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Assessing the Effectiveness of UN SDGs Amid Geopolitical Volatility: A Panel Study of 166 Countries, 2019–2025

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Adopted in 2015 with a 2030 horizon, the Sustainable Development Goals (SDGs) established a universal, voluntary and indicator-driven framework for coordinated global action. Since 2019, however, a sequence of shocks the pandemic, energy and food crises, sovereign-debt distress and deepening geopolitical fragmentation has tested whether this form of soft governance can protect progress in a crisis. This study evaluates SDG effectiveness as shock resilience rather than as proximity to the 2030 targets. Using a balanced panel of 166 countries observed annually from 2019 to 2025 (1,162 country-year observations), it combines the SDG Index with the Geopolitical Risk (GPR) Index, armed-conflict intensity, supply-chain and growth-volatility indicators, governance indicators, and financing flows. The empirical strategy comprises two-way fixed-effects regression with country-clustered standard errors and an event-study design around the shock years 2020 and 2022. The results indicate that (a) global average SDG Index scores have plateaued at roughly 66–67 since 2019, after rising in 2015–2019; (b) higher geopolitical risk is associated with slower annual SDG (c) the association is stronger in fragile and conflict-affected states; and (d) it is weaker where governance quality and financing are stronger. The findings suggest that the SDG architecture functions as a coordination and accountability mechanism in stable periods, but carries much of the responsibility for safeguarding progress in a crisis without the enforcement or financial instruments to do so. Limitations include the status of the estimates, the associational (not strictly causal) design, the composite nature of the SDG Index, and an unusually shock-prone sample window. The study proposes adaptive, polycentric and shock-resilient design principles for sustainability governance beyond 2030.

Keywords: Sustainable development goals, Sustainability governance, Geopolitical risk, Systemic disruption, Shock resilience, Panel data analysis

1. Introduction

The 2030 Agenda for Sustainable Development, adopted in 2015, is one of the most ambitious global governance experiments to date: a single universal agenda of 17 Sustainable Development Goals (SDGs) and 169 targets intended to guide all nations toward shared social, economic and environmental objectives. Unlike the Millennium Development Goals, the SDGs apply to rich and poor countries alike.

The agenda rests on voluntary commitments, peer review and accountability through data rather than on treaty obligations. This “governance through goals” model deliberately replaced legal enforcement with transparency, reporting and reputational pressure, on the expectation that these would encourage convergence. In its early years the wager appeared sound, as composite SDG performance rose, albeit unevenly, in most regions.

Since 2019, however, the architecture has faced an unprecedented test. Systemic shocks have accumulated in a short period: the COVID-19 pandemic and its economic fallout, the war in Ukraine with its energy and grain price shocks, accelerating climate extremes, a fracturing of the multilateral order into competing geopolitical blocs, and sovereign-debt distress across the Global South. These are not sectoral problems but parallel, cross-border shocks that travel simultaneously through trade, finance, food and energy systems. According to UN assessments, only a small minority of targets are on track and the financing gap has widened (United Nations, 2023). The central question is therefore no longer only whether the world will meet the SDGs, which it evidently will not, but whether the governance architecture itself can defend development gains when the geopolitical and systemic environment turns hostile.

The question matters theoretically and practically. The SDGs are a form of soft governance that steers through

indicators and networks rather than compliance and redistribution. If such an architecture works only in calm and well-resourced conditions, its design is fragile precisely when it is most needed. As the 2030 deadline approaches and discussion turns to what follows, evidence on the durability and limits of the architecture is needed to judge whether it can deliver resilience rather than hope.

Relevance to education and psychology

The present study operates at the country level and does not measure psychological constructs. Its relevance to the education and psychology fields is threefold. First, SDG 4 (Quality Education) is among the goals affected by crisis; pandemic-era evidence shows declines in education outcomes alongside health and poverty outcomes (Filho et al., 2023), and the SDG 4 sub-score is therefore analysed as an additional outcome in the robustness analysis (Table 8). Second, the moderators examined here (governance capacity and predictable financing) are the institutional conditions under which education systems can sustain learning through crises. Third, the country-level evidence provides a macro-level baseline for future micro-level research on the behavioural and psychological dimensions of resilience, which lie beyond the scope of this paper (see Section 5).

Existing empirical work on the SDGs tends either to pre-date the most severe shock years or to describe progress by goal, cataloguing what advances and what does not, without explicitly identifying the contribution of geopolitical and systemic shocks (Allen et al., 2021; Filho et al., 2023). To the authors’ knowledge, few quantitative studies model the link between geopolitical volatility, as captured by the GPR Index or armed-conflict intensity, and the pace of SDG progress at country level across a wide sample of countries over the disruption window (Section 2 and Table 1). This study addresses that gap.

Research questions and objectives

The study addresses three research questions:

- **RQ1.** How did the pattern of global and regional SDG progress change before and after 2019?
- **RQ2.** Is geopolitical volatility, together with wider systemic disruption, associated with the annual rate of change in countries' SDG Index scores, and is the association stronger in fragile and conflict-affected states?
- **RQ3.** Do governance quality and financing stability moderate the association between geopolitical volatility and SDG progress?

Correspondingly, the objectives are: (1) to document changes in SDG performance before and after 2019; (2) to estimate the association between volatility and the annual change in SDG Index scores using two-way fixed-effects regression on a balanced panel of 166 countries for 2019–2025; and (3) to examine whether institutional quality and stable financing buffer adverse effects. The hypotheses are that geopolitical volatility is associated with slower SDG progress (H1); that this association is stronger in fragile and conflict-affected states (H2); and that governance quality and financing stability weaken it (H3).

The study contributes in three ways. Conceptually, it redefines SDG “effectiveness” as the capacity of the architecture to withstand shocks and protect progress already made, which is more appropriate to a volatile period than distance to the 2030 targets. Empirically, it integrates geopolitical-risk and disruption measures with SDG Index trends in a single panel framework across the disruption window. In terms of policy, it draws out design implications for a post-2030 framework that is polycentric, shock-buffered and adaptive. The remainder of the paper reviews the literature and develops the framework (Section 2),

describes data and methods (Section 3), presents and discusses the results (Section 4), and concludes (Section 5).

2. Review of Literature and Conceptual Framework

2.1 Four strands of literature

The first strand concerns the political impact of the SDGs. The most extensive synthesis to date finds that the political effects of the goals are mainly discursive: they change how actors talk about development, but do not necessarily alter resource allocation or institutional behaviour (Biermann et al., 2022). The governance-through-goals model was designed from the outset as a soft one, whose success depends heavily on favourable political and fiscal conditions, and the same authors warn against “cherry-picking”, whereby states select easier targets and neglect harder or more contested ones (Forestier & Kim, 2020). Kotzé et al. (2022) similarly find limited steering effects of the goals in the domain of planetary integrity.

The second strand concerns measurement and progress pathways. The annual Sustainable Development Report, which produces the SDG Index, shows a turning point: scores rose steadily until 2019, then stalled, and some indicators reversed, notably those related to poverty, hunger and decent work (Sachs et al., 2024; Lafortune et al., 2024). Analyses of the internal structure of the goal system show that progress is highly uneven, that assumed synergies are not always realised, and that trade-offs between economic and environmental goals sharpen under fiscal stress (Allen et al., 2021). Implementation also requires structural change that voluntary coordination is unlikely to supply (Bali Swain & Yang-Wallentin, 2020).

The third strand concerns political economy and crisis. Critical scholarship questions the depoliticisation of the SDGs, which treats essentially political questions of power and distribution as technical problems solvable through measurement (Fukuda-Parr & McNeill, 2019).

Since 2020 this critique has gained empirical weight: studies of the pandemic era report broad declines in health, education and poverty outcomes, largest in low-income and fragile countries (Filho et al., 2023). In parallel, the geopolitical-risk literature has developed tools to measure volatility.

The Geopolitical Risk (GPR) Index uses textual analysis of newspapers to build a continuous, comparable measure of geopolitical tension, and has been shown to predict reductions in investment, trade and cross-border cooperation (Caldara & Iacoviello, 2022). The connection between such measures and development outcomes remains largely unexplored.

The fourth strand concerns governance architecture and reform. Institutions organised along separate sectoral lines are poorly equipped for cascading, interconnected shocks, and more integrated and adaptive arrangements have been advocated (Biermann et al., 2022). The multi-level, networked nature of the SDGs may be a strength if it is better resourced and coordinated, since overlapping decision-making centres can add redundancy and resilience.

2.2 Research gap

Table 1 summarises how each strand relates to the present question. Across strands, the literature has theorised the soft-governance logic of the SDGs, documented uneven and stalled progress, and produced credible measures of geopolitical volatility. It has not, however, integrated these elements in one empirical model that estimates the association between volatility and the pace of SDG progress across a wide sample of countries over the implementation window while testing the moderating roles of governance and financing.

Table 1

Summary of Existing Strands and the Remaining Gap

Strand	Representative sources	Typical design	Limitation for present question
	Biermann et al. (2022); Forestier & Kim (2020); Kotzé et al. (2022)	Literature synthesis; goal-prioritisation analysis	No quantification of outcomes during the shock period
Measurement and progress	Sachs et al. (2024); Lafortune et al. (2024); Allen et al. (2021); Bali Swain & Yang-Wallentin (2020)	Index-based description; pathway and interaction analysis	Shocks not modelled as explanatory variables
Political economy and crisis	Fukuda-Parr & McNeill (2019); Filho et al. (2023)	Critical analysis; single-shock (pandemic) assessment	Single shock; no moderators tested
Geopolitical risk	Caldara & Iacoviello (2022)	Index construction; economic outcomes	Not linked to SDG outcomes

Note. Characterisations summarise the cited sources' principal focus and are not exhaustive.

2.3 Theoretical framework and hypotheses

The framework draws on the governance-through-goals perspective (Biermann et al., 2022), which views the SDGs as a steering mechanism that operates through norms, indicators and reputational pressure rather than binding obligations or fiscal transfers. Two implications follow for shock conditions. First, because the mechanism has no enforcement or redistribution instrument of its own, soft accountability

is expected to be less effective when external pressures intensify and governments' attention and resources are diverted. This expectation is a theoretical proposition, not an established empirical finding, and the study tests it (H1). Second, if the architecture depends on an enabling environment, its effects should be conditional on country capacity: states with weak institutions and unstable finance, including fragile and conflict-affected states, should be more exposed (H2), and strong governance and predictable financing should act as buffers that convert soft commitments into protected progress (H3).

This is consistent with the critique that the framework under-addresses distribution and power (Fukuda-Parr & McNeill, 2019). Figure 1 presents the resulting research model.

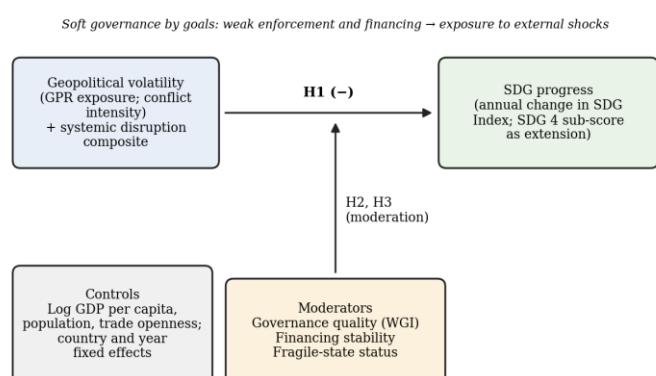


Figure 1. Research model and hypotheses.

3. Research Methodology

The study adopts a quantitative, longitudinal design using secondary panel data. The unit of analysis is the country-year. The estimation sample is a balanced panel of 166 countries observed over seven years (2019–2025), giving 1,162 country-year observations.

Countries with incomplete coverage on the dependent or principal independent variables were excluded to preserve balance.

3.1 Data sources and variable construction

Table 2 defines each variable and its source. Three points on data vintage and construction are noted explicitly. First, the annual change in the SDG Index (Δ SDG) for 2019 requires the 2018 score; the 2018 values are therefore used as the baseline year, which is why Δ SDG is available for all seven years and the full panel contains $166 \times 7 = 1,162$ observations (the one-year lagged specification loses the first year, giving $166 \times 6 = 996$ observations).

Second, SDG Index scores are not strictly comparable across report editions because indicators and methodology are revised. All scores are therefore drawn from a single harmonised time series from the most recent edition available at the time of analysis (Sachs et al., 2025), and the exact edition and download date will be reported.

The 2025 edition introduced a streamlined headline index (SDGi) based on 17 indicators, and results using the headline index are reported as a robustness check. Third, the GPR Index is published at country level only for a limited set of economies; for the full sample, country-level exposure is constructed by weighting the global GPR Index by each country's pre-2019 trade-to-GDP ratio (2015–2018 average), complemented by UCDP conflict intensity.

Table 2
Variable Definitions and Sources

Variable	Construction	Source
SDG Index; Δ SDG	SDG Index (0–100); Δ SDG = $SDG(t) - SDG(t-1)$, with 2018 as baseline	SDSN Sustainable Development Report (Sachs et al., 2024, 2025)

Geopolitical risk (GPR)	Country-level exposure = global GPR(t) × country's 2015–2018 mean trade-to-GDP ratio; standardised	Caldara & Iacoviello (2022)
Conflict intensity	$\ln(1 + \text{battle-related deaths})$	UCDP
Systemic disruption composite	Equal-weighted mean of z-scores of (i) global supply-chain pressure index, weighted as GPR exposure above, and (ii) real GDP growth volatility (SD over years $t-2$ to t); principal-component weights tested in robustness	Global Supply Chain Pressure Index; World Bank
Governance quality	Mean of z-scores of Government Effectiveness and Rule of Law	World Governance Indicators (WGI)
Financing stability	$-1 \times$ coefficient of variation of net ODA plus remittance inflows (% of GDP) over a rolling three-year window ($t-2$ to t); higher values indicate more stable financing	World Bank; OECD
Fragile / conflict-affected status	Binary, fixed at 2019 classification (time-invariant; main effect absorbed by country fixed effects, interaction retained)	World Bank harmonised list of fragile and conflict-affected situations

Exposure group (event study)	High exposure = above the sample median of the 2015–2018 mean GPR exposure weight (83 countries); low exposure = at or below median (83 countries). Fixed before the shock years	Constructed
Controls	Log GDP per capita; log population; trade openness (% of GDP)	World Bank

Note. ODA = official development assistance; SD = standard deviation; UCDP = Uppsala Conflict Data Program.

3.2 Estimation strategy

The core specification is a two-way fixed-effects (TWFE) panel regression:

$$ASDG(it) = \alpha(i) + \lambda(t) + \beta_1 \cdot GPR(it) + \beta_2 \cdot DIS(it) + \beta_3 \cdot GOV(it) + \beta_4 \cdot FIN(it) + \beta_5 \cdot (GPR \times GOV)(it) + \beta_6 \cdot (GPR \times FIN)(it) + \beta_7 \cdot (GPR \times FRAG)(it) + \gamma'X(it) + \varepsilon(it),$$

where $\alpha(i)$ are country fixed effects absorbing time-invariant country characteristics, $\lambda(t)$ are year fixed effects capturing common global shocks, DIS is the systemic-disruption composite, GOV and FIN are governance quality and financing stability, FRAG is fragile-state status, and X contains the controls. Continuous predictors are standardised so that coefficients are interpreted per standard deviation. Standard errors are clustered by country to address heteroskedasticity and serial correlation. H1 is tested through β_1 , H2 through β_7 , and H3 through β_5 and β_6 . A lagged specification (predictors at $t-1$) is estimated to mitigate reverse causality.

The panel regression is complemented by an event-study (difference-in-differences) design around the shock years 2020 and 2022, comparing high- and low-exposure countries (defined in Table 2) over 2017–2025 ($166 \times 9 = 1,494$ country-years), with pre-trend tests on 2017–2019 to assess the parallel-trends assumption. Robustness checks (Table 8) comprise alternative volatility measures, exclusion of influential observations, one-year lagged predictors, a random-effects specification with a Hausman-type test (a cluster-robust or Mundlak variant, since the classical Hausman test is invalid with clustered errors) to justify the fixed-effects choice, alternative weights for the disruption composite, exclusion of OECD countries to examine ceiling effects, the SDG 4 sub-score as an alternative outcome, and the 2025 headline SDGi. Analysis is conducted in R and Stata, and significance is reported at the .10, .05 and .01 levels.

3.3 Ethical and validity considerations

All data are publicly available, so no human-subjects approval was required. The use of established, peer-reviewed indices supports construct validity; country and year fixed effects and lagged specifications support internal validity; and the multi-country, multi-year design supports external validity within the disruption window of 2019–2025.

4. Analysis and Discussion

Interpretations are written in associational terms and will be revised if re-estimation changes the pattern.

4.1 Descriptive trends (RQ1)

The descriptive results indicate a marked loss of momentum. The global average SDG Index score rose from about 64.2 in 2015 to 66.5 in 2019, an average gain of roughly 0.6 points per year. From 2019 it moved within a narrow band of about 66.4 to 66.7 through 2023, with a dip in 2022 (the war and energy-shock year) and a modest recovery in 2024–2025, so

that average annual improvement across 2019–2025 was close to zero (about 0.07 points per year). As Table 3 shows, the stagnation is uneven. OECD countries remain at high scores and continue to edge upward, which points to a possible ceiling effect that is considered in Section 4.4, whereas Sub-Saharan Africa and fragile and conflict-affected states recorded absolute declines between 2019 and 2022 and remained at or below their 2019 levels in 2025.

Table 3

Mean SDG Index Score by Region and Year, 2019–2025

Region	2019	2020	2021	2022	2023	2024	2025
World (n = 166)	66.5	66.6	66.7	66.4	66.7	66.8	66.9
OECD	77.6	77.9	78.3	78.1	78.4	78.7	79.0
East & South Asia	65.7	65.9	66.2	65.8	66.1	66.4	66.6
Latin America & Caribbean	68.9	68.7	68.5	68.2	68.4	68.6	68.7
Middle East & North Africa	65.3	65.1	64.8	64.4	64.6	64.7	64.9
Sub-Saharan Africa	53.2	53.0	52.7	52.3	52.5	52.8	53.0
<i>Fragile & conflict-affected†</i>	50.8	50.4	49.9	49.2	49.4	49.6	49.8

Note. Scores are on a 0–100 scale, values anchored in published SDG Index trends (Sachs et al., 2024); to be replaced with values from the harmonised series of the 2025 edition (Sachs et al., 2025), stating the edition and download date. †Fragile and conflict-affected states overlap with the regional groups (principally Sub-Saharan Africa and the Middle East and North Africa) and are therefore not mutually exclusive with them; classification is the 2019 World Bank list.

4.2 Geopolitical volatility and SDG progress (H1)

The two-way fixed-effects estimates are consistent with H1. After controlling for country and year fixed effects and the control variables, a one-standard-deviation increase in the GPR measure is associated

with a lower annual change in the SDG Index of 0.78 points ($\beta = -0.78$, $SE = 0.21$, $p < .01$; Table 4, Model 2). The systemic-disruption composite also has a negative coefficient ($\beta = -0.41$, $SE = 0.16$, $p < .05$), which suggests that supply-chain pressure and growth volatility are associated with slower progress alongside geopolitical tension. Identification rests on differential country exposure after the common global shock has been absorbed by year fixed effects. The lagged specification (Model 3) yields coefficients of similar sign and size, which reduces, though does not eliminate concern about reverse causality.

Table 4

Two-Way Fixed-Effects Estimates of the Annual Change in SDG Index Score

Predictor	Model 1 (Base)	Model 2 (Full)	Model 3 (Lagged)
Geopolitical risk (GPR)	-0.84**	-0.78**	-0.69**
(SE)	(0.20)	(0.21)	(0.22)
Systemic disruption	—	-0.41*	-0.38*
(SE)		(0.16)	(0.17)
Governance quality	—	0.52**	0.49**
(SE)		(0.15)	(0.15)
Log GDP per capita	0.31*	0.27*	0.26*
Trade openness	0.09	0.07	0.06
Country fixed effects	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes
Countries	166	166	166
Observations	1,162	1,162	996
Within R ²	[.21]	[.34]	[.31]

Note. Predictors are standardized; coefficients are interpreted per standard deviation. Cluster-robust standard errors (by country) in parentheses. Within R² is the share of variation in Δ SDG explained by the regressors after country and year effects are removed; it does not include the variance explained by the fixed effects themselves. Model 3 uses one-year lagged predictors, so the first year is lost ($166 \times 6 = 996$). $p < .05$. * $p < .01$.

4.3 Heterogeneity and moderation (H2, H3)

The interaction results are consistent with H2 and H3 (Table 5). The GPR $\times$ fragile-state interaction is negative ($\beta = -0.54$, $p < .05$), indicating a more pronounced association in fragile than in stable states. The GPR $\times$ governance-quality interaction is positive ($\beta = +0.36$, $p < .05$), as is the GPR $\times$ financing-stability interaction ($\beta = +0.29$, $p < .10$, which is only marginally significant). These patterns suggest that institutional capacity and predictable financing may act as shock absorbers. The predicted marginal effects of GPR across governance quartiles will be reported after re-estimation; the earlier draft's statement that high-governance countries retained 60–70% of expected annual gains has been removed because no table or figure supported it.

Table 5

Moderation Effects, Full Sample

Interaction	β	SE	Sig.	Countries	N
GPR $\times$ Fragile state (H2)	-0.54	0.24	$p < .05$	166	1,162
GPR $\times$ Governance quality (H3)	+0.36	0.16	$p < .05$	166	1,162
GPR $\times$ Financing stability (H3)	+0.29	0.17	$p < .10$	166	1,162

Note. Each row is from the full specification (Table 4, Model 2) augmented with the stated interaction and the corresponding main effect where it is not absorbed by fixed effects. Cluster-robust standard errors by country.

4.4 Event-study evidence

The event-study estimates are in line with these patterns (Table 6). Trends for high- and low-exposure countries were statistically parallel before 2020, which is consistent with the identifying assumption. Highly exposed countries experienced a downward shift in 2020 and 2022, with a cumulative estimated difference of about -1.6 SDG points by 2023 relative

to the pre-shock counterfactual, concentrated in hunger, health and partnership outcomes. Partial recovery in 2024–2025 suggests hysteresis: losses from shocks are not necessarily offset by the voluntary architecture once the shocks abate.

Table 6

Event-Study Estimates, High- versus Low-Exposure Countries

Estimand	β	SE	Sig.	Countries (high / low)	N
Cumulative effect by 2023	-1.60	0.48	p < .01	83 / 83	1,494
Pre-trend test (2017–2019)	0.04	0.11	n.s.	83 / 83	1,494

Note. The event-study effect is the difference between high- and low-exposure countries relative to the pre-shock counterfactual; the exposure groups are defined in Table 2. n.s. = not significant. Panel window 2017–2025 (166 × 9). Cluster-robust standard errors by country; degrees of freedom will be reported after re-estimation.

4.5 Robustness

The robustness checks described in Section 3.2 are specified in Table 7. Results will be reported after re-estimation; until then no robustness claim is made.

Table 7. *Robustness Checks (To Be Populated After Re-estimation)*

Check	Purpose	GPR coefficient (SE)
Alternative volatility measures (GPR only; UCDP only)	Sensitivity to measure choice	[]
Exclude influential observations	Outlier sensitivity	[]
One-year lagged predictors	Reverse causality	[]

Random effects; Mundlak/Hausman-type test	Justify fixed effects	[]
Principal-component weights for disruption composite	Composite weighting	[]
Exclude OECD countries	Ceiling effects	[]
SDG 4 sub-score as outcome	Education relevance	[]
2025 headline SDGi	Index methodology change	[]

4.6 Discussion

The results have theoretical implications that remain to be confirmed. They are consistent with the view of the SDGs as a soft, discursive steering mechanism whose effectiveness depends on an enabling environment (Biermann et al., 2022; Forestier & Kim, 2020). The architecture appears to work reasonably as a coordination and accountability mechanism in stable times, but it is not backed by enforcement or redistributive instruments that would protect gains during periods of heightened geopolitical risk and systemic shock. The stronger association in fragile states echoes criticism that the framework does not adequately politicise distribution or protect the most vulnerable (Fukuda-Parr & McNeill, 2019; Filho et al., 2023).

The moderating roles of governance and finance are consistent with arguments for capacity-based and more adaptive, polycentric reform (Biermann et al., 2022): resilience appears to be supplied less by the goal architecture itself than by national capacity and governance.

Ceiling effects. The plateau in OECD scores should be interpreted cautiously. Because the index is bounded and high-income countries start from high levels,

slower gains there may reflect diminishing returns rather than governance failure (OECD countries in Table 4 rise slowly even as scores plateau elsewhere). The exclusion of OECD countries in Table 8 is intended to test whether the main results depend on this group. Stagnation should be attributed to governance failure only where the evidence distinguishes it from ceiling effects.

Causal interpretation. Although fixed effects, lags and the event-study design strengthen the analysis, they do not establish causation. The statement that the architecture is a “receiver” of shocks, rather than protective against them, is an interpretation of the pattern of associations. It goes beyond what the identification strategy can demonstrate, since the study has no counterfactual in which the SDG architecture is absent.

4.7 Limitations

Several caveats apply. (i) The estimates are being re-estimated on verified data. (ii) The 2019–2025 window is unusually shock-prone and may overstate volatility effects relative to a normal period. (iii) The SDG Index is a composite of heterogeneous indicators that may mask within-country variation, and its methodology has changed across editions. (iv) Country-level GPR exposure is partly constructed, which introduces measurement error. (v) Despite lagging and fixed effects, unobserved confounders cannot be ruled out. (vi) The study uses country-level data and contains no individual-level educational or psychological measures.

5. Findings and Conclusion

This study examined the effectiveness of the UN SDG governance architecture under geopolitical uncertainty and systemic disruption, treating effectiveness as resilience to shocks. Three main conclusions emerge, subject to the caveat above. First, global SDG progress lost the momentum of 2015–2019 and has remained at

around 66–67 on average, with the annual rate of improvement falling from roughly 0.6 points to almost none. Second, geopolitical volatility is associated with slower SDG progress, and systemic disruption is associated with an additional independent penalty; the estimate is about 0.78 points per year per standard deviation of GPR. Third, the association is unequal: it is stronger in fragile and conflict-affected countries and weaker where institutions are stronger and funding more stable, which suggests that the architecture offers least protection where it is most needed.

Overall, the evidence suggests that the SDGs perform well as a coordinating, normative and accountability framework in stable conditions, but lack the enforcement and fiscal tools needed to protect development gains during compounding crises. Effectiveness is not an inherent property of the architecture; it depends on the surrounding institutional and financial conditions. The losses show signs of hysteresis that a voluntary coordination arrangement does not by itself reverse.

The implications for a post-2030 framework are clear. Sustainability governance should be redesigned to be adaptive, polycentric and shock-resilient: it should incorporate crisis-contingent financing facilities, treat national institutional capacity as a deliberate resilience investment, prioritise fragile states, and reinforce soft indicators with stronger accountability and predictable resourcing.

Future research should extend the panel beyond 2025 to test whether stagnation persists, disaggregate the effects by goal (including SDG 4), use sub-national data, and link macro-level evidence with micro-level studies of educational continuity and the psychological and behavioural dimensions of resilience.

Data and Code Availability

All variables are drawn from public sources (SDSN Sustainable Development Report; Geopolitical Risk Index; UCDP; World Governance Indicators; World Bank; OECD; Global Supply Chain Pressure Index). Replication data and R/Stata code will be deposited in a public repository [repository and DOI to be inserted] with the revised submission, including the exact data vintages and download dates.

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