out of 12, and in case of pillar 1 and pillar 8, no information was reported on two corresponding ESG indicators. The results are similar for BT, the difference being the fact that, in case of pillar 8 and pillar 12, no information was reported on two mapped ESG indicators, as observed in table 2.

Our findings highlight the fact that, in the case of OMV Petrom, the social pillar contributes the most to the country's competitiveness, in a percentage of 60%, followed by the governance pillar (24%) and the environmental pillar (16%). At a more disaggregated level, in the case of the social pillar, the score is allocated only to the workforce dimension (15). For the environmental pillar, information on resource use had the highest score (2), followed by emissions (1) and innovation (1). The governance pillar also contributed to the achievement of the country's

competitiveness ranking, where the management dimension obtained a score of 3, followed by shareholders (2) and CSR strategy (1) dimensions.

Similarly, for Banca Transilvania, our results show that the social pillar contributes the most to the country's competitiveness, in percentage of 56%, followed by the governance pillar (24%) and the environmental pillar (20%). At a more disaggregated level, in the case of the social pillar, the score is recorded only by the workforce dimension (14). For the environmental pillar, resource use had the highest score (3), followed by emissions (1) and innovation (1). The governance pillar also contributed to the achievement of the country's competitiveness, where the management dimension obtained a score of 3, followed by shareholders (2) and CSR strategy (1) dimensions. In terms of reporting and contribution to country competitiveness, the two companies, from very different industries, have a relatively similar profile. This is mainly due to their size and market share in the Romanian economy.

Conclusion

Our results show that, in Romania, the largest oil and gas company disclosed information on ESG indicators and obtained a score of 25, which is equal to the one obtained by the analyzed bank. The highest contribution towards the achievement of the country's competitiveness pertains to the social pillar, more specifically to the workforce dimension. These results apply also to the bank workforce dimension. Thus, corporate ESG performance is linked to the country's competitiveness, for entities activating in either financial or non-financial industries, with similar priority allocated to the social pillar.

Our research is relevant to different stakeholders, as it provides theoretical and practical implications. The reporting attitudes of managers can be adjusted once they understand the link between corporate ESG performance and the country's competitiveness on different pillars. Banks and other financing institutions may take into account the contribution of a company towards a country's competitiveness, before granting loans or when a more favorable interest may be offered to those companies that contribute more to the country's competitiveness. Shareholders are better informed through the integrated reporting framework, allowing them to make more timely investment decisions on investments that are more sustainable. Lastly, regulators are focused on maximizing social welfare, and may have a less interventionist approach regarding those companies that support the country's competitiveness.

This study has some limitations. First, the sample includes only two companies from Romania because sufficient data was available in Refinitiv only for OMV Petrom SA and Banca Transilvania for the financial year 2021. As such, we presumed that the data is more accurate than self-collected information because Refinitiv Eikon is subject to quality audits performed by database administrators. However, in some cases, we performed detailed interpretative analysis by reviewing the original reports published by the organizations. Also, another limitation refers to the availability of the Global Competitiveness Report, as the latest full version was published in 2019 by WEF. Finally, the sample included only two sectors, oil and gas and financial services, which might not be directly comparable.

Future analyses can focus on more than two industries to observe which contributes the most to the increase of the country's competitiveness. The results can generate different measures that support relevant investment projects. Furthermore, future research may consider the period after 2021, once the data are available, to compare the impact of the latest uncontrollable factors, such as war and inflation, on the achievement of the country's competitiveness. Different countries

may be included in order to reach a global sample, extending the present case study that was applied only to Romania.

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