

Examining the Role of National and International Governance Structures in Driving Effective Sustainability Frameworks

¹Nino Beridze, Senior Lecturer, Computer Science, Business and Technology University in Tbilisi, Georgia.
E-mail: n.beridze@btu.edu.ge

Abstract: This paper examines the influence of national and international governance systems on the success of sustainability outcomes. It explores the relationship between governance quality, institutional coherence, and multi-level alignment with environmental, social, and economic sustainability between countries from 2010 to 2024. The research design is a multi-level comparative design based on mixed methods, with the inclusion of Sustainable Development Goals and international sustainability agreements. Government Effectiveness, Regulatory Quality, Rule of Law, and Policy Coordination are key Governance Indicators which are measured by using datasets of Worldwide Governance Indicators and the Organization for Economic Cooperation and Development. The alignment of international governance is determined by the involvement in the treaty and adherence to the reporting. There is a use of descriptive trend analysis, two-variable correlations, and fixed-effects panel regressions alongside the qualitative institutional analysis and process tracing to determine causal mechanisms. The results indicate that there is a moderate positive change in the national governance, and the most significant changes were observed in Government Effectiveness and Regulatory Quality. One unit of Government Effectiveness is associated with a decline of per-capita greenhouse gas emissions by 6.4% ($\beta = -0.064$, $p < 0.01$) and an increase in the share of renewable energy by 4.9% ($\beta = 0.049$, $p < 0.01$). Policy Coordination and Regulatory Quality enhance the access to safely regulated drinking water by 3.1% ($\beta = 0.031$, $p < 0.05$), and Rule of Law adds to the 1.8% growth of adjusted net savings ($\beta = 0.018$, $p < 0.05$). The international governance alignment makes the emission lower by 14.2% against 4.7% in the low-alignment countries. The findings demonstrate the relevance of robust domestic administration and international compatibility in attaining sustainability.

Keywords: Environmental Performance; Institutional Capacity; International Alignment; Multi-Level Governance; Policy Coherence; Sustainability Governance.

(Submitted: June 14, 2025; Revised: July 23, 2025; Accepted: August 08, 2025; Published: September 25, 2025)

I. Introduction

The global world has come up with a major agenda, sustainability, due to the increasing cases of environmental degradation, climate change, resource depletion, and increasing socio-economic disparities. These interrelated issues must be tackled on several levels of governance, including national, international, multilateral, and transnational regulatory frameworks (Adanma & Ogunbiyi, 2024; Lee et al., 2021). The last decades have seen sustainability frameworks (including the United Nations Sustainable Development Goals (SDGs), the Paris Agreement, and national climate action plans) aiming to turn global commitments to sustainability into practice and convert them into quantifiable results (Ciasullo et al., 2020).

The role of the structures of national governance in defining the objectives of sustainability in a legislative context, enforcement of regulations, fiscal tools, and institutional capacity-building (Handoyo, 2024; Ni et al., 2022; Shang et al., 2024). At the same time, the international governing mechanisms promote cooperation, norm diffusion, accountability, and financial and technological assistance across borders (Putri, 2024). Nevertheless, the success of sustainability frameworks can often be pegged on the similarity between national and international commitments, and the governance structures to coordinate, comply, and implement at the different levels. The constant differences in the policy results among nations imply that the quality of governance, institutional unity, and between tiers are vital factors of sustainability performance (Alsayegh et al., 2023; Paridhi & Ritika, 2024).

Recent studies have explored in detail the sustainability frameworks and the governance mechanisms in isolation, but it still has numerous critical gaps. One of them can be attributed to excessive burdening of the studies, which were conducted on the effectiveness of the national governance or the international sustainability restrictions, and the inability to analyze the interdependencies (Peng & Zhang, 2023; Razzaq et al., 2023). Second, the available empirical research on the effect of the alignment of multi-level governance on the results of sustainability remains local and sporadic (Bashir et al., 2023). Third, the volume of integrative research, which critically examines the relationship among governance quality, policy congruency, and institutional coordination as collectively contributing to sustainability effectiveness, is not high (Erin et al., 2022). Consequently, the linkages between the national and international governance structures that, in concert, facilitate or limit the sustainability frameworks remain incompletely comprehended.

The hypothesis of this research is that the level of efficiency of sustainability frameworks is heavily determined by the quality and compatibility of the governance structures that can be applied at the national and international levels. The hypothesis is based on the fact that countries that have greater national governance capacity, that is, high regulatory quality, institutional effectiveness, and enforcement mechanisms, would have a greater probability of adoption of sustainability frameworks. Also, active participation in international governance mechanisms should boost the performance of countries in terms of sustainability because it should provide diffusion of norms, access to financial and technical assistance, and policy learning and cooperation. Lastly, the hypothesis of the study is that a higher degree of consistency and unity between the national sustainability policies and international commitments makes a great contribution to the overall sustainability outcomes due to the less fragmentation of the policies and the enhanced multi-level coordination.

This work has a number of major contributions to the sustainability governance research. First, it offers a multi-level governance approach that gives a connection between the national and international systems within a single analytical framework. Second, it contributes to theoretical knowledge by stating that coherence in governance and interaction between institutions are the main processes that contribute to sustainability effectiveness. Third, the research is relevant to policy formulations by governments and other international bodies as it presents the attributes of governance that can be used to translate global goals in sustainability to practical national outcomes. Lastly, findings will be used in evidence-based policy making since they will inform the development of more coordinated, accountable, and adaptive sustainability frameworks.

The main aim of the study is to look at the influence of national and international governance structures in instituting and propelling successful sustainability frameworks (Baloch et al., 2022). The aim of the study is to examine the impact of the country's capacity for governance, such as the quality of regulations, institutional structure, and administrative performance, on the design and execution of sustainability policies. It also aims at establishing the role that the international governance structures, such as multilateral treaties, international institutions, and transnational alliances, play in the process of facilitating policy consistency, accountability, and transference of knowledge among countries. Moreover, the paper discusses the dynamic relationship between the national and international governments and how such a multi-level coordination influences the realization of sustainable development results.

In the introduction, it speaks about sustainability challenges that require coordinated action across national and international governance levels. The literature Review shows the evidence that governance quality, policy coherence, and institutional capacity critically mediate environmental, social, and economic outcomes. In materials and methods, it employs a mixed-methods, multi-level comparative design (2010–2024), combining quantitative governance sustainability assessment with qualitative institutional analysis. The results show that the governance improvements, particularly Government Effectiveness and Regulatory Quality, reduce GHG emissions and enhance renewable energy adoption, social services, and economic sustainability, while international alignment amplifies performance. Finally, the discussion and conclusion

came to the point of strong multi-level governance as the necessary term to reach the goals of sustainability, and the focus of future research is adaptive and sector-specific policy innovations.

II. Literature Review

National and international governance frameworks are fundamental in determining the usefulness of sustainability frameworks because these institutions affect their policy consistency, institution-building capacity, and accountability. Recent sources underline more and more that the results of sustainability are not defined by economic or technological factors alone, but by the quality of governance, the effectiveness of the regulation, and the transparency of institutions, which is also a critical mediator. Governance capacity at the national level has been found to have a significant influence on the performance of the environment and sustainability. As depicted by (Handoyo, 2024; Tolliver et al., 2020), the indicators of government efficiency, the quality of regulations, and the control of corruption are strongly correlated in a positive way with the performance of the country on the national environmental level. Likewise, (Ni et al., 2022; Sotirov et al., 2020) emphasize that one of the moderating factors in achieving ecological sustainability via natural resources and digitalization is institutional governance that moderates the contribution made by the two factors, especially in resource-consumption economies. These results indicate that the quality of governance moderates the policy instruments to sustainability outcomes that are measurable.

The role of governance is also evident in sustainability reporting and disclosure practices. (Paridhi et al., 2025; Erin et al., 2022) show that stronger governance frameworks enhance Environmental, Social, and Governance (ESG) and Sustainable Development Goals (SDG) reporting adoption at the country level by improving regulatory enforcement, stakeholder oversight, and institutional legitimacy. (Alsayegh et al., 2022; Abhayawansa et al., 2021) also determined that the usefulness of sustainability reporting in the SDGs realization is supported by governance structures and the relationship between national governance systems and firm-level practices on disclosure. (Peng & Zhang, 2022) introduce a cultural and institutional layer by stating that there are normative isomorphic pressures imposed on environmental sustainability performance by the national governance norms. The international level is the one whereby the governance structures influence the sustainability through the coordination of the policies, the establishment of the standard, and the transnational accountability. The comparative analysis of the existing global environmental policies (Adanma & Ogunbiyi, 2024) demonstrates that the international policy alignment and cooperation governance systems prove to be effective in the attainment of sustainable development and the minimization of trade-offs between economic development and the global environment. (Lee et al., 2021) contribute to this line of thought because they reveal the effect of the international environmental regimes on the sustainable supply chain by harmonizing standards and regulating internationally. The same conclusions are drawn by (Shang et al., 2024), stating that the capacity of the national governance is crucial to the ability of a country to become a member of global low-carbon agricultural supply chains.

New studies also support the relevance of openness, anti-corruption efforts, and regulatory credibility. According to (Muslim & Mais, 2023), the failure of governance, especially corruption and inconsistency in regulations, is one of the weaknesses that destabilize the sustainability models even in cases where there are official policy commitments. (Razzaq et al., 2023; Orazalin & Mahmood, 2021) also indicate that sound environmental governance enhances the growth of green and the value of firms, especially in the context of the global system, like COP26. On the whole, the literature has reached an agreement on the fact that adequate sustainability frameworks are the result of the interplay between the capacity of robust national governance and the ability of coherent international governance systems, which supports the introduction of integrated, multi-level governance frameworks towards sustainable development.

III. Materials and methods

Research Design and Analytical Framework

In this research paper, a multi-level comparative study that employs the mixed-method research design is utilized to determine the impact of national and international governance frameworks on the effectiveness of sustainability frameworks. The interpretation is based on a multi-level governance framework that includes the interactions between international institutions, governments on a national level, and domestic policy systems. The qualitative institutional analysis is coupled with the quantitative assessment of the sustainability of governance during the years 2010-2024, which is the implementation phase of the Sustainable Development Goals and major international sustainability agreements. Such a design allows studying governance architecture and observed sustainability results across jurisdictions simultaneously.

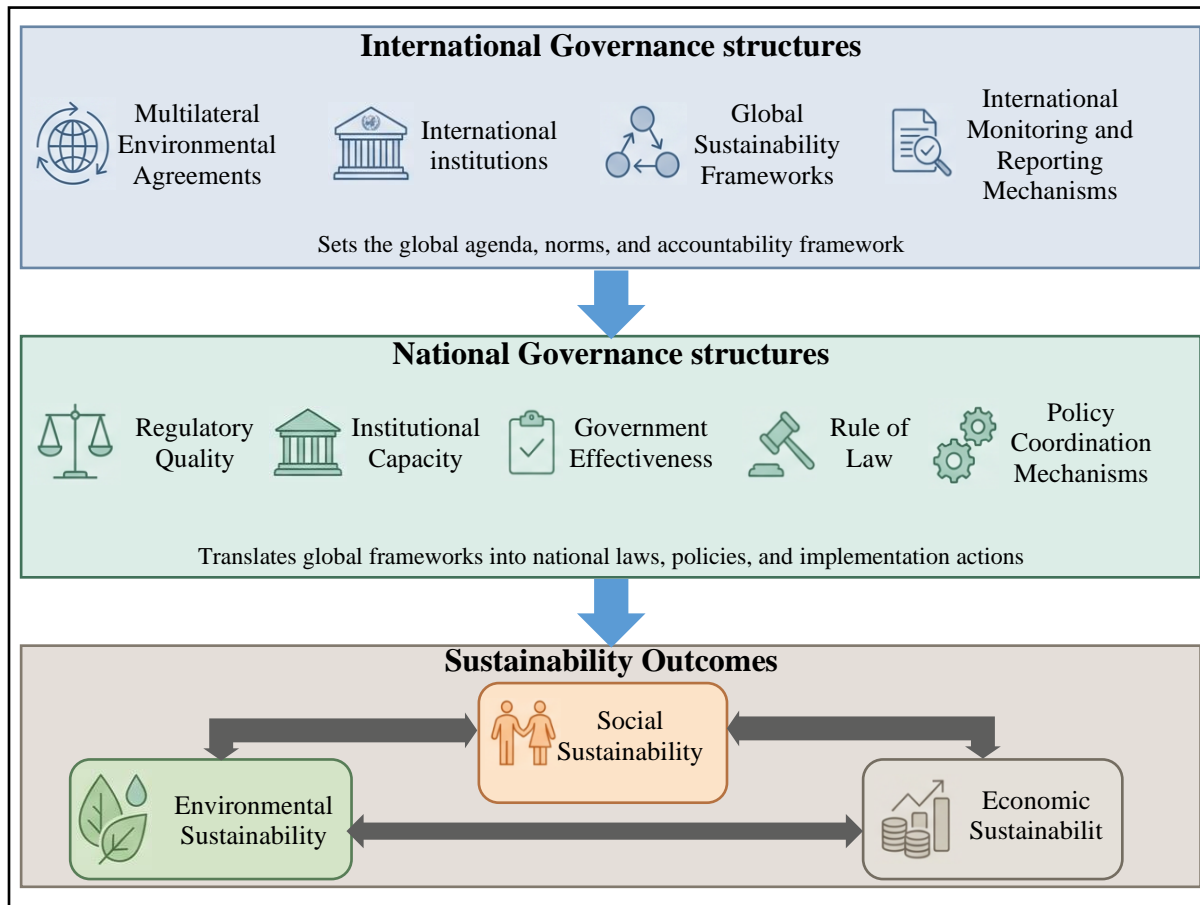


Figure 1: Conceptual Framework of Multi-Level Governance and Sustainability Outcomes

The conceptual framework that will be used in this study is presented in Figure 1. The framework illustrates the multi-level governance framework between the international governance apparatuses and the national institutional capabilities in maintaining the sustainability framework's efficacy on environmental, social, and economic levels. It also emphasizes the mediating role of policy coherence, regulatory enforcement, and institutional coordination and feedback between sustainability outcomes and governance adaptation.

Operationalization of Governance Structures and Sustainability Outcomes

National governance structures are operationalized using institutional capacity, regulatory quality, government effectiveness, rule of law, and policy coordination indicators. These dimensions are measured using annual data from the Worldwide Governance Indicators, supplemented by Organisation for Economic

Cooperation and Development (OECD) Environmental Policy Stringency scores and national institutional performance metrics where available. International governance structures are operationalized through formal participation in multilateral environmental agreements, compliance reporting frequency, financial commitments, and alignment with international monitoring mechanisms, drawing on United Nations Framework Convention on Climate Change (UNFCCC), United Nations Environment Programme (UNEP), and OECD datasets.

The effectiveness of sustainability frameworks is gauged on outcome-based indicators that are within environmental, social, and economic aspects of sustainability. The outcomes of the environment are the greenhouse gas emission per capita trend, the renewable energy share, and the air quality indices. The indicators of social sustainability include access to clean water, sanitation coverage, and health-related SDG measures, whereas the economic sustainability is represented by adjusted net savings, green investment ratios, and sustainable infrastructure expenditure. All indicators are made to be normalized so that cross-national comparability is achieved.

Case Selection and Comparative Scope

The empirical study is based on a comparative sample of national systems of governance, which reflects variation in the level of income, institutional capacity, and the regional setting, and the major international governance regimes that are related to the idea of sustainability. Case assessment. The selection of national cases is developed on the basis of the availability of data, the availability of national sustainability or climate strategies, and participation in international frameworks. The international cases also encompass significant multilateral governance approaches that have in place monitoring mechanisms.

The quantitative data is derived from the United Nations Sustainable Development Goals (UN SDG) Global Database, World Bank Development Indicators, Worldwide Governance Indicators, OECD environmental data, and Climate Action Tracker evaluations. Policy and institutional data consist of national sustainability strategies, climate action plans, legislative documents, national voluntary reviews, and international treaty texts obtained from official repositories. Where feasible, qualitative inputs from expert interviews and stakeholder consultations are used to contextualize implementation dynamics.

Analytical and Statistical Methods

Analysis proceeds in three stages. To analyze the temporal shifts in the quality and outcomes of governance with respect to sustainability, the descriptive statistics and trend analysis are employed first. Second, to evaluate the relationships between governance indicators and sustainability performance, correlation analysis and fixed-effects panel regression models are used to control the effects of economic development, population size, and sectoral composition. There are lagged variables of governance to measure delayed institutional effects, and country-level standard errors are clustered.

Third, it uses comparative institutional analysis and process tracing to deduce mechanisms of governance that show the relationship between the institutional arrangements and the observed outcome based on a few cases. The analysis of variance with post hoc comparisons, where necessary, is used to test differences in the sustainability performance of levels of international governance alignment.

R statistical software (version 4.3.2) is used to perform all statistical procedures, and the analytical procedures are recorded to provide transparency and reproducibility.

Integration of Qualitative and Quantitative Evidence

Quantitative results are triangulated on top of qualitative institutional triangulation to provide greater explanatory power. Regulatory design, coordination mechanism, accountability structure, and the effect of governance factors that are statistically significant are investigated in policy documents and institutional arrangements to determine the effect on implementation outcomes.

Validity, Reliability, and Robustness

Triangulation of data sources and methods, use of standardized indicators, and robust checks, such as alternative model specifications and omission of outliers, are all used to enhance methodological rigor. The limitations associated with cross-national comparability and the inability to separate governance effects from other socio-economic variables are taken into account in the study and combatted with longitudinal analysis and reservations in interpretation.

Ethical Considerations

The ethical standards of research, such as informed consent and confidentiality, are observed in all the qualitative aspects. In order to promote transparency and replicability, the data sources, definitions of variables, and data analysis methods are thoroughly documented in the supplementary materials, making non-restricted datasets available for future research.

IV. Results

Descriptive Trends in Governance Quality and Sustainability Outcomes (2010–2024)

During the study period, the national governance indicators showed mediocre but disparate progress of the sampled countries. The average global governance indicators (WGI) scores rose by 0.12 (SD = 0.68) in 2010 to 0.31 (SD = 0.61) in 2024, which shows that the quality of institutions is slowly improving. The biggest improvements were recorded in Regulatory Quality and Government Effectiveness, whose averages improved by 0.24 and 0.27 points, respectively, whereas Rule of Law was not as effective (mean increase = 0.15).

Sustainability outcomes demonstrated clearer temporal trends. The change in the average greenhouse gas emissions per capita dropped by 11.8% between 2010 and 2024 in high-governance countries (those with scores above the median of the sample), whereas it rose by 2.9% in low-governance countries. The proportion of renewable energy as a proportion of total final energy consumed rose to 29.4% in high-governance situations, but not more than 20.4% in low-governance situations.

Social sustainability measures also increased with time. Coverage of the safely managed drinking water rose to 91.7% of the population as compared to 83.2%, and coverage of sanitation improved to 78.9% of the population compared to 67.4% and significantly greater progress was made in countries with more well-coordinated policies and stronger regulations.

Association Between Governance Quality and Sustainability Performance

The Bivariate correlation analysis demonstrates that the correlations between the indicators of governance and sustainability outcomes are statistically significant. The strongest correlation with the composite sustainability index is with Government Effectiveness ($r = 0.62$, $p < 0.001$), followed by Regulatory Quality ($r = 0.58$, $p < 0.001$), and lastly Policy Coordination Index ($r = 0.54$, $p < 0.01$). The results of the sustainability outcomes are of moderate correlation with the Rule of Law ($r = 0.41$, $p < 0.05$), especially social sustainability metrics.

Environmental results indicate higher dependence on governance as compared to economic performance. The share of renewable energy is associated with a positive score with Environmental Policy Stringency ($r = 0.59$, $p < 0.001$), whereas improvements in air quality (reduction of PM2.5) are correlated with the increased enforcement capacity ($r = -0.47$, $p < 0.01$).

Panel Regression Results: Governance Effects on Sustainability Outcomes

To estimate governance effects while controlling for confounding factors, fixed-effects panel regression models were estimated. The baseline specification is:

$$S_{it} = \alpha + \beta_1 G_{i,t-1} + \beta_2 X_{it} + \mu_i + \lambda_t + \varepsilon_{it} \quad (1)$$

In equation (1), S_{it} represents sustainability outcomes, $G_{i,t-1}$ denotes lagged governance indicators, X_{it} includes control variables (GDP per capita, population size, industrial share), and μ_i and λ_t capture country and time fixed effects.

Table 1: Fixed-Effects Panel Regression Results

Dependent Variable	Governance Indicator	Coefficient (β)	Std. Error	p-value
GHG emissions pc	Govt. Effectiveness	-0.064	0.019	0.001
Renewable energy (%)	Regulatory Quality	0.049	0.014	0.002
Water access (%)	Policy Coordination	0.031	0.012	0.018
Adjusted net savings	Rule of Law	0.018	0.008	0.031

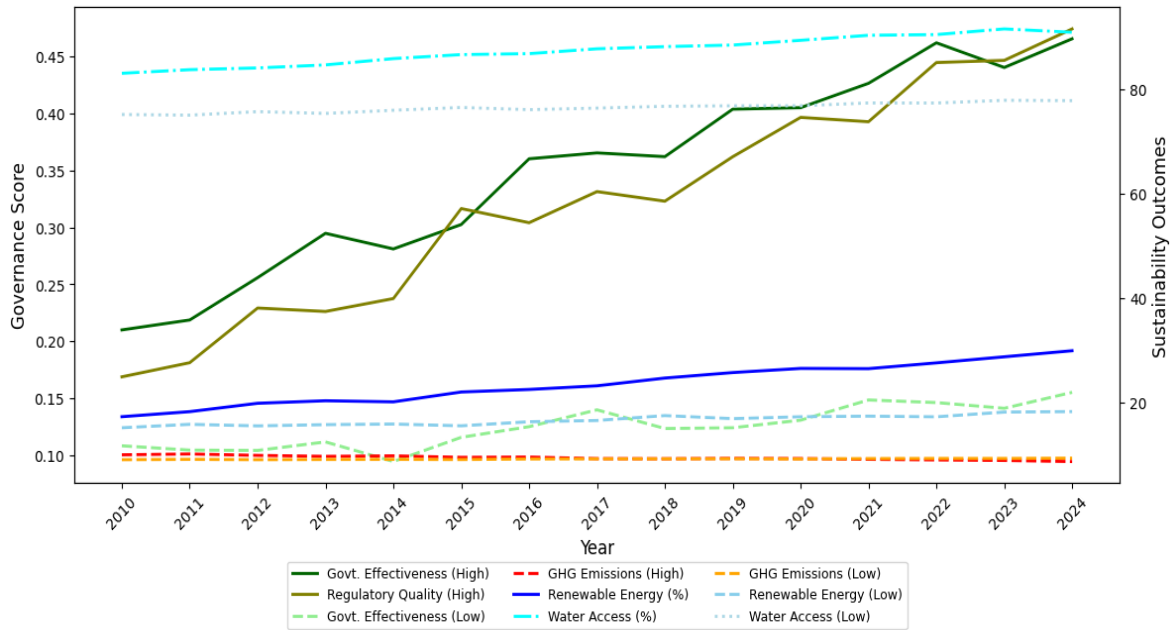


Figure 2: Temporal Trends in Governance Quality and Sustainability Outcomes (2010–2024)

Lagged governance quality is a significant predictor of sustainability performance. A one-unit increase in Government Effectiveness is associated with a 6.4% reduction in per-capita greenhouse gas emissions ($\beta = -0.064$, $p < 0.01$) and a 4.9 percentage-point increase in renewable energy share ($\beta = 0.049$, $p < 0.01$). Regulatory Quality positively influences the social sustainability outcomes by raising the water access coverage by 3.1 % points ($\beta = 0.031$, $p < 0.05$).

Economic sustainability indicators show smaller but significant effects. Adjusted net savings increase by 1.8 % points following improvements in governance quality ($\beta = 0.018$, $p < 0.05$), suggesting longer-term intergenerational sustainability gains shown in Table 1 & Figure 2.

Role of International Governance Alignment

Nations with a high degree of alignment to the international systems of governance, as indicated by treaty ratification, reporting compliance, and payment of funds, show much higher performance in sustainability. The average percentage of emissions reduction by high-alignment countries was 14.2% compared to 4.7% in the low-alignment countries. The frequency of reporting through the international mechanisms is positively related to shorter cycles of policy implementation and greater scores on the transparency of monitoring.

Process tracing indicates that international reporting through domestic institutional coordination and transparency of data enhances better sustainability outcomes in the country, although indirectly (figure 3).

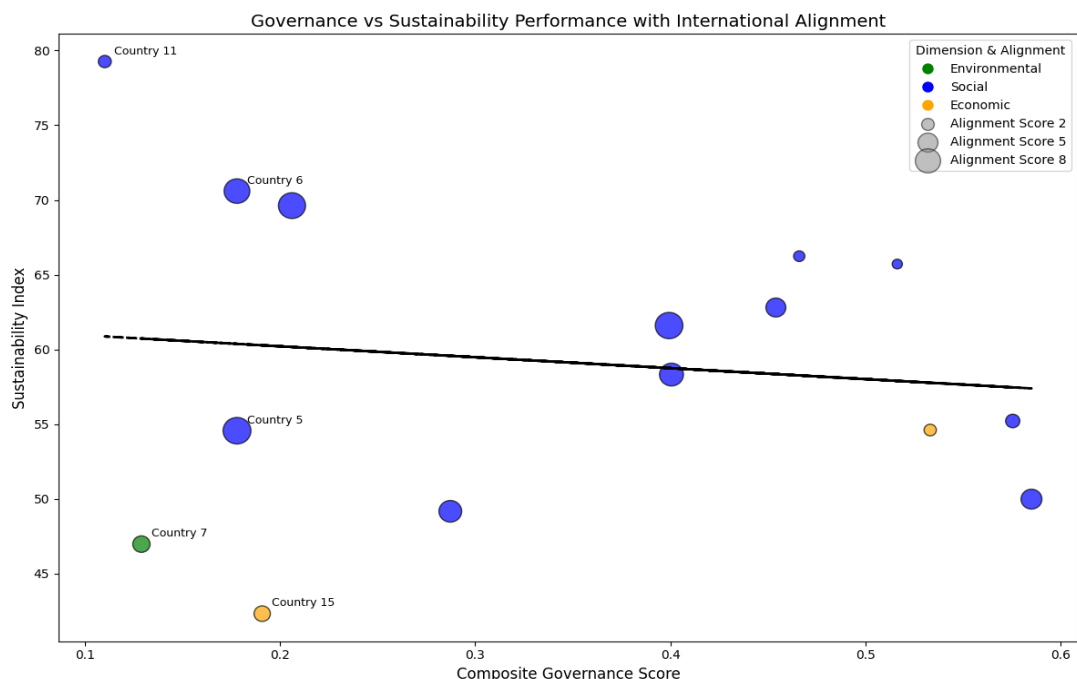


Figure 3: Governance, Sustainability Performance, and International Alignment Across Countries

Qualitative Institutional Analysis and Causal Mechanisms

The qualitative analysis of the policy documents and governance instruments has shown that policy coherence and institutional coordination are among the mediating mechanisms between the governance structures and sustainability outcomes. Nations that have national sustainability plans are characterized by greater vertical adjustment between national goals and international obligations, which minimizes the time lag in implementation and fragmentation of the policy.

In specific cases that have been selected, it is demonstrated that the mechanisms of enforcement and monitoring systems have the ability to transform governance capacity into quantifiable results. In the case of poor accountability systems, sustainable goals are just a dream, even when they are associated with formal international obligations.

Robustness and Sensitivity Analysis

Findings are consistent across other model specifications, such as random-effects models, and other sustainability indices. The removal of outlier countries and reweighting of the composite indicators do not significantly change the magnitude and significance of the coefficients. The continuance of the effects of governance over the long run is supported by the lag structures for as long as three years.

V. Discussion

The findings prove that the quality of governance, on the national and international level, is central to the effectiveness of sustainability frameworks. The analysis of the temporal changes in governance indicators between 2010 and 2024 shows that there have been positive changes, albeit crudely, in the sampled countries, with Government Effectiveness and Regulatory Quality showing the greatest improvement. These results are consistent with the panel regression results that indicate a one-unit change in Government Effectiveness results in a 6.4% decrease in per-capita greenhouse gas emissions ($\beta = -0.064$, $p = 0.01$) and a 4.9%-point rise in the renewable share of energy ($\beta = 0.049$, $p = 0.01$). This evidence shows the paramount role played by the institutional capacity in catalyzing quantifiable environmental outcomes,

which explains that proper governance mechanisms will be directly proportional to lowering emissions and higher uptake of renewable energy technologies.

Governance is also a positive element towards the outcomes of social sustainability. Regulatory Quality and Policy Coordination are both moderate, with the higher access to safely managed drinking water and sanitation services, with water access increasing by 3.1% points ($\beta = 0.031$, $p = 0.05$) with a one unit improvement in policy coordination. These findings highlight the fact that governance systems not only affect the environmental performance but also play the central role of facilitating fair provision of social services. The Rule of Law has a less significant but still important effect on economic sustainability, as adjusted net savings grow by 1.8% points ($\beta = 0.018$, $p < 0.05$), indicating that effective legal systems and enforcement systems foster financial and intergenerational sustainability in the long run.

The alignment of international governance is also important. There is a significant difference in sustainability performance between the high- and low-alignment countries, and the high-alignment countries reduce the emissions by 14.2% as compared to 4.7% in the low-alignment countries. This observation, as exhibited in Figure 3, suggests that the coexistence with international systems of governance strengthens the coordination of domestic institutions and promotes a speedy process in the implementation of policies. Process tracing also affirms that reporting requirements and involvement in multilateral agreements increase transparency and accountability, which establishes feedback mechanisms that, in turn, can be improved to improve the sustainability outcomes of the nation.

These conclusions are supported by bivariate correlations in which Government Effectiveness ($r = 0.62$, $p < 0.001$), Regulatory Quality ($r = 0.58$, $p < 0.001$), and Policy Coordination Index ($r = 0.54$, $p < 0.01$) have strong correlations with composite sustainability outcomes. The environmental indicators, especially the renewable energy share, are more dependent on governance than the economic indicators, which reflects the direct influence of institutional effectiveness on environmental policy. When taken together, the results indicate that strong governance systems and alignment with the global systems are found to be enablers and factors of sustainable development. They give factual data that institutional capacity, legal enforcement, and policy coordination are keys to integrated objectives of environmental, social, and economic sustainability.

VI. Conclusion

The study presents sound empirical data that national and international governance frameworks play a pivotal role in the success of sustainability frameworks. As seen throughout 2010-2024, positive changes in national governance, especially Government Effectiveness and Regulatory Quality, have a close connection with quantifiable increases in environmental, social, and economic sustainability performance. The findings of fixed-effects panel regression models suggest that a 1-unit increase in Government Effectiveness leads to a 6.4% decrease in per-capita greenhouse gas emissions ($\beta = -0.064$, $p < 0.01$) and a 4.9-point rise in the share of renewable energy ($\beta = 0.049$, $p < 0.01$). Policy Coordination and Regulatory Quality has a positive impact on social sustainability, increasing access to safely managed drinking water by 3.1% points ($\beta = 0.031$, $p < 0.05$), and Rule of Law has a positive impact on long-term economic sustainability, increasing adjusted net savings by 1.8% points ($\beta = 0.018$, $p < 0.05$). Countries with higher treaty compliance, reporting frequency, and financial contributions achieved a 14.2% reduction in emissions, compared to 4.7% in low-alignment cases, highlighting the synergistic effect of domestic and global institutional frameworks. These results are supported by bivariate correlations, Government Effectiveness ($r = 0.62$, $p < 0.001$), Regulatory Quality ($r = 0.58$, $p < 0.001$), and Policy Coordination Index ($r = 0.54$, $p < 0.01$), which are strongly correlated. These findings reiterate the fact that sound governance that includes institutional capacity, policy coherence, legal enforcement, and integration with other countries is essential in attaining the Sustainable Development Goals. Future studies must examine the dynamics of feedback between multi-level governance organizations and sectoral-specific sustainability performance, the emergence of new digital apparatus, and adaptive governance to support resilience in

climate-unpredictable conditions. This work can help guide the development of integrated policies that can both empower the domestic institution and also conform to international frames.

References

- [1] Adanma, U. M., & Ogunbiyi, E. O. (2024). A comparative review of global environmental policies for promoting sustainable development and economic growth. *International Journal of Applied Research in Social Sciences*, 6(5), 954-977. <https://doi.org/10.51594/ijarss.v6i5.1147>
- [2] Orazalin, N., & Mahmood, M. (2021). Toward sustainable development: Board characteristics, country governance quality, and environmental performance. *Business strategy and the environment*, 30(8), 3569-3588. <https://doi.org/10.1002/bse.2820>
- [3] Alsayegh, M. F., Ditta, A., Mahmood, Z., & Kouser, R. (2023). The role of sustainability reporting and governance in achieving sustainable development goals: An international investigation. *Sustainability*, 15(4), 3531. <https://doi.org/10.3390/su15043531>
- [4] Putri, J. W. (2024). Indonesia and ASEAN chairmanship in 2023: leading the region in strengthening relations with China. *International Journal of Law and Politics Studies*, 6(1), 96-106. <https://doi.org/10.32996/ijlps.2024.6.1.11>
- [5] Erin, O. A., Bamigboye, O. A., & Oyewo, B. (2022). Sustainable development goals (SDG) reporting: an analysis of disclosure. *Journal of Accounting in Emerging Economies*, 12(5), 761-789. <https://doi.org/10.1108/jaee-02-2020-0037>
- [6] Handoyo, S. (2024). Public governance and national environmental performance nexus: Evidence from cross-country studies. *Heliyon*, 10(23). <https://doi.org/10.1016/j.heliyon.2024.e40637>
- [7] Ni, Z., Yang, J., & Razzaq, A. (2022). How do natural resources, digitalization, and institutional governance contribute to ecological sustainability through load capacity factors in highly resource-consuming economies?. *Resources Policy*, 79, 103068. <https://doi.org/10.1016/j.resourpol.2022.103068>
- [8] Paridhi, & Ritika. (2024). Sustainability reporting for boosting national commitment and overcoming challenges: A hierarchical model. *Business Strategy & Development*, 7(1), e334. <https://doi.org/10.1002/bsd2.334>
- [9] Paridhi, Saini, N., & Shri, C. (2025). Environmental, social, and governance reporting adoption factors for sustainable development at the country level. *Environment, Development and Sustainability*, 27(3), 8003-8042. <https://doi.org/10.1007/s10668-024-04537-1>
- [10] Peng, X., & Zhang, R. (2022). Corporate governance, environmental sustainability performance, and normative isomorphic force of national culture. *Environmental Science and Pollution Research*, 29(22), 33443-33473. <https://doi.org/10.1007/s11356-022-18603-6>
- [11] Razzaq, A., Sharif, A., Ozturk, I., & Afshan, S. (2023). Dynamic and threshold effects of energy transition and environmental governance on green growth in COP26 framework. *Renewable and Sustainable Energy Reviews*, 179, 113296. <https://doi.org/10.1016/j.rser.2023.113296>
- [12] Bashir, M. A., Dengfeng, Z., Bashir, M. F., Rahim, S., & Xi, Z. (2023). Exploring the role of economic and institutional indicators for carbon and GHG emissions: policy-based analysis for OECD countries. *Environmental Science and Pollution Research*, 30(12), 32722-32736. <https://doi.org/10.1007/s11356-022-24332-7>
- [13] Shang, H., Jiang, L., Mangla, S. K., Pan, X., & Song, M. (2024). Examining the role of national governance capacity in building the global low-carbon agricultural supply chains. *Transportation Research Part E: Logistics and Transportation Review*, 192, 103833. <https://doi.org/10.1016/j.tre.2024.103833>
- [14] Lee, V., Marasini, D., Dong, W., Lee, H. J., & Lee, D. (2021). Comparative study of key supply chain management elements in sustainability reports. *Businesses*, 1(3), 168-195. <https://doi.org/10.3390/businesses1030013>

- [15] Muslim, M., & Mais, R. G. (2023). The Interplay between Transparency, Accountability, and Corruption: A Contemporary Discourse. *Advances: Jurnal Ekonomi & Bisnis*, 1(6), 332-343. <https://doi.org/10.60079/ajeb.v1i6.268>
- [16] Sotirov, M., Pokorný, B., Kleinschmit, D., & Kanowski, P. (2020). International forest governance and policy: institutional architecture and pathways of influence in global sustainability. *Sustainability*, 12(17), 7010. <https://doi.org/10.3390/su12177010>
- [17] Abhayawansa, S., Adams, C. A., & Neesham, C. (2021). Accountability and governance in pursuit of Sustainable Development Goals: conceptualising how governments create value. *Accounting, Auditing & Accountability Journal*, 34(4), 923-945. <https://doi.org/10.1108/aaaj-07-2020-4667>
- [18] Tolliver, C., Keeley, A. R., & Managi, S. (2020). Drivers of green bond market growth: The importance of Nationally Determined Contributions to the Paris Agreement and implications for sustainability. *Journal of cleaner production*, 244, 118643. <https://doi.org/10.1016/j.jclepro.2019.118643>
- [19] Ciasullo, M. V., Troisi, O., Grimaldi, M., & Leone, D. (2020). Multi-level governance for sustainable innovation in smart communities: an ecosystems approach. *International Entrepreneurship and Management Journal*, 16(4), 1167-1195. <https://doi.org/10.1007/s11365-020-00641-6>
- [20] Baloch, Q. B., Shah, S. N., Iqbal, N., Sheeraz, M., Asadullah, M., Mahar, S., & Khan, A. U. (2023). Impact of tourism development upon environmental sustainability: a suggested framework for sustainable ecotourism. *Environmental Science and Pollution Research*, 30(3), 5917-5930. <https://doi.org/10.1007/s11356-022-22496-w>