

CZU

<https://doi.org/10.52507/2345-1106.2026-1.37>

ESG PROFILE OF THE REPUBLIC OF MOLDOVA IN THE EUROPEAN REGIONAL CONTEXT*

TIMOFEI Olga,

PhD in Economics, Coordinating Scientific Researcher,
National Institute for Economic Research,
Academy of Economic Studies of Moldova
<https://orcid.org/0000-0002-2201-9496>

SUMMARY

The integration of ESG criteria into economic and regulatory decision-making represents one of the most significant transformations of the European business environment over the past decade, with direct implications for EU candidate countries. The Republic of Moldova, engaged in an active process of alignment with the EU acquis, faces a pronounced structural gap between European normative requirements and the actual capacity to implement ESG reporting at national level.

The paper presents a comparative quantitative analysis of the ESG profile of the Republic of Moldova in relation to Romania, Poland and Ukraine, based on a panel of 32 indicators from the World Bank Sovereign ESG Data Profile database, for the period 2010 - 2024. The results highlight a gap between environmental indicators and the country's real

* Articolul a fost elaborat în cadrul Subprogramului 030101 „Fortificarea rezilienței, competitivității și durabilității economiei Republicii Moldova în contextul procesului de aderare la Uniunea Europeană”, finanțare instituțională.

development: low carbon emissions reflect not a genuine green transition, but industrial underdevelopment; deep social gaps are masked by mass emigration of the workforce, which artificially reduces internal social pressure; and the state's reduced capacity to govern effectively records a gradual improvement after 2016, under the impetus of the European integration process. The correlation analysis confirms that institutional governance simultaneously conditions environmental and social performance, imposing an integrated reform approach on the three ESG pillars.

Key words: ESG, panel data, Republic of Moldova, institutional governance, CSRD, energy transition, comparative analysis, Eastern Europe, sustainable development

PROFILUL ESG AL REPUBLICII MOLDOVA ÎN CONTEXT REGIONAL EUROPEAN

TIMOFEI Olga,

Doctor în economie, cercetător științific coordonator,
Institutul Național de Cercetări Economice,
Academia de Studii Economice din Moldova
<https://orcid.org/0000-0002-2201-9496>

REZUMAT

Integrarea criteriilor ESG în procesele decizionale economice și de reglementare reprezintă una dintre cele mai semnificative transformări ale mediului de afaceri european din ultimul deceniu, cu implicații directe pentru țările candidate la Uniunea Europeană. Republica Moldova, aflată în plin proces de aliniere la acquis-ul comunitar, se confruntă cu un decalaj structural pronunțat între cerințele normative europene și capacitatea reală de implementare a raportării ESG la nivel național.

În lucrare a fost realizată o analiză cantitativă comparativă a profilului ESG al Republicii Moldova în raport cu România, Polonia și Ucraina, pe baza unui panel de 32 de indicatori din baza de date World Bank Sovereign ESG Data Profile, pentru perioada 2010 - 2024. Rezultatele evidențiază un decalaj între indicatorii de mediu și dezvoltarea reală a țării: emisiile carbonice reduse reflectă nu o tranziție verde autentică, ci subdezvoltarea industrială; decalajele sociale profunde sunt mascate de emigrarea în masă a forței de muncă, care reduce artificial presiunea socială internă; iar capacitatea redusă a statului de a guverna eficient înregistrează o îmbunătățire treptată după 2016, sub impulsul procesului de integrare europeană. Analiza de corelații confirmă că guvernanta instituțională condiționează simultan performanța de mediu și cea socială, impunând o abordare de reformă integrată pe cei trei piloni ESG.

Cuvinte-cheie: ESG, panel de date, Republica Moldova, guvernanta instituțională, CSRD, tranziție energetică, analiză comparativă, Europa de Est, dezvoltare durabilă.

Introduction. The integration of Environmental, Social, and Governance (ESG) criteria into the European regulatory framework has fundamentally transformed the conditions for access to capital and competitiveness for companies in the EU and, through the conditioning effect of accession processes, for candidate economies such as the Republic of Moldova. While standards such as the Global Reporting Initiative were purely voluntary in the late 1990s, today the Corporate Sustainability Reporting Directive (CSRD) imposes standardized and externally verified reporting obligations on approximately 50000 companies, a regulatory transformation with direct implications for countries aspiring to European integration [11].

The Republic of Moldova, being a country in transition that is currently in a perspective of accession to the European Union, cannot ignore these developments. Because the implementation of these practices accelerates the attraction of quality foreign investments, allows a transition to a more efficient green economy, strengthens the competitive position by complying with European standards and prevents marginalization from large capital flows oriented towards sustainability. At the same time, we must understand that the adoption of a regulatory framework does not guarantee the real capacity to apply it, especially in an economy dominated by microenterprises and SMEs (99.2%) [3], which have limited financial, institutional and expertise resources.

The Moldovan government and its institutions (notably the National Bank of Moldova (NBM) and the Ministry of Economic Development and Digitalization) have already launched significant legislative and strategic initiatives. The Roadmap for Sustainable Finance 2024-2028, launched by the NBM in June 2024, explicitly sets out the development and adoption of a national taxonomy for sustainable finance based on the EU taxonomy of environmentally sustainable economic activities, the adoption of guidelines on reporting and publishing ESG/sustainability information in line with international best practices and standards, and the integration of the identification and management of environmental (including climate) and social risks into the prudential supervision system of financial sector entities [2].

In February 2026, the Ministry of Finance, together with the NBM, put out for public consultation a draft decision on the taxonomy for sustainable finance [16]. This project almost fully transposes the European regulation defining environmentally sustainable economic activities. This initiative aims to create a clear framework for green investments and align the country with European green transition standards. The step comes in the context of the Growth Plan for 2025-2027, supported by the European Union through the Reform and Growth Facility [7]. The plan supports broad economic reforms, convergence with European standards

and the green transition, linking financial assistance to the achievement of key indicators in the reform agenda. The green transition occupies an important place in this plan, alongside other priorities such as energy, economic governance and resilience. Thus, the taxonomy becomes a concrete tool that helps channel investments towards sustainable projects and contributes to the broader objectives of decarbonisation and European alignment.

However, in actual practice, ESG implementation remains predominantly fragmented and voluntary in the Republic of Moldova. Only a few companies (especially subsidiaries of multinational groups or large entities in sectors such as telecommunications, banking, retail and energy/agriculture, e.g. Moldcell, Maib, Trans-Oil and Kaufland Moldova) voluntarily publish sustainability reports in line with international standards such as Global Reporting Initiative (most widely used), European Sustainability Reporting Standards (ESRS) (incipiently) or Task Force on Climate-Related Financial Disclosures (TCFD), while most entities report only general and declarative non-financial statements, without detailed data [1].

Large public entities in the Republic of Moldova have started to integrate environmental and governance elements into their strategies and reports, especially in the context of the 2030 Agenda for Sustainable Development and the EU Growth Plan, but none fully reports according to ESRS standards [1; 8]. SMEs, which have significant potential to generate changes of scale in the economy through the green transition and ESG integration, are only in the awareness phase and face major barriers, such as lack of knowledge, limited

resources and low perception of long-term benefits [1; 24].

In the Republic of Moldova, the formal transposition of European standards may generate a disproportionate administrative burden, rather than substantial compliance, in an economic context characterized by a predominance of SMEs. Small and medium-sized companies that have a high structural potential to generate multiplier effects in the green transition and in the integration of ESG criteria remain predominantly at the early stage of awareness and face major systemic obstacles: information deficit, financial and human resource constraints, as well as a suboptimal assessment of the long-term profitability of sustainable practices. These dysfunctions require a nuanced positioning towards the adoption of European reporting standards.

The purpose of this research is to quantitatively assess the sovereign ESG profile of the Republic of Moldova in relation to Eastern European countries with comparable institutional transition profiles, identifying the structural gaps on the three pillars and the factors that condition the real capacity to implement European reporting standards. The approach starts from the premise that the effectiveness of implementation depends decisively on institutional capacity, not on the formal fidelity of legislative transpositions.

Theoretical and regulatory foundations of ESG reporting standards. The evolution of the ESG regulatory framework, from voluntary initiatives to externally verified legislative obligations, can be traced through five distinct stages, summarized in Figure 1.

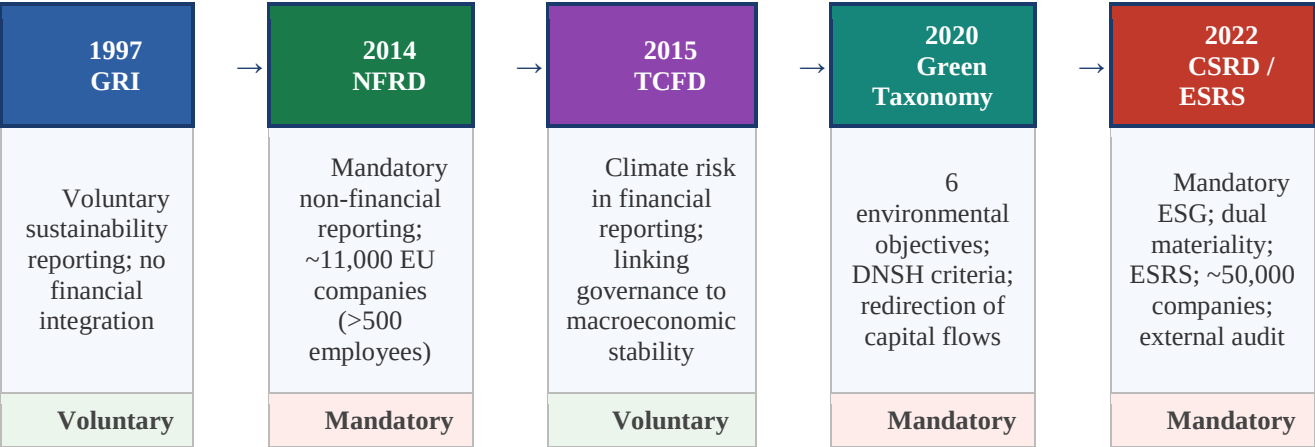


Figure 1. Evolution of ESG reporting standards, from voluntary initiatives to legislative obligations (1997–2022)

Source: developed by the author based on [4-6; 9; 10; 12]

The Global Reporting Initiative (GRI), created in 1997, represented the first attempt at voluntary harmonization of sustainability reporting, but initially, without the explicit integration of climate risks or financial aspects. The Task Force on Climate-Related Financial Disclosures (TCFD), created in 2015, introduced the reporting of climate risks with direct financial implications, making the link between corporate governance and macroeconomic stability [14].

The Non-Financial Reporting Directive (NFRD) [4] marked the first European legislative obligation for non-financial reporting, with coverage limited to approximately 11,000 large companies. The Green Taxonomy [5] added a mechanism to classify sustainable economic activities based on six environmental objectives and Do No Significant Harm (DNSH) criteria, redirecting capital flows. The CSRD [6] subsequently extended the obligations to around 50,000 companies,

introducing ESRS standards with the principle of dual materiality and mandatory external audit.

These tools are not linearly successive, but complementary: ESRS explicitly refers to GRI and TCFD, ensuring progressive compatibility, and the Green Taxonomy works integrated with the CSRD, companies

bound by the CSRD must report the percentage of activities aligned with the taxonomy criteria.

Beyond the regulatory framework, the practical understanding of ESG also requires a measurement architecture structured on three levels: the total aggregate score, the three thematic pillars and the subcategories specific to each, as illustrated in Figure 2.

ENVIRONMENTAL <i>Benchmarked by industry group</i>	SOCIAL <i>Benchmarked by industry group</i>	GOVERNANCE <i>Benchmarked by country of incorporation</i>
Resource Use Efficiency <i>Water, energy, sustainable packaging & supply chain</i>	Workforce <i>Safety, diversity, training, working conditions</i>	Management & Oversight <i>Board independence, diversity, committees, compensation</i>
Emission Reduction <i>CO₂, total waste, pollution reduction targets</i>	Human Rights <i>Fundamental human rights conventions & policies</i>	Shareholders Rights <i>Equal treatment, anti-takeover defenses</i>
Environmental Innovation <i>Green technologies, eco-products, R&D expenditures</i>	Community <i>Public health, business ethics, good citizenship</i>	CSR Strategy <i>Integration of ESG into business decision-making</i>
—	Product Responsibility <i>Product quality, data privacy, responsible marketing</i>	—
SCOR ESG TOTAL results from the 10 categories, each weighted differently depending on the sector of activity — categories with higher impact for a given sector receive a higher weight in the final calculation.		

Figure 2: ESG Framework and related categories

Source: Developed by author based on [15]

This structure of the ESG framework takes on particular relevance in the Moldovan context. Bahnaru documents that the adoption of international standards remains characteristic of a limited number of large entities and exporting companies, which suggests an uneven reporting capacity across pillars and sectors [1]. The subcategories require adaptation to local structural particularities: the predominance of agriculture and traditional industries with a high environmental footprint, the persistent challenges of financial inclusion and the significant share of the rural population give the community and environmental dimensions a distinct structural relevance compared to mature economies, where green innovation is already operationalized. At the governance level, in the context of the EU accession process, alignment with European requirements tends to become the defining subcategory, shifting the emphasis from the classic Corporate Social Responsibility (CSR) strategy approach to institutional compliance [18; 21].

The principle of dual materiality, introduced by the ESRS, captures both the company's impact on the environment and society, and the effects of sustainability factors on financial performance, fundamentally different from previous GRI approaches [17; 19]. According to Snowkap, the materiality threshold in ESG reporting is more complex and less tangible than that in traditional

financial reporting [23], and Sulkowski and Jebe identify differences in philosophy between the EU and the US as a factor that will hinder the global consolidation of ESG governance [25].

Studies on Eastern European countries such as Romania [13], Poland [20] and Ukraine [22] illustrate that ESRS/CSRD preparedness and reporting remain low among large companies, due to institutional capacity gaps, perception of ESG as an excessive administrative burden and fragmented political/economic priorities. These findings justify the inclusion of Romania, Poland and Ukraine as a reference group in the comparative analysis of this article, providing a relevant framework for assessing the position of the Republic of Moldova.

In the Republic of Moldova, the academic literature dedicated to ESG remains extremely limited. Only large entities and a few exporting companies have adopted international standards, and the Accounting Law no. 287/2017 provides minimum non-financial obligations without ESRS alignment [1]. Inter-ministerial fragmentation and limited human resources are identified as fundamental structural barriers [18; 21].

Methods and materials. The research adopts a mixed methodological approach, which involves a synthesis between the normative-qualitative analysis of the European ESG regulatory framework and a

quantitative comparative component based on panel data. While the first component allows for the institutional contextualization of the identified gaps, the second provides the empirical evidence necessary to go beyond the descriptive level and structurally test the relationships between the ESG pillars.

Quantitative data comes from the World Bank Sovereign ESG Data Profile [26], a source that integrates harmonized statistical series from recognized international systems, the International Labor Organization (ILO), the World Health Organization (WHO), the United Nations Framework Convention on Climate Change (UNFCCC), and the Worldwide Governance Indicators (WGI) — thus ensuring methodological comparability across countries and across years.

The sample includes four countries: the Republic of Moldova, Romania, Poland and Ukraine. The choice of this reference group is not arbitrary, but responds to three criteria of structural comparability: membership in the post-Soviet or post-communist space, which determines a similar institutional starting point; status as a candidate or member of the European Union, which creates convergent normative pressures; and the existence of common structural challenges in the adoption of ESG standards, documented in the specialized literature for all four countries. Poland represents the benchmark of a mature EU member state with consolidated institutional reforms; Romania illustrates the trajectory of a recent

member state with developing institutional capacity; Ukraine provides the comparison term for a candidate state facing severe external shocks; Moldova constitutes the central case study.

From approximately 180 indicators available in the World Bank's ESG profile, 32 indicators were selected by simultaneously applying three inclusion criteria - representativeness for one of the three ESG pillars, sufficient variability across countries, and temporal coverage of a minimum of 10 consecutive observations for at least three out of four countries, and four systematic exclusion criteria: constant values without analytical variation, redundant sectoral sub-components compared to synthetic per capita indicators, and series with insufficient or discontinuous temporal coverage.

The 32 indicators retained were distributed across three ESG pillars according to the World Bank's conceptual framework: Pillar E: Environment (12 indicators, including emissions, energy intensity, renewables, water and biodiversity), Pillar S: Social (9 indicators, covering health, well-being, labor market and demographics) and Pillar G: Governance (9 indicators from the WGI series supplemented with digitalization, political representation and innovation capacity), to which are added two macroeconomic control variables (GDP per capita and annual GDP growth) (see Table 1). This distribution reflects the standard architecture of sovereign ESG scores and ensures analytical balance between dimensions.

Table 1. Structure of ESG indicators used in the panel analysis (N=32)

ENVIRONMENT (E)	SOCIAL (S)	GOVERNANCE (G)
CO ₂ emissions per capita (tonnes) (co2_pc)	Life expectancy at birth (years) (life_exp)	Government effectiveness (estimate) (gov_effect)
Carbon intensity of GDP (kg CO _{2e} per 1,000 USD PPP 2021) (carbon_int)	Under-5 mortality rate (per 1,000 live births) (mort_u5)	Control of corruption (estimate) (gov_corrupt)
Electricity from renewable sources (% of total) (elec_renew)	Population using safely managed drinking water (%) (water_safe)	Rule of law (estimate) (rule_law)
Renewable energy consumption (% of total final energy consumption) (energy_ren)	Poverty headcount ratio at national poverty lines (%) (poverty_nat)	Regulatory quality (estimate) (reg_qual)
Net energy imports (% of energy use) (energy_imp)	Gini index (gini)	Voice and accountability (estimate) (voice_acc)
Energy intensity (MJ per 1,000 USD PPP 2021 GDP) (energy_int)	Labor force participation rate (% ages 15–64) (labor_part)	Political stability (estimate) (pol_stab)
Electricity from coal (% of total) (elec_coal)	Unemployment rate (%) (unemploy)	Internet users (%) (internet)
Annual freshwater withdrawals (% of internal resources) (h2o_withdraw)	Youth NEET rate (% of youth population) (neet)	Women in parliament (%) (women_parl)
Water stress level (% of available freshwater resources) (h2o_stress)	Net migration (net_migr)	Research & development expenditure (% of GDP) (rd_exp)
Air pollution — PM _{2.5} (µg/m ³) (pm25)		

Terrestrial and marine protected areas (% of total area) (prot_areas)		
Total GHG emissions (% change from 1990) (ghg_change)		
CONTROL VARIABLES		
	GDP per capita — current USD (gdp_pc)	Annual GDP growth (%) (gdp_growth)

Source: developed by the author based on [26]. Codes in parentheses represent the variables used in the dedicated econometric software.

The data were structured as an unbalanced panel (N=4, T=11–15 years per series), with a total number of valid observations between 33 and 60 per indicator, depending on data availability at the time of extraction in March 2026. Statistical processing was performed using standard econometric methods for panel data.

The quantitative analysis was carried out in three complementary stages, all carried out by the authors based on the collected data. The first stage included the calculation of descriptive statistics per indicator and per country — mean, standard deviation, minimum and maximum values — to identify the relative position of Moldova compared to the reference group and the degree of temporal variability of each series. The second stage aimed at trend analysis through graphic representations of the temporal evolution of the representative indicators on each pillar, with an emphasis on inflection points correlating with major institutional events: the signing of the Association Agreement with the EU (2014), the granting of candidate country status to the Republic of Moldova (2022) and the entry into force of the CSRD (2022). The third stage consisted of the construction of the Pearson correlation matrix between the 15 key indicators selected from the three pillars, to identify the structure of interdependencies and test the central hypothesis of the article — that institutional governance simultaneously conditions environmental and social performance.

Results and discussion. To assess the position of the Republic of Moldova in relation to European ESG standards, the present research applied a quantitative analysis on three complementary levels: comparative descriptive statistics, analysis of temporal evolution and analysis of the structure of interdependencies between indicators. The three levels of analysis complement each other, providing a more complete picture.

The empirical basis of the analysis is an unbalanced panel of 32 ESG indicators for the period 2010–2024, covering four countries with comparable institutional transition profiles: the Republic of Moldova, Romania, Poland and Ukraine. The indicators are structured on the three ESG pillars and include measures of emissions, energy efficiency and biodiversity for the environmental dimension, indicators of well-being, health and the labor market for the social dimension, and institutional

governance and digital capacity scores for the governance dimension. Of the 32 ESG indicators collected and presented in Table 1, descriptive and correlational statistical analysis is performed on a subset of 15 indicators selected based on theoretical relevance for each pillar and data coverage for all four sample countries. Full descriptive statistics are available in Annex 1.

The research results shows that the Republic of Moldova presents an ESG profile characterized by deep structural vulnerabilities, partially masked by apparently favorable indicators, and by a gradually improving institutional capacity, but insufficient for the requirements of implementing CSRD standards and the European Green Taxonomy.

The analysis of the **environmental pillar** highlights what can be called the ecological paradox of the Republic of Moldova. From the perspective of CO₂ emissions per capita, Moldova records the lowest average value in the group (3.14 t CO₂e/capita compared to 8.27 t in Poland and 5.05 t in Ukraine), which could suggest a superior environmental performance. However, Annex 1 destroys this appearance, the share of electricity from renewable sources in Moldova is only 5.9%, six times lower than in Romania (38.0%) and more than two times lower than in Poland (13.1%), and the net energy dependence reaches 83.2%, three times higher than in Romania (24.1%). The low emissions therefore reflect **the absence of industrialization, not the presence of the green transition.**

This interpretation is quantitatively confirmed by the correlation matrix (Figure 3): renewable electricity is strongly negatively correlated with GDP carbon intensity ($r = -0.89$) and energy intensity ($r = -0.73$), demonstrating that the transition to renewables simultaneously produces decarbonization and energy efficiency — benefits that Moldova is structurally deprived of. At the same time, the energy intensity of the Moldovan economy (5.36 MJ/\$ GDP at PPP compared to 2.77 in Romania) is strongly negatively correlated with all governance indicators in the panel (r between -0.62 and -0.84), suggesting that energy inefficiency and institutional weakness are structurally coupled phenomena, not coincidences (Annex 1).

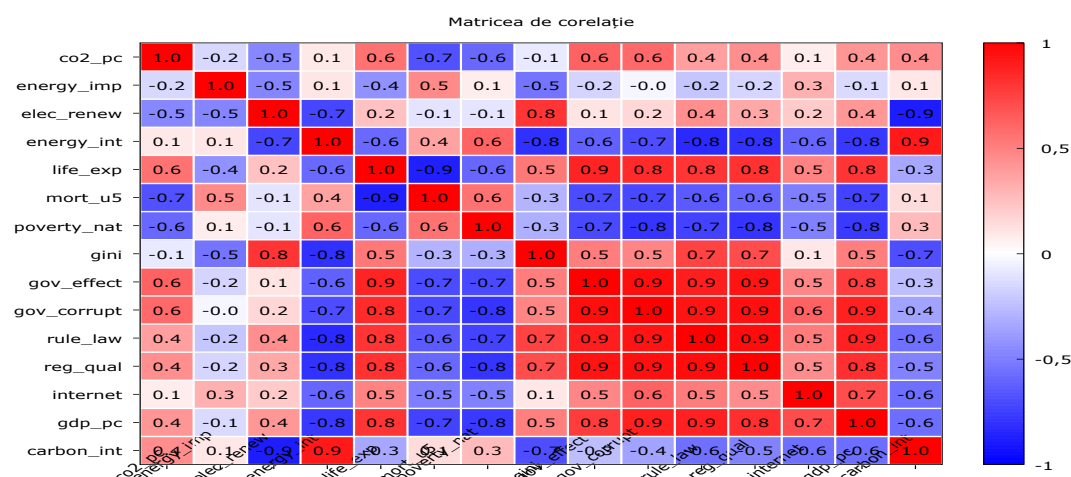


Figure 3. Matrix of correlation coefficients between selected ESG indicators — Moldova, Romania, Poland and Ukraine panel (2010–2024)

Source: developed by the author based on World Bank Sovereign ESG Data Profile data.

Note: deep red = strong positive correlation; deep blue = strong negative correlation; white = no correlation.

The temporal evolution (left panel, Figure 4) confirms the structural stagnation: the Moldovan line remains constant in the narrow range of 4–7% throughout the period 2010–2021, while Romania oscillates between 25% and 45%, and Poland gradually increases from 7.4%

to 18.4%. This stagnation in the context of the Association Agreement signed in 2014 demonstrates that the normative commitments to the EU have not been accompanied by the investments in green energy infrastructure necessary for their real implementation



Figure 4. Comparative evolution of renewable electricity (%) and government effectiveness (WGI score) in the Republic of Moldova, Romania, Poland and Ukraine, 2010–2023

Source: developed by the author based on [26]

At the level of the **social pillar**, the descriptive statistics in Annex 1 reveal pronounced gaps compared to European standards on fundamental indicators of well-being: the average life expectancy in Moldova (70.3 years) is almost 7 years below Poland (77.2 years), the infant mortality rate (15.5‰) is three times higher than in Poland (4.9‰), and the national poverty rate (27.8%) significantly exceeds the values recorded in Poland (15.0%) and Romania (23.0%). The high standard

deviation of the poverty rate in Moldova (3.3 percentage points) indicates a pronounced volatility of well-being, sensitive to external shocks, confirmed by the jump to 31.6% in 2023 as a result of the energy crisis induced by the conflict in Ukraine.

A seemingly contradictory element is the Gini index (an indicator that measures the degree of inequality in income distribution on a scale from 0 (perfect equality) to 100 (maximum inequality), where Moldova (27.25)

records the lowest level of inequality in the group, below Poland (30.8) and significantly below Romania (34.9). The correlation matrix (Figure 3) provides a key to interpretation: Gini correlates positively with electricity from renewables ($r = 0.79$) and negatively with energy intensity ($r = -0.81$), suggesting that the low inequality in Moldova does not reflect a fair distribution of prosperity, but a generalized compression of incomes to low levels, a more evenly distributed poverty. The average net migration of -43188 people annually, the most negative in the group after Ukraine, introduces an additional distortion in the interpretation of labor market indicators: the unemployment rate of 1.6%, the lowest small in the panel, reflects not full employment, but the reduction of the available labor force through emigration. This demographic dynamic directly reduces the institutional capacity necessary to implement ESG reporting standards, through the loss of qualified human resources.

The connection between governance and social performance is quantitatively confirmed by the correlation matrix: government effectiveness correlates strongly positively with life expectancy ($r = 0.86$) and strongly negatively with infant mortality ($r = -0.71$) and poverty rate ($r = -0.71$). For Moldova, where all governance indicators are negative throughout the analyzed period, this structure of correlations partially explains the persistence of social gaps compared to European standards.

The **governance pillar** produces the results most directly relevant to the central thesis of the article. Annex 1 confirms that all five Worldwide Governance Indicators have negative average values for Moldova over the period 2010–2023: government effectiveness (-0.50), control of corruption (-0.67), rule of law (-0.37), regulatory quality (-0.04), and political stability (-0.30). By contrast, Poland has positive values for all indicators, with government effectiveness of +0.54 and control of corruption of +0.62, differences of over one point on the standardized WGI scale compared to Moldova.

The correlation matrix (Figure 3) demonstrates that these indicators are not independent dimensions, but an integrated construct: the correlation coefficients between government effectiveness, corruption control, rule of law and regulatory quality range between 0.92 and 0.95, a remarkable internal cohesion that validates the use of any of them as an index of overall institutional capacity. Moreover, GDP per capita correlates strongly positively with all governance indicators (r between 0.76 and 0.87), confirming that economic development and institutional reform are structurally coupled and complementary processes but not alternative public policy options.

Central to the argument for gradual reform is the positive trend visible in the right panel of Figure 4: Moldova records a consistent improvement in government effectiveness from -0.72 in 2015 to -0.17 in 2023, an improvement of 0.55 points in eight years, temporally correlating with the intensification of the European integration process, with the granting of candidate country status in 2022 and with the reforms conditional on EU macro-financial assistance. Corruption control follows the same path, from -0.99 in

2016 to -0.28 in 2023. This positive dynamic, although insufficient to bring Moldova into positive territory on the WGI scale, suggests that the pressure of European conditionality is producing real and measurable institutional effects.

In general, the situation of the indicators within the three pillars outlines a specific **ESG profile of the Republic of Moldova**, which is an economy with low carbon emissions for structural reasons, with deep social gaps partially masked by the emigration process, and with a gradually improving but insufficient governance for the implementation requirements of the CSRD standards and the European Green Taxonomy. The interdependencies identified through the correlation analysis demonstrate that the three ESG pillars cannot be addressed in isolation: institutional governance simultaneously conditions the energy transition, social well-being and ESG reporting capacity which requires an integrated, not sectoral, reform approach.

Conclusions. The comparative analysis of the country ESG profile of the Republic of Moldova for the period 2010–2024, carried out in relation to Romania, Poland and Ukraine, outlines an economy with deep structural vulnerabilities, but with an institutional trajectory that offers real grounds for cautious optimism.

Moldova's environmental performance is misleading in absolute terms. Low carbon emissions do not reflect an advanced green transition, but rather the absence of industrialization and structural economic underdevelopment. The truly relevant indicator is that of green energy infrastructure, where Moldova registers complete stagnation throughout the analyzed period, in visible contrast to the upward trajectories of Romania and Poland. And the main structural obstacle to the green transition is the high net energy dependence, which makes any strategy in this regard dependent on foreign investments and deep energy reforms, which in turn are impossible to achieve through the simple legislative transposition of the green taxonomy.

Social gaps compared to European standards are real and partially masked by the dynamics of emigration. Health, well-being and labor market indicators consistently place Moldova below the reference group, and structural emigration, although artificially compressing some indicators, at the same time erodes the institutional and human capacity necessary to implement ESG reporting standards.

Institutional governance is not a separate dimension of ESG performance, but the factor that conditions it as a whole. The correlation matrix showed that governance indicators simultaneously condition energy performance, social well-being and reporting capacity: the strong negative correlations between energy intensity and all WGI indicators confirm that energy inefficiency and institutional weakness are structurally coupled phenomena. This conclusion requires an integrated reform approach on the three ESG pillars, not a sectoral one.

The effective implementation of ESG standards in the Republic of Moldova cannot be reduced to the formal transposition of the European regulatory framework. The economic structure dominated by small businesses, the

lack of institutional capacity, and demographic erosion through emigration require a sequential and locally tailored reform model, one that prioritizes strengthening real reporting capacity, investments in green energy infrastructure, and effective coordination between public and private actors, rather than uniform formal compliance with standards designed for economies with significantly higher institutional capacity.

The research presents limitations inherent to the macroeconomic approach, country ESG indicators do not capture company-level performance, an essential dimension for fully assessing CSRD compliance capacity. The construction of a composite ESG index with differential weights and the application of panel regression models to test causal relationships are natural extensions for further research.

Bibliographic references:

1. Bahnaru, R. (2024). ESG reporting in the Republic of Moldova: challenges and opportunities in aligning with European and international standards. *Eastern European Journal for Regional Studies*, 10(2), 74–84. <https://doi.org/10.53486/2537-6179.10-2.07>.
2. Banca Națională a Moldovei. (2024). *Foaia de parcurs pentru finanțare durabilă Republica Moldova 2024-2028*. https://bnm.md/files/Foaia%20de%20parcurs%20pentru%20finan%C8%9Bare%20durabil%C4%83_eng.pdf (visited 21.02.2026).
3. Biroul Național de Statistică al Republicii Moldova. (2025). *Activitatea întreprinderilor mici și mijlocii în anul 2024*. https://statistica.gov.md/ro/activitatea-intreprinderilor-mici-si-mijlocii-in-anul-2024-9557_61902.html (visited 22.02.2026).
4. European Commission. (2014). *Directive 2014/95/EU of the European Parliament and of the Council of 22 October 2014 amending Directive 2013/34/EU as regards disclosure of non-financial and diversity information by certain large undertakings and groups*. Official Journal of the European Union, L 330, 1–9.
5. European Commission. (2020). *Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment*. Official Journal of the European Union, L 198, 13–43.
6. European Commission. (2022). *Directive (EU) 2022/2464 of the European Parliament and of the Council of 14 December 2022 amending Regulation (EU) 2017/1129, Directive 2004/109/EC, Directive 2006/43/EC and Directive 2013/34/EU, as regards corporate sustainability reporting*. Official Journal of the European Union, L 322, 15–82.
7. European Commission. (2024, October 9). *Communication on the Moldova Growth Plan* (COM(2024) 470 final). https://enlargement.ec.europa.eu/document/download/ff73c5dd-3fd1-4dcd-ab7d-ad04760c538c_en?filename=Growth%20Plan%20for%20Moldova%20-%20Commission%20proposal.pdf (visited 24.02.2026).
8. European Commission. (2025). *Republic of Moldova 2025 Report*. Commission Staff Working Document SWD(2025) 758 final. https://enlargement.ec.europa.eu/document/download/23fa6af0-89b3-4532-a3d9-d1638727d14c_en?filename=moldova-report-2025.pdf (visited 11.02.2026).
9. European Financial Reporting Advisory Group (EFRAG). (2023). *ESRS implementation support resources*. <https://www.efrag.org/en/sustainability-reporting/esrs-workstreams>
10. Financial Stability Board (FSB). (2017). *Recommendations of the Task Force on Climate-related Financial Disclosures*. <https://www.fsb-tcfd.org/publications/final-recommendations-report/> (visited 27.02.2026).
11. Fornasari, T., & Traversi, M. (2024). The impact of the CSRD and the ESRS on non-financial disclosure. *Symphony Emerging Issues in Management*, (1), 117–133.
12. Global Reporting Initiative (GRI). (2016). *GRI Standards 2016*. <https://www.globalreporting.org/standards/>
13. Hao, N., & Dragomir, V. D. (2025). Renewable energy, sustainable business models, and decarbonization in the European Union: Comparative analysis of corporate sustainability reports. *Sustainability*, 17(8), Article 3646. <https://doi.org/10.3390/su17083646>
14. Hasan, I., Lee, H., Qiu, B., & Saunders, A. (2025). Climate-related disclosure commitment of the lenders, credit rationing, and borrower environmental performance. *Review of Accounting Studies*. <https://doi.org/10.1007/s11142-025-09918-z>
15. LSEG. (2024, October). *Environmental, Social and Governance scores from LSEG*. London Stock Exchange Group. https://www.lseg.com/content/dam/data-analytics/en_us/documents/methodology/lseg-esg-scores-methodology.pdf (visited 21.02.2026).
16. Ministerul Finanțelor al Republicii Moldova. (2026, februarie 19). *Proiectul Hotărârii de Guvern privind Taxonomia pentru finanțare durabilă* (număr unic 113/MF/BNM/2026). <https://mf.gov.md/ro/content/proiectul-hotararii-de-guvern-privind-taxonomia-pentru-finantare-durabila-numar-unic> (visited 25.02.2026).
17. Molnár, P., Lukács, B., & Tóth, Á. (2025). Toward social disclosure alignment: Evaluating the interoperability of ISSB S2 with ESRS and GRI Standards. *Societies*, 15(10), 273. <https://doi.org/10.3390/soc15100273>
18. Moscviciov, L. (2023). Regionalization in the Republic of Moldova: The essence and form of the manifestation. *International Relations Plus*, 2(22), 65–81.
19. Nicolo, G. (2025). Ready for change after the Omnibus Package? Early compliance with the European Sustainability Reporting Standards and its key determinants in the new regulatory era. *Business Strategy and the Environment*, 34(7), 9040–9058. <https://doi.org/10.1002/bse.70054>

20. Próchniak, J., & Płoska, R. (2023). WIG-20 Warsaw Stock Exchange companies: Are they ready for governance matters disclosures based on EU sustainable reporting standards? *Humanities and Social Sciences*, 30(2), 229–242. <https://journals.umcs.pl/h/article/view/14423> (visited 21.02.2026).
21. Rusu, S., & Pârțachi, I. (2021). Implementation of the principles of effective public administration for sustainable development in Moldova. *Journal of Law and Administration*, 17(3), 41–51.
22. Seletska, D. (2024). Formation of ESG-reports according to GRI standards: The governance aspect. *Problems of Theory and Methodology of Accounting Control and Analysis*. <https://www.researchgate.net/publication/390523899> FORMATION OF ESG-REPORTS ACCORDING TO GRI STANDARDS THE GOVERNANCE ASPECT (visited 19.02.2026).
23. Snowkap. (2025, May 12). Materiality assessment: A guide to better ESG performance. <https://snowkap.com/materiality-assessment-a-guide-to-better-esg-performance>
24. Stockholm Environment Institute (SEI). (2025). *New national assessment shows progress on Moldova's green transition*. <https://www.sei.org/features/national-assessment-moldova-green-transition> (visited 21.02.2026).
25. Sulkowski, A., & Jebe, R. (2022). Evolving ESG reporting governance, regime theory, and proactive law: Predictions and strategies. *American Business Law Journal*, 59(3), 449–503. <https://doi.org/10.1111/ablj.12210>
26. World Bank. (2024). *World Bank Sovereign ESG Data Profile*. <https://api.worldbank.org/v2/country/UKR/indicator/EG.FEC.RNEW.ZS?format=json&date=1960:2024> (visited 25.02.2026).

Descriptive statistics of sovereign ESG indicators — Moldova, Romania, Poland, Ukraine (2010–2024)												
Indicator	Moldova			Romania			Poland			Ukraine		
	Mean	Std.Dev.	Min	Max	Mean	Std.Dev.	Min	Max	Mean	Std.Dev.	Min	Max
PILLAR E — ENVIRONMENT												
CO ₂ per capita (t CO ₂ e/tep)	3,140	0,290	2,620	3,720	4,070	0,220	3,690	4,460	8,270	0,380	7,550	8,760
Carbon intensity of GDP (kg/\$ PPP)	0,245	0,030	0,209	0,308	0,129	0,026	0,092	0,171	0,242	0,046	0,167	0,319
Net energy imports (%)	83,24	1,690	80,88	86,56	24,10	5,300	16,72	32,46	37,43	7,470	26,50	48,82
Renewable electricity (%)	5,930	0,890	4,250	7,020	38,01	6,480	25,74	44,86	13,14	3,370	7,400	18,40
Renewable energy consumption (%)	23,14	2,040	20,00	26,10	23,32	1,040	21,10	24,40	12,51	2,300	9,500	16,10
Energy intensity (MJ/\$PPP)	5,360	0,550	4,690	6,450	2,770	0,440	2,120	3,520	3,850	0,440	3,130	4,650
PM2.5 air pollution (µg/m ³)	18,02	2,210	14,76	20,71	17,71	1,980	14,85	21,36	22,67	2,760	17,96	26,97
Protected areas (%)	6,610	3,560	4,200	11,50	23,39	1,850	18,10	24,40	36,28	3,440	29,30	38,20
Freshwater withdrawals (%)	52,04	0,300	51,60	52,53	16,05	1,470	14,67	19,23	19,06	1,870	16,17	22,22
PILLAR S — SOCIAL												
Life expectancy (years)	70,26	0,590	68,99	71,55	74,81	0,930	72,81	76,61	77,16	0,820	75,35	78,51
Under-5 mortality rate (‰)	15,49	0,720	14,70	16,90	8,700	2,130	6,500	12,40	4,860	0,530	4,400	6,00
Safe drinking water access (%)	71,92	4,070	62,33	75,82	81,97	0,090	81,89	82,18	91,21	1,230	88,68	92,56
National poverty rate (%)	27,84	3,320	24,50	31,60	23,01	1,760	19,00	25,40	15,01	2,290	11,70	17,70
Gini index	27,25	2,090	25,00	32,10	34,88	1,890	29,80	36,90	30,81	2,00	28,50	33,20
Labour force participation (%)	70,26	3,140	64,77	74,42	61,75	3,630	56,99	66,73	69,92	3,080	65,51	74,84
Unemployment rate (%)	1,630	0,590	0,790	2,940	5,850	1,060	3,910	7,180	5,900	3,090	2,470	10,29
Youth NEET rate (%)	16,59	2,180	13,31	19,72	16,54	1,200	14,52	18,08	11,62	1,560	9,570	14,09
Net migration (persons)	-43,188	42,561	-84,039	89,154	-32,934	45,114	-122,364	89,076	60,021	261,380	-238,062	967,744
PILLAR G — GOVERNANCE												
Government effectiveness	-0,502	0,153	-0,721	-0,165	-0,079	0,146	-0,287	0,225	0,541	0,168	0,254	0,769
Control of corruption	-0,670	0,209	-0,991	-0,280	-0,189	0,131	-0,381	0,041	0,621	0,075	0,507	0,760
Rule of law	-0,371	0,104	-0,529	-0,153	0,300	0,137	0,093	0,453	0,603	0,194	0,377	0,872
Regulatory quality	-0,041	0,077	-0,133	0,106	0,493	0,136	0,292	0,688	0,916	0,109	0,717	1,063
Voice and accountability	-0,002	0,091	-0,117	0,237	0,485	0,098	0,312	0,599	0,836	0,202	0,579	1,105
Political stability	-0,298	0,216	-0,684	0,047	0,267	0,191	0,036	0,582	0,707	0,244	0,481	1,072
Internet users (%)	56,32	17,58	29,68	80,21	65,40	17,76	39,93	91,29	74,79	10,11	61,95	88,59
Women in parliament (%)	26,35	8,730	17,82	40,82	16,75	3,920	11,21	21,88	26,61	2,810	20,00	29,57
R&D expenditure (% of GDP)	0,281	0,048	0,223	0,367	0,462	0,038	0,382	0,507	1,078	0,254	0,726	1,454
CONTROL VARIABLES												
GDP per capita (current USD)	4,161	1,555	2,437	7,576	12,173	3,611	8,400	20,080	15,925	3,758	12,464	25,104
Annual GDP growth (%)	2,990	5,420	-8,280	13,93	2,650	3,250	-3,910	8,200	3,430	2,450	-2,040	6,930

Note: Statistics calculated on an unbalanced panel (N=4 countries, T=10–15 years). Std.Dev. = standard deviation. WGI indicators (gov_effect, gov_corrupt, rule_law, reg_qual, voice_acc, pol_stab) are on the standardised scale [-2.5, +2.5]. Source: World Bank Sovereign ESG Data Profile, extracted March 2026.