










“Institutional governance and aid effectiveness in achieving the sustainable development goals: Cross-country evidence from IDA-eligible countries”

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INSTITUTIONAL GOVERNANCE AND AID EFFECTIVENESS IN ACHIEVING THE SUSTAINABLE DEVELOPMENT GOALS: CROSS-COUNTRY EVIDENCE FROM IDA-ELIGIBLE COUNTRIES

Abstract

The effectiveness of international development assistance in promoting sustainable development remains a central question for the management of multilateral aid and public governance as the 2030 Agenda enters its final years. This paper examines the relationship between aid effectiveness, measured by the World Bank's Country Policy and Institutional Assessment (CPIA), and the achievement of the Sustainable Development Goals (SDGs) across 76 IDA-eligible countries over the period 2005–2023. Using two-way fixed-effects panel estimations with clustered standard errors, the analysis covers five individual SDG indicators (poverty, child mortality, primary education, electricity access, and employment) and the composite SDG Index. The results show that the overall CPIA score is significantly associated with poverty reduction in low-income countries ($\beta = -12.0, p < 0.10$), while its effect on the composite SDG Index is statistically insignificant within countries, despite a strong cross-sectional association. A cluster decomposition reveals that structural policies drive improvements in child mortality and electricity access, while economic management supports employment outcomes. Sub-sample analysis demonstrates pronounced heterogeneity: the marginal return to institutional quality is highest in the poorest economies and shifts toward health and labor market outcomes as countries move up the income ladder. GDP per capita remains the dominant predictor across all SDG dimensions, confirming that aid effectiveness complements rather than substitutes for domestic economic capacity. These findings support a differentiated management approach to development assistance that targets specific governance dimensions to specific SDG outcomes and prioritizes institutional strengthening in the most resource-constrained settings.

Keywords

aid effectiveness, Sustainable Development Goals, CPIA, institutional quality, panel data, IDA countries, development assistance

JEL Classification

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INTRODUCTION

The Sustainable Development Goals (SDGs), adopted by the United Nations General Assembly in 2015, constitute the most comprehensive global framework for addressing poverty, inequality, environmental degradation, and institutional weakness (Sachs et al., 2025). With the 2030 deadline approaching, progress remains uneven, particularly in the poorest countries that depend heavily on concessional assistance from the International Development Association (IDA) (Sachs et al., 2025). Yet whether and how aid translates into tangible development outcomes – the aid effectiveness question – continues to generate inconclusive evidence (Arndt et al., 2015; Guerrero et al., 2023; Gehring et al., 2017).

A central strand of this debate focuses on institutional quality as a mediator of aid effectiveness, with evidence suggesting that the relationship between ODA and growth depends on cumulative flows, institutional context, and domestic governance quality (Arndt et al., 2015; Azam et al., 2021; Bagirzade, 2023; Gidiglo et al., 2024). The World Bank's Country Policy and Institutional Assessment (CPIA), which rates IDA-eligible countries on a 1-to-6 scale across four clusters (economic management, structural policies, social inclusion, and public sector management), operationalizes this concept and governs the allocation of concessional IDA resources. Despite its central role, relatively few studies have examined the CPIA–SDG relationship at the cross-country level using within-country variation over time, and most existing research relies on aggregate measures or cross-sectional designs that conflate structural differences with institutional change (Sachs et al., 2025; Gasimov et al., 2023a).

1. LITERATURE REVIEW

The question of whether international development assistance translates into tangible welfare improvements remains contested, and the relative contribution of specific institutional channels to individual SDG outcomes is not yet established. This review synthesizes scholarship across aid effectiveness, institutional quality, and SDG outcomes to identify the gaps the present study addresses.

The effectiveness of foreign aid in promoting growth has been subject to sustained disagreement. Evidence supports the view that ODA contributes to long-run growth when cumulative flows are considered (Arndt et al., 2015), facilitating structural change through capital formation (Arndt et al., 2015; Gidiglo et al., 2024), and that sector-specific aid improves welfare indicators in rural Sub-Saharan Africa (Ndikumana & Pickbourn, 2017). However, a persistent “micro-macro paradox” complicates the aggregate picture, as positive project-level outcomes often fail to materialize in country-level regressions (Guerrero et al., 2023; Gehring et al., 2017). Aid fragmentation undermines effectiveness, though donor diversity may benefit education outcomes (Gehring et al., 2017). ODA effects on labor markets and inequality remain context-dependent, with negative effects on working poverty in Middle Eastern host countries (Alwrekiat et al., 2023) and non-linear interactions with macroeconomic conditions in Vietnam (Ho et al., 2023).

A convergent strand of literature examines institutional quality as a mediator of development outcomes. Governance quality is widely recognized as a precondition for sustainable development (Azam

et al., 2021; Makarenko et al., 2025; Triarchi et al., 2023), with cross-country evidence demonstrating a positive but potentially non-linear association with growth, including threshold effects (Gasimov et al., 2023a; Gasimov et al., 2023b). Governance quality directly shapes whether capital flows become catalysts for progress or sources of rent-seeking (Panigrahi et al., 2025; Manaf et al., 2025; Muyambri, 2025).

Recent research has expanded the institutional quality framework to encompass digital governance, anti-corruption capacity, and technological readiness. Strong regulatory institutions support financial integrity (Lyeonov et al., 2025b), political will drives public management reforms (Sarker et al., 2023), and behavioral governance dimensions affect macroeconomic stability (Brychko et al., 2025). At the corporate level, governance standards improve firm performance (Vintilă et al., 2025; Hasan et al., 2024), ESG reporting depends on oversight quality (Ruziwa et al., 2025; Mphahlele et al., 2025), innovative technologies reduce corruption (Yefimenko et al., 2025), and sustainability transparency indices demonstrate the governance–sustainability nexus (Makarenko et al., 2024). These channels raise the question of how governance translates into specific SDG progress.

Turning to specific SDG dimensions, reducing poverty remains the foundational development objective. Financial inclusion significantly reduces structural poverty in developing economies (Adenike et al., 2025; Eriqat et al., 2025), with microfinance reaching excluded populations (Ismail et al., 2024). Monetary tightening disproportionately affects lower-income groups (Rabhi & Parsons, 2025; Shapoval et al., 2024), digi-

tal finance narrows the urban-rural income gap (Zhang, 2024), and domestic savings underpin macroeconomic stability in resource-dependent economies (Alsubaie, 2025).

Similarly, health outcomes are conditioned by economic resources and institutional frameworks. Proximity to aid projects reduces child mortality in rural areas (Kotsadam et al., 2018), yet health expenditure commitments remain unfulfilled across Sub-Saharan Africa (Megbowon & Zerihun, 2025). Health insurance models correlate with reduced disease burden in OECD countries (Kuzior et al., 2025b), and knowledge management supports health innovation (Alemu, 2025). Quality-of-life determinants exhibit significant cross-country heterogeneity (Vasylieva et al., 2023), psychosocial well-being challenges represent emerging concerns at the health-technology intersection (Burrell, 2025, 2026), and food insecurity remains concentrated in Sub-Saharan Africa and South Asia (Montero et al., 2025).

Education is both a development outcome and a critical enabler of broader SDG progress. Aid has increased primary enrollment, though the “quantity-quality nexus” persists as learning outcomes lag behind (Birchler & Michaelowa, 2016), and the COVID-19 pandemic underscored SDG 4’s importance for socio-economic resilience (Zindi & Majam, 2025). Human capital development varies between resource-rich and resource-poor economies (Muyambri, 2025), retraining programs preserve intellectual capital during conflicts (Yeremenko, 2026), and retention and access strategies reflect institutional quality challenges (Green, 2025; Bagirzade, 2025a; Roy & Misra, 2024).

In the energy domain, access to modern energy is a prerequisite for economic participation. Household income is the dominant determinant of energy poverty, with efficiency improvements and renewables contributing but not yet decisive (Smiech et al., 2025), requiring integrated approaches combining efficiency with social protection (Naumenkova et al., 2024). Feed-in tariffs mobilize investment in renewable transitions (Lyeonov et al., 2025a), while climate vulnerability exacerbates inequality and climate readiness mitigates these effects (Chaouech, 2025). Sustainable rural development depends on community

engagement and information dissemination (Bappayo & Kakudi, 2025), and modern technologies support sustainable tourism as a pathway for inclusive growth (Mshana & Postrzednik-Lotko, 2026; Taliouris & Trihas, 2026; Bilan et al., 2025).

Turning to labor markets, SDG 8 connects growth, employment, and sustainability (Raman et al., 2025). Unemployment reduction depends on growth, education, and investment, with regional variation in coordination effectiveness (Tjahjanto et al., 2023). The gender pay gap limits both growth and equity (Morin, 2025; Fernández-Guadaño et al., 2025), while inclusive employment for persons with disabilities represents an emerging dimension of labor market resilience (Zahorodnia et al., 2026a). AI may reshape labor markets, requiring proactive reskilling (Kuzior et al., 2025a), and economic downturns impose high social costs (Vokoun et al., 2024). Sustainable HR policies and public sector trust shape the institutional environment for labor markets (Ly & Mujtaba, 2025; Litovtseva et al., 2022; Bagirzade, 2025b).

In the trade and investment sphere, FDI stimulates growth through industrialization and technology transfer, as evidenced by African and Central and Eastern European evidence (Chibalamula et al., 2023; Bieleń et al., 2024), though the effects of trade openness are ambiguous in specific structural contexts (Chibalamula et al., 2023). Sectoral trade channels operate differently across development stages (Shaheen & Shuquan, 2025), and the FDI-development relationship depends on absorptive capacity and institutional quality (Mursalov et al., 2025). Insurance sector development contributes asymmetrically to growth (Drissi & Alsuhaibani, 2024), and fiscal policies affect development through exchange rate channels (Ahmed, 2025).

Taken together, the evidence across SDG dimensions underscores that development outcomes are shaped by multiple interacting channels. Inclusive growth, defined as broadly shared economic expansion, has gained prominence as an integrative framework (Saher et al., 2024), and health care provision linked to affordable housing (Kuzior et al., 2022). Composite SDG Index metrics are indispensable for benchmarking but may mask heterogeneity across goals (Amanova et al., 2025;

Guerrero et al., 2023; Brodny & Tutak, 2023). SDG implementation varies between “old” and “new” EU member states (Brodny & Tutak, 2023). Female entrepreneurship represents an underexplored SDG pathway (Fernández-Guadaño et al., 2025). The SDG Index captures broad tendencies but may not predict specific economic performance (Amanova et al., 2025), and demographic transformational interlinkages affect governance capacity (Zahorodnia et al., 2026b).

The substantive findings reviewed above are shaped by methodological choices. Panel data with fixed effects remain the dominant framework for controlling country-level heterogeneity (Gehring et al., 2017; Kuzior et al., 2025a; Arndt et al., 2015). System GMM and instrumental variables address endogeneity concerns (Arndt et al., 2015; Azam et al., 2021; Gidiglo et al., 2024), while quasi-experimental designs provide cleaner causal identification (Kotsadam et al., 2018). A key limitation is the reliance on aggregate ODA measures that conflate sector-specific aid with budget support (Guerrero et al., 2023; Ndikumana & Pickbourn, 2017).

Despite the breadth of the existing evidence base, several gaps remain. Most studies employ the Worldwide Governance Indicators (WGI) as their primary measure of institutional quality, leaving the World Bank’s Country Policy and Institutional Assessment (CPIA) – which directly governs the allocation of concessional IDA resources – largely unexplored as a predictor of SDG outcomes. The specific focus on IDA-eligible countries, which face the most acute fiscal constraints and the highest dependence on development assistance, is underrepresented in the literature. Furthermore, the interaction between institutional quality and development outcomes may differ systematically across income groups within the IDA-eligible universe. However, few studies have disaggregated the CPIA into its constituent clusters to identify which institutional dimensions drive which specific SDG outcomes. The present study addresses these gaps by examining the CPIA–SDG nexus across 76 IDA-eligible countries over the period 2005–2023, using two-way fixed effects panel estimations that control for both time-invariant country characteristics and common temporal shocks.

2. METHODOLOGY

This study employs panel data analysis to examine the CPIA–SDG relationship across 76 IDA-eligible countries from 2005 to 2023, yielding an unbalanced panel of 1,444 country-year observations. The panel structure is summarized in Table A3 (Appendix A). The estimation proceeds in three stages: baseline regressions of the overall CPIA score on individual SDG indicators and the composite SDG Index, a cluster decomposition into four institutional dimensions, and a sub-sample analysis stratified by income group.

2.1. Variables and data sources

Six dependent variables capture SDG-related outcomes (see Table 1). Five are drawn from the World Bank’s WDI database: the poverty headcount ratio at \$2.15/day (SDG 1), under-5 mortality (SDG 3), primary education completion (SDG 4), electricity access (SDG 7), and the employment-to-population ratio (SDG 8). The sixth, the composite SDG Index score (0–100), is obtained from the Sustainable Development Report’s backdated panel dataset (Sachs et al., 2025).

The key explanatory variables are the World Bank’s CPIA ratings. The analysis uses both the overall CPIA score and its four constituent clusters: economic management (A), structural policies (B), social inclusion and equity (C), and public sector management (D), each rated 1–6 annually.

Four control variables account for confounding factors (Arndt et al., 2015; Azam et al., 2021): log GDP per capita (economic development), net ODA as a share of GNI (aid intensity), trade openness (global integration), and log population (country size). Table 1 summarizes all variable definitions and data sources.

2.2. Sample description

The sample comprises 76 countries eligible for concessional lending from the International Development Association (IDA) as of 2023. This includes 26 low-income countries, 33 lower-middle-income countries, and 17 blend or other IDA-eligible economies. The IDA eligibility criterion ensures that the sample captures the coun-

Table 1. Variable definitions and data sources

Source: Our compilation based on World Bank WDI, World Bank CPIA, and Sachs et al. (2025).

Variable	Notation	Description	Scale	Source
CPIA overall	cpia_overall	IDA Resource Allocation Index	1–6	World Bank
Cluster A	cpia_econ_mgmt	Economic management	1–6	World Bank
Cluster B	cpia_struct_pol	Structural policies	1–6	World Bank
Cluster C	cpia_social_incl	Social inclusion/equity	1–6	World Bank
Cluster D	cpia_public_sect	Public sector mgmt & institutions	1–6	World Bank
Poverty	sdg1_poverty	Headcount ratio at \$2.15/day (PPP)	%	WDI
Child mortality	sdg3_mort	Under-5 mortality rate	per 1,000	WDI
Education	sdg4_educ	Primary completion rate	%	WDI
Electricity	sdg7_elec	Access to electricity	% of pop.	WDI
Employment	sdg8_empl	Employment-to-population ratio	%	WDI
SDG Index	sdg_index	Composite SDG Index score	0–100	Sachs et al.
GDP per capita	ln_gdp_pc	Log of GDP per capita (const. 2015 USD)	log USD	WDI
ODA	net_oda_gni	Net ODA received (% of GNI)	%	WDI
Trade openness	trade_open	Trade (% of GDP)	%	WDI
Population	ln_pop	Log of total population	log	WDI

Note: WDI = World Development Indicators (World Bank, n.d.b). CPIA = Country Policy and Institutional Assessment (World Bank, n.d.a). SDG Index from Sachs et al. (2025), Sustainable Development Report.

tries most dependent on development assistance and most relevant to the aid effectiveness debate. Geographically, the sample spans Sub-Saharan Africa (44 countries), South Asia, East Asia and the Pacific, Europe and Central Asia, Latin America and the Caribbean, and the Middle East and North Africa.

The panel covers the period 2005–2023 (19 years), with CPIA data available for 75 of the 76 countries (1,330 country-year observations, 92.1% coverage). Full variable-level coverage statistics are reported in Table A1 (Appendix A). Data coverage varies across the SDG indicators: under-5 mortality and the SDG Index achieve near-complete coverage (100%). In comparison, the poverty headcount ratio has only 19.0% raw coverage (275 observations across 69 countries), reflecting the well-documented scarcity of household survey data in low-income settings. Trade openness covers 76.4% of the panel (1,103 observations). The unbalanced structure arises from differential data availability across countries and years, particularly for poverty and education indicators.

2.3. Data preparation

The raw data were inspected for missing values, outliers, and distributional properties. Given the sparse coverage of the poverty headcount variable, linear interpolation within countries was applied

to fill gaps between observed survey rounds, following established practice in the development literature. This procedure increased the number of usable poverty observations from 275 to approximately 650, enabling panel estimation while preserving within-country variation. The interpolated series is used in the main analysis, and robustness checks using only the raw (non-interpolated) poverty data yield qualitatively similar results with reduced statistical power.

GDP per capita and total population are entered in natural logarithmic form to reduce right skewness and to allow interpretation of coefficients as semi-elasticities. All remaining variables are used in their original metric. Descriptive statistics and distributional properties are reported in Table 2.

2.4. Econometric specification

The baseline empirical model takes the following panel data form:

$$SDG_{it} = \alpha_i + \lambda_t + \beta \cdot CPIA_{it} + \gamma' X_{it} + \varepsilon_{it}, \quad (1)$$

where SDG_{it} denotes one of the six SDG outcome indicators for country i in year t ; $CPIA_{it}$ is the overall CPIA score (or, in the cluster decomposition, a vector of the four cluster scores); X_{it} is a vector of control variables (ln GDP per capita, net ODA/GNI, trade openness, and ln population); α_i

represents time-invariant country fixed effects; λ_t captures common year effects (year dummies); and ε_{it} is the idiosyncratic error term. The coefficient β is the parameter of interest. It measures the within-country effect of a one-point change in the CPIA score on the SDG outcome, holding constant the control variables and absorbing all time-invariant country characteristics and common temporal shocks.

The two-way fixed effects (TWFE) specification is the preferred estimator, as it eliminates bias from unobserved time-invariant heterogeneity and common year-specific shocks. All standard errors are clustered at the country level.

2.5. Model selection strategy

For each dependent variable, three specifications are estimated: pooled OLS (benchmark), panel fixed effects (FE), and random effects (RE). The Hausman test adjudicates between FE and RE; rejection ($p < 0.05$) favors fixed effects. Results and the preferred specification are reported for each outcome.

In the cluster decomposition (Model 2), the overall CPIA score is replaced by the four cluster scores entered simultaneously. Given the moderate-to-high inter-cluster correlations ($r = 0.636\text{--}0.812$), this specification tests which institutional dimensions exert independent within-country effects on SDG outcomes, while acknowledging that multicollinearity may inflate standard errors for individual clusters.

In the sub-sample analysis (Model 3), the baseline specification (Equation 1) is re-estimated separately for each income group (low-income, lower-middle-income, and blend/other IDA-eligible countries) to assess whether the marginal effect of institutional quality on SDG outcomes varies with economic development.

2.6. Estimation and software

All estimations are conducted in Python using the `linearmodels` and `statsmodels` packages. The Hausman test is implemented via the coefficient-difference approach. Data are sourced through the World Bank API and the Sustainable Development Report (Sachs et al., 2025).

2.7. Limitations

Several caveats apply. The CPIA's ordinal scale (1–6) may not fully capture continuous institutional variation. Sparse poverty coverage (19% raw) limits precision despite interpolation. The within-country strategy cannot rule out reverse causality if CPIA assessors incorporate development performance. Moderate inter-cluster correlations complicate decomposition interpretation. These limitations are addressed through robustness checks and cautious interpretation of marginally significant results.

3. RESULTS

3.1. Descriptive statistics

Table 2 presents the summary statistics for the main variables used in the analysis. The sample comprises 76 IDA-eligible countries observed over the period 2005–2023, yielding an unbalanced panel of 1,444 country-year observations. The overall CPIA score averages 3.225 on a 1-to-6 scale ($SD = 0.489$), with the public sector management cluster exhibiting the lowest mean (3.029), suggesting that governance quality remains the weakest institutional dimension across aid-recipient countries. Among the CPIA clusters, economic management shows the highest average score (3.355), reflecting relatively stronger macroeconomic policy frameworks.

Regarding the SDG indicators, the average poverty headcount ratio at \$2.15 per day stands at 28.7% ($SD = 24.7$), with substantial cross-country variation ranging from near zero to 85.3%. Under-5 mortality averages 62.0 per 1,000 live births ($SD = 42.0$), while primary education completion reaches 78.9% ($SD = 20.3$). Access to electricity covers 57.3% of the population on average ($SD = 31.1$), and the employment-to-population ratio averages 58.4% ($SD = 14.6$). The composite SDG Index score averages 56.3 ($SD = 8.4$), ranging from 36.6 to 79.7 across the sample.

Mean GDP per capita is \$2,088 (constant 2015 US dollars), net ODA averages 9.4% of GNI, and trade openness averages 74.7% of GDP. CPIA scores differ systematically by income group: low-income

Table 2. Descriptive statistics (pooled observations, 2005–2023)

Source: Our calculations in Python (linearmodels, statsmodels).

Variable	N	Mean	Std. Dev.	Min	Q1	Median	Q3	Max
CPIA overall	1,330	3.225	0.489	1.400	2.950	3.292	3.575	4.400
Cluster A: Econ. mgmt	1,330	3.355	0.681	1.000	3.000	3.500	3.833	5.500
Cluster B: Structural pol.	1,330	3.251	0.516	1.167	3.000	3.333	3.667	4.333
Cluster C: Social incl.	1,330	3.264	0.505	1.500	2.900	3.400	3.600	4.400
Cluster D: Public sector	1,330	3.029	0.513	1.300	2.700	3.000	3.400	4.200
Poverty \$2.15/day (%)	275	28.652	24.702	0.000	4.600	21.500	44.800	85.300
Under-5 mortality (‰)	1,444	61.993	42.040	9.900	28.375	54.500	83.600	478.900
Primary completion (%)	899	78.926	20.317	22.794	61.750	81.807	96.106	130.104
Electricity access (%)	1,440	57.264	31.144	0.800	30.250	56.500	89.000	100.000
Employment-to-pop. (%)	1,329	58.364	14.569	20.017	50.291	58.205	69.153	85.840
SDG Index (score)	1,444	56.348	8.428	36.620	50.362	54.900	62.843	79.725
GDP per capita (USD)	1,408	2,088	2,116	251	808	1,355	2,561	23,101
Net ODA (% of GNI)	1,410	9.375	10.443	-8.224	3.216	6.068	11.808	92.142
Trade openness (% GDP)	1,103	74.689	39.037	2.474	45.501	66.703	95.410	347.720

Note: N = number of non-missing observations. Poverty uses raw (non-interpolated) data. SDG Index from Sachs et al. (SDSN) Backdated SDG Index.

countries average 3.019, lower-middle-income countries 3.275, and blend/other IDA-eligible countries 3.483, confirming a positive gradient between institutional quality and income level (Table A2 in Appendix A).

The correlation matrix (Table A4 in Appendix A) reveals moderate negative correlations between the overall CPIA score and poverty ($r = -0.316$) and under-5 mortality ($r = -0.318$), and moderate positive correlations with education completion ($r = 0.259$) and electricity access ($r = 0.272$). Among the CPIA clusters, social inclusion and equity policies show the strongest correlations with SDG outcomes, with correlations across the four CPIA clusters ranging from 0.636 to 0.812, warranting attention to multicollinearity in the cluster-decomposition models.

3.2. Country-specific fixed effects

The estimated country-specific fixed effects from the baseline TWFE model reveal substantial heterogeneity in baseline SDG performance across the IDA-eligible countries (Table A5, Appendix A). Table A5 reports demeaned fixed effects for all six dependent variables, expressed as deviations from the cross-country mean, allowing direct comparison of each country's structural baseline with the sample average. The fixed effects are estimated for 63 of the 76 sample countries; 13 countries are excluded due to incomplete data coverage, pri-

marily reflecting missing trade openness data in the World Bank WDI for small island developing states and fragile economies.

For the composite SDG Index, the demeaned country effects range from -15.0 (South Sudan) to +16.3 (Kyrgyz Republic), with a standard deviation of 6.2. This dispersion indicates that a large share of cross-country variation in SDG outcomes is attributable to time-invariant structural factors – including geography, colonial history, conflict exposure, and deep institutional characteristics – that cannot be explained by the measured covariates alone. Countries with the highest baseline SDG Index effects include the Kyrgyz Republic (+16.3), Moldova (+16.0), Tajikistan (+11.7), Armenia (+11.4), and Tonga (+9.8), suggesting favorable structural conditions – such as inherited Soviet-era educational and health infrastructure in the Central Asian and Eastern European economies – that systematically elevate SDG performance beyond what CPIA scores, income, and aid levels can capture. At the lower end, South Sudan (-15.0), Chad (-12.4), the Central African Republic (-8.9), Yemen (-8.7), and Djibouti (-8.6) exhibit the lowest baseline effects, reflecting deep-rooted developmental challenges, including prolonged conflict, geographic isolation, and institutional fragility.

The pattern is broadly consistent across individual SDG indicators. Countries with negative SDG Index effects also tend to exhibit positive (worse)

demeaned mortality and poverty effects and negative (worse) demeaned education and electricity access effects. For instance, South Sudan combines the lowest SDG Index effect (-15.0) with a large positive mortality effect (+119.6) and the largest negative electricity effect (-59.0), while the Kyrgyz Republic combines the highest SDG Index effect (+16.3) with negative mortality (-43.5) and the largest positive electricity effect (+48.3). This cross-indicator consistency confirms that the fixed effects capture genuine structural development capacity rather than indicator-specific measurement artefacts. The dispersion of country effects reinforces the methodological choice to employ fixed effects estimation, which absorbs these time-invariant differences and isolates within-country institutional change as the source of identification.

3.3. Baseline panel estimations

Table 3 reports the results of panel data estimations examining the relationship between the overall CPIA score and five individual SDG indicators, as well as the composite SDG Index. For each dependent variable, pooled OLS, fixed effects (FE), and random effects (RE) specifications are estimated, with the Hausman test guiding model selection. All models include GDP per capita (in logarithms), net ODA as a percentage of GNI, trade openness, and population (in logarithms) as control variables. Standard errors are clustered at the country level.

The Hausman test favors the fixed effects specification for under-5 mortality ($p = 0.000$), access to electricity ($p = 0.000$), poverty headcount ($p = 0.000$), and the SDG Index ($p = 0.000$). In contrast, the random effects specification is preferred for employment-to-population ($p = 0.213$) and primary completion ($p = 0.128$).

In the preferred specifications, the overall CPIA score is negatively associated with poverty at the 10% significance level ($\beta = -6.936$, $SE = 4.182$, $p = 0.098$), indicating that a one-point improvement in the overall CPIA score is associated with a reduction of approximately 6.9 percentage points in the poverty headcount ratio. The coefficients for the remaining individual SDG indicators are not statistically significant at conventional levels in the within-country estimations. However, the signs are largely consistent with theoretical expectations: negative for under-5 mortality ($\beta = -1.384$) and positive for employment ($\beta = 1.357$) and primary completion ($\beta = 4.058$).

The SDG Index specification yields a small and statistically insignificant coefficient for the overall CPIA score in the FE model ($\beta = 0.408$, $SE = 0.850$, $p = 0.631$), despite a strong and highly significant association in the pooled OLS ($\beta = 5.883$, $p < 0.001$). This divergence indicates that the cross-sectional relationship between aid effectiveness and overall SDG performance is driven predominantly by between-country variation in institutional quality, while within-country changes in CPIA scores do not translate into detectable shifts in the composite index. This finding underscores the value of disaggregating SDG performance into individual indicators.

Among the control variables, GDP per capita (in logarithms) is the most consistently significant predictor, with large negative effects on poverty ($\beta = -18.039$) and under-5 mortality ($\beta = -8.376$), and large positive effects on electricity access ($\beta = 11.486$), primary completion ($\beta = 12.281$), and the SDG Index ($\beta = 4.528$). These results confirm that domestic economic capacity remains the primary driver of SDG achievement.

Table 3. Baseline panel estimation results: CPIA overall → SDG outcomes (TWFE, 2005–2023)

Source: Our calculations in Python (linearmodels, statsmodels).

Dep. variable	β (CPIA)	SE	P	β (ln GDP)	β (ODA)	β (Trade)	β (Pop)	N	R ² (w)	Haus. p	Pref.
Poverty (SDG 1)	-6.936*	4.182	0.098	-18.039	-0.070	-0.060	-25.971	650	0.496	0.000	FE
Mortality (SDG 3)	-1.384	3.608	0.702	-8.376	0.254	-0.046	-63.324	1,042	0.355	0.000	FE
Education (SDG 4)	4.058	4.096	0.322	12.281	0.083	0.039	17.956	680	0.224	0.128	RE
Electricity (SDG 7)	-4.519	3.139	0.150	11.486	-0.170	-0.003	7.500	1,042	0.283	0.000	FE
Employment (SDG 8)	1.357	1.195	0.256	1.238	-0.018	0.013	-6.130	996	0.151	0.213	RE
SDG Index	0.408	0.850	0.631	4.528	-0.012	0.007	0.317	1,042	0.323	0.000	FE

Note: All models include country and year fixed effects. Clustered standard errors at the country level. Hausman $p < 0.05$ → FE preferred. Signif. codes: '***' – 0.01; '**' – 0.05; '*' – 0.10.

3.4. CPIA cluster decomposition

To investigate which dimensions of institutional quality drive the observed effects, Table 4 presents the results of fixed effects estimations in which the four CPIA cluster scores – economic management (Cluster A), structural policies (Cluster B), social inclusion and equity (Cluster C), and public sector management and institutions (Cluster D) – replace the overall CPIA score.

The cluster decomposition reveals a more nuanced pattern than the aggregate results suggest. Structural policies (Cluster B) emerge as the most consistently significant dimension, with a statistically significant negative effect on under-5 mortality ($\beta = -4.440$, $p < 0.10$), indicating that improvements in trade, financial sector, and business regulatory frameworks are associated with reductions in child mortality. Structural policies also show a significant positive association with access to electricity ($\beta = 7.060$, $p < 0.05$), consistent with the expectation that open trade regimes and a supportive business environment facilitate infrastructure investment and energy sector development.

Economic management (Cluster A) is positively and significantly associated with the employment-to-population ratio ($\beta = 1.428$, $p < 0.10$), suggesting that sound macroeconomic policies – including fiscal sustainability, inflation control, and debt management – contribute to labor market outcomes.

Public sector management and institutions (Cluster D) exhibits a significant negative association with access to electricity ($\beta = -10.242$, $p < 0.05$). While counterintuitive at first glance, this result may reflect the regulatory burden hypothesis: countries with more formalized governance structures may impose stricter regulatory require-

ments on infrastructure projects, potentially slowing the pace of electrification in the short to medium term.

Social inclusion and equity policies (Cluster C) show consistently positive coefficients for education ($\beta = 7.245$) and negative coefficients for mortality ($\beta = -5.559$), but these effects do not reach statistical significance at conventional levels in the within-country estimations. The SDG Index cluster model yields a marginally significant negative coefficient for economic management ($\beta = -0.703$, $p < 0.10$), while the remaining clusters are not individually significant.

3.5. Country-level effects: Sub-sample analysis by income group

Table 5 presents the results of sub-sample estimations stratified by World Bank income classification to assess whether the relationship between aid effectiveness and SDG achievement varies across levels of economic development. The analysis distinguishes among low-income countries (26 countries), lower-middle-income countries (33 countries), and blend/other IDA-eligible countries (17 countries).

The sub-sample analysis reveals pronounced heterogeneity. In low-income countries, the overall CPIA score has a substantial and statistically significant negative effect on poverty ($\beta = -11.995$, $p < 0.10$), indicating that a one-point improvement in institutional quality is associated with a reduction of approximately 12 percentage points in the poverty headcount. This effect is nearly twice the magnitude of the full-sample estimate, suggesting that aid effectiveness matters most in the contexts where domestic resources are most constrained and external assistance constitutes a larger share of development financing.

Table 4. CPIA cluster decomposition: FE coefficients for individual CPIA dimensions (TWFE, 2005–2023)

Source: Our calculations in Python (linearmodels, statsmodels).

CPIA cluster	Poverty	Mortality	Education	Electricity	Employment	SDG Index
A: Econ. Mgmt.	-2.70	1.72	-1.27	-0.78	1.43*	-0.70*
B: Structural pol.	-1.35	-4.44*	0.17	7.06**	0.50	0.74
C: Social incl.	0.04	-5.56	7.24	1.34	0.34	0.14
D: Public sector	-1.91	4.17	0.59	-10.24**	-1.58	0.47

Note: All models include $\ln(\text{GDP per capita})$, net ODA/GNI, trade openness, $\ln(\text{population})$, country and year FE. Clustered SE at the country level. Signif. codes: '***' – 0.01; '**' – 0.05; '*' – 0.10.

In lower-middle-income countries, the pattern shifts toward health and labor market outcomes. The CPIA score is significantly associated with reductions in under-5 mortality ($\beta = -6.945, p < 0.10$) and improvements in employment ($\beta = 2.689, p < 0.05$). These findings are consistent with a development trajectory in which, as countries move beyond extreme poverty, institutional quality increasingly channels its effects through sectoral service delivery and labor market governance.

In blend/other IDA-eligible countries – which represent higher-income IDA borrowers – the CPIA score shows a positive and significant association with primary completion ($\beta = 10.504, p < 0.10$), but an unexpected positive association with under-5 mortality ($\beta = 6.660, p < 0.10$). However, with only 17 countries in this subgroup, the estimate is likely driven by a small number of influential observations, and the coefficient should be interpreted with caution, as the limited degrees of freedom render it sensitive to individual outliers rather than indicative of a systematic relationship.

The SDG Index does not exhibit significant within-country effects of the CPIA score in any income subgroup, further confirming that the composite measure absorbs heterogeneous and partially offsetting effects that are only visible at the individual indicator level.

3.6. Policy recommendations

The empirical findings carry several implications for the design and management of international development assistance. First, the concentration of poverty-reducing effects in low-income countries ($\beta = -11.995$) suggests that donor agencies should prioritize strengthening institutional frameworks (particularly through CPIA-aligned capacity building) in the poorest economies, where the marginal return to improved aid effectiveness is highest.

Second, the significance of structural policies for both child mortality reduction and electricity access expansion implies that trade liberalization, financial sector development, and business regulatory reform serve as enabling conditions for SDG achievement. Development partners should therefore integrate structural policy support into sector-specific programs, rather than treating governance reform and service delivery as separate agendas.

Third, the finding that GDP per capita remains the dominant predictor across all SDG indicators confirms that effective aid complements, rather than substitutes for, domestic economic growth. This reinforces the case for aid strategies that combine institutional strengthening with investments in productive capacity, particularly in sectors with high growth multipliers such as infrastructure and human capital.

4. DISCUSSION

The empirical results indicate that the CPIA–SDG relationship operates through specific institutional channels rather than a generalized governance effect. The overall CPIA score is significantly associated with poverty reduction, yet its within-country effect on the composite SDG Index is statistically indistinguishable from zero – consistent with heterogeneous and partially offsetting effects across SDG dimensions. The cluster decomposition reveals that structural policies (Cluster B) drive both child mortality reduction ($\beta = -4.44, p < 0.10$) and electricity access expansion ($\beta = 7.06, p < 0.05$), consistent with evidence on trade and FDI as drivers of structural transformation (Chibalamula et al., 2023; Bieleń et al., 2024; Mursalov et al., 2025). Economic management (Cluster A) supports employment ($\beta = 1.43, p < 0.10$) through macroeconomic stability (Tjahjanto et al., 2023; Raman et al., 2025). The counterintuitive

Table 5. Sub-sample analysis: CPIA overall → SDG outcomes by income group (FE, 2005–2023)

Source: Our calculations in Python (linearmodels, statsmodels).

Income group	Poverty	Mortality	Education	Electricity	Employment	SDG Index
Low income (26)	-12.00*	-0.54	3.74	-2.76	0.81	1.12
Lower-middle (33)	-3.37	-6.94*	4.92	-6.91	2.69**	0.03
Blend/Other (17)	1.02	6.66*	10.50*	-4.02	0.17	-0.54

Note: FE (TWFE) with clustered SE. Controls: $\ln(\text{GDP pc})$, ODA/GNI, trade, $\ln(\text{pop})$. Number of countries in parentheses. Significance codes: '***' – 0.01; '**' – 0.05; '*' – 0.10.

negative association between public sector management (Cluster D) and electricity access ($\beta = -10.24$, $p < 0.05$) may reflect a regulatory burden effect, whereby formalized procurement and accountability mechanisms delay infrastructure projects, consistent with evidence that governance reforms depend on implementation capacity rather than formal design (Sarker et al., 2023; Makarenko et al., 2025).

The sub-sample analysis reveals a development-stage gradient: in low-income countries, institutional quality channels its effects primarily through poverty reduction ($\beta = -12.0$), while in lower-middle-income countries the marginal impact shifts toward health (mortality: $\beta = -6.94$) and labor markets (employment: $\beta = 2.69$). This pattern is consistent with evidence that returns to governance reform are heterogeneous across development stages (Gasimov et al., 2023a). The dominance of GDP per capita as a predictor across all SDG dimensions confirms that aid effectiveness operates within the broader growth process, aligning with the Sachs et al. (2025) observation that SDG Index scores correlate strongly with income levels and with the literature's emphasis on complementarity between external assistance and domestic capacity (Arndt et al., 2015). The strong pooled OLS association between the CPIA and SDG Index ($\beta = 5.883$, $p < 0.001$), juxtaposed with the near-zero within-country FE estimate ($\beta = 0.408$, $p = 0.631$), underscores that cross-sectional comparisons capture development conditions rather than causal effects of institutional improvement.

Social inclusion policies (Cluster C) show consistently positive but insignificant coefficients for education ($\beta = 7.24$) and mortality ($\beta = -5.56$), possibly reflecting the longer time horizon required for social protection to translate into measurable outcomes, or implementation gaps between policy adoption and delivery. These findings contribute to the aid effectiveness debate (Arndt et al., 2015; Guerrero et al., 2023) by offering a nuanced middle ground: the CPIA matters for specific SDG outcomes in specific contexts, but its effects are neither universal nor uniform. The implication is clear: development assistance should be strategically differentiated, targeting specific governance dimensions to specific development challenges rather than pursuing a one-size-fits-all reform agenda.

Several limitations should be acknowledged. The CPIA is an expert assessment rather than an objective measure, and its ordinal scale may not fully capture continuous variation in institutional quality. The within-country identification strategy, while controlling for time-invariant confounders, cannot fully rule out reverse causality. The sparse coverage of the poverty variable (19% raw data) limits the precision of poverty-related estimates. Future research could address these limitations by employing instrumental variable approaches, exploiting discontinuities in IDA allocation rules, or incorporating sub-national variation in institutional quality and SDG outcomes.

CONCLUSION

This study examined the relationship between aid effectiveness, measured by the World Bank's CPIA, and the achievement of the Sustainable Development Goals across 76 IDA-eligible countries from 2005 to 2023, using two-way fixed effects panel estimations with clustered standard errors.

The results indicate that the overall CPIA score exerts a significant poverty-reducing effect in the full sample ($\beta = -6.936$, $p < 0.10$), with the magnitude roughly doubling in the low-income sub-sample ($\beta = -12.0$, $p < 0.10$), suggesting that institutional quality matters most where domestic resources are most constrained. In contrast, the composite SDG Index does not respond significantly to within-country CPIA variation ($\beta = 0.408$, $p = 0.631$), despite a strong cross-sectional association ($\beta = 5.883$, $p < 0.001$ in pooled OLS), confirming that the aggregate measure absorbs heterogeneous and partially offsetting effects that are only visible at the individual indicator level. The cluster decomposition reveals that specific institutional dimensions drive specific outcomes: structural policies reduce child mortality and expand electricity access, economic management supports employment, and public sector management shows a counterintuitive negative association with electrification that may reflect regulatory burden ef-

fects. Sub-sample analysis uncovers pronounced heterogeneity, with the CPIA–SDG relationship shifting from poverty reduction in low-income countries to health and labor market improvements in lower-middle-income countries.

From a governance and management perspective, these findings carry three main implications. First, donor agencies and multilateral institutions should prioritize CPIA-aligned institutional strengthening in the poorest economies, where the marginal return to improved aid effectiveness is highest and where poverty reduction is the binding constraint. Second, the significance of structural policies for both child mortality and electricity access suggests that trade liberalization, financial sector development, and business regulatory reform serve as enabling conditions for SDG achievement, and should be integrated into sector-specific development programs rather than treated as a separate governance agenda. Third, the finding that GDP per capita remains the dominant predictor across all SDG indicators confirms that effective aid complements, rather than substitutes for, domestic economic growth, reinforcing the case for aid management strategies that combine institutional strengthening with investments in productive capacity.

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APPENDIX A

Table A1. Data coverage by variable

Source: Our calculations in Python (linearmodels, statsmodels).

Variable	Observations	Countries	Coverage (%)
CPIA overall	1,330	75	92.1
CPIA: Econ. management	1,330	75	92.1
CPIA: Structural policies	1,330	75	92.1
CPIA: Social inclusion	1,330	75	92.1
CPIA: Public sector	1,330	75	92.1
Poverty \$2.15/day	275	69	19.0
Under-5 mortality	1,444	76	100.0
Primary completion	899	73	62.3
Electricity access	1,440	76	99.7
Employment-to-pop.	1,329	70	92.0
SDG Index	1,444	76	100.0
GDP per capita	1,408	76	97.5
Net ODA/GNI	1,410	76	97.6
Trade openness	1,103	64	76.4
Population	1,444	76	100.0

Note: Coverage % = share of non-missing observations out of the total 1,444 country-year cells in the balanced panel frame (76 countries × 19 years).

Table A2. CPIA overall score by income group

Source: Our calculations in Python (linearmodels, statsmodels).

Income group	Obs.	Mean CPIA	Std. Dev.
Low income	468	3.019	0.544
Lower middle income	606	3.275	0.392
Blend / Other	256	3.483	0.436

Note: Income classification based on World Bank IDA eligibility status.

Table A3. Panel structure

Source: Our calculations in Python (linearmodels, statsmodels).

Parameter	Value
Number of countries	76
Time period	2005–2023
Max. obs. per country	19
Panel type	Unbalanced

Note: Countries in the sample (ISO3 codes): AFG, ARM, BDI, BEN, BFA, BGD, BTN, CAF, CIV, CMR, COD, COG, COM, CPV, DJI, DMA, ERI, ETH, FJI, FSM, GHA, GIN, GMB, GNB, GRD, GUY, HND, HTI, KEN, KGZ, KHM, KIR, LAO, LBR, LCA, LSO, MDA, MDG, MHL, MLI, MMR, MNG, MOZ, MRT, MWI, NER, NGA, NIC, NPL, PAK, PNG, RWA, SDN, SEN, SLB, SLE, SOM, SSD, STP, SWZ, TCD, TGO, TJK, TLS, TON, TUV, TZA, UGA, UZB, VCT, VNM, VUT, WSM, YEM, ZMB, ZWE.

Table A4. Pairwise correlation matrix (selected variables)

Source: Our calculations in Python (linearmodels, statsmodels).

	CPIA	Pov.	Mort.	Educ.	Elec.	Empl.	SDG lx	GDP pc	ODA	Trade
CPIA	1.00	-.32	-.32	.26	.27	.13	.51	.31	-.30	.08
Pov.		1.00	.73	-.70	-.87	.38	-.81	-.75	.31	-.38
Mort.			1.00	-.73	-.69	.18	-.75	-.63	.10	-.31
Educ.				1.00	.74	-.31	.79	.67	.02	.43
Elec.					1.00	-.34	.82	.71	-.11	.30
Empl.						1.00	-.11	-.23	.04	-.11
SDG lx							1.00	.67	-.16	.29
GDP pc								1.00	-.16	.42
ODA									1.00	.11
Trade										1.00

Note: Pearson correlation coefficients. CPIA = CPIA overall; Pov. = poverty \$2.15/day; Mort. = under-5 mortality; Educ. = primary completion; Elec. = electricity access; Empl. = employment-to-population; SDG lx = SDG Index; GDP pc = ln(GDP per capita); ODA = net ODA/GNI; Trade = trade openness.

Table A5. Demeaned country-specific fixed effects from the baseline TWFE model

Source: Our calculations in Python (linearmodels, statsmodels).

Country	Pov.	Mort.	Educ.	Elec.	Empl.	SDG Ix
Afghanistan	-	94.2	-	+29.5	-11.5	-3.8
Armenia	-31.3	-83.1	+23.2	+43.8	-15.1	+11.4
Bangladesh	+63.5	+179.5	-53.6	-7.7	+16.0	+3.1
Benin	+27.9	+66.3	-17.6	-19.4	+15.7	-3.8
Bhutan	-69.4	-159.8	+37.6	+41.5	-11.3	+6.2
Burkina Faso	+36.3	+102.1	-35.3	-37.5	+21.8	-2.9
Cabo Verde	-57.9	-195.6	+47.4	+39.8	-27.7	+2.6
Cambodia	-	+31.9	-8.3	-6.5	+25.5	+1.6
Cameroon	+25.4	+108.8	-28.9	-8.8	+17.9	-2.5
Central African Rep.	-0.2	+73.5	-21.7	-29.8	+9.8	-8.9
Chad	+17.7	+114.4	-47.9	-52.7	+7.9	-12.4
Comoros	-66.7	-155.7	+39.6	+29.9	-27.1	-3.2
Congo, Dem. Rep.	+92.2	+184.5	-42.8	-47.9	+21.0	-4.5
Congo, Rep.	+9.3	-18.7	-6.2	-18.6	-8.2	-7.4
Côte d'Ivoire	+41.8	+114.6	-45.8	-7.5	+11.8	-1.1
Djibouti	-33.4	-103.3	-	+11.5	-50.7	-8.6
Eritrea	-	-66.0	+20.9	-8.9	+12.6	-5.2
Ethiopia	+58.6	+168.2	-63.2	-27.6	+31.1	-1.6
Gambia	-55.1	-78.3	+18.6	+12.2	-21.3	+2.2
Ghana	+53.3	+88.3	-20.8	+2.9	+13.1	+2.3
Guinea	-9.0	+83.8	-19.9	-21.4	-2.0	-1.8
Guinea-Bissau	-35.1	-56.5	+23.0	-20.6	-4.4	-4.3
Guyana	-	-145.1	+39.8	+26.8	-25.8	+4.0
Haiti	+12.8	+38.2	-	-21.2	-0.4	-4.9
Honduras	+7.6	-13.9	-13.3	+21.2	-1.8	+1.1
Kenya	+60.1	+110.9	-15.6	-23.9	+20.7	+0.5
Kiribati	-124.0	-261.2	+98.5	+53.5	-	+7.6
Kyrgyz Republic	-24.6	-43.5	+20.4	+48.3	-3.3	+16.3
Lao PDR	-4.6	+4.7	+6.6	+13.1	-0.7	-0.1
Lesotho	-20.1	-54.7	+21.9	-11.3	-15.4	-1.9
Madagascar	+44.5	+80.7	-26.3	-30.0	+33.3	-2.0
Malawi	+49.1	+39.3	-8.7	-40.4	+9.0	+3.5
Mali	+30.2	+116.8	-40.1	-22.1	+14.8	-0.8
Marshall Islands	-136.8	-338.6	+94.2	+63.9	-	+0.1
Mauritania	-31.9	-43.5	-7.3	-15.6	-25.4	-3.6
Micronesia	-101.6	-293.0	+72.6	+43.6	-	-2.9
Moldova	-38.3	-91.7	+26.3	+44.0	-4.3	+16.0
Mongolia	-34.5	-81.2	+18.3	+25.0	-10.7	+3.8
Mozambique	+68.2	+99.9	-38.7	-31.0	+26.7	-2.0
Nepal	+6.9	+65.2	+5.1	+14.2	-14.4	+7.5
Nicaragua	-16.3	-43.1	-0.7	+23.5	-0.9	+4.7
Niger	+40.2	+126.8	-36.6	-36.4	+24.0	-6.4
Pakistan	+76.9	+234.5	-81.4	+4.8	+11.5	-3.0
Rwanda	+32.5	+21.3	-10.3	-22.2	-2.7	+2.9
Samoa	-95.9	-256.2	+70.1	+58.6	-34.9	+5.4
Senegal	+24.5	+42.5	-33.2	+0.3	-8.5	+1.1
Sierra Leone	+8.0	+72.8	+4.6	-33.5	-3.1	-1.6
Solomon Islands	-43.1	-188.4	+39.8	+6.7	+9.0	-5.2
Somalia	-	+106.3	-	-4.2	-23.6	-5.6
South Sudan	+32.2	+119.6	-	-59.0	+9.7	-15.0
Sudan	+12.2	+114.3	-47.3	-28.0	-8.6	-7.7
Tajikistan	-20.8	-15.2	+21.0	+44.4	-19.3	+11.7
Tanzania	+64.6	+122.2	-35.5	-39.5	+36.0	+0.3
Timor-Leste	-30.7	-108.2	+46.1	+23.7	-5.1	+7.3

Table A5 (cont.). Demeaned country-specific fixed effects from the baseline TWFE model

Country	Pov.	Mort.	Educ.	Elec.	Empl.	SDG Ix
Togo	+9.8	+18.6	+7.4	-9.5	-1.6	-0.7
Tonga	-115.5	-305.2	+85.6	+59.6	-32.7	+9.8
Uganda	+62.6	+104.8	-44.1	-35.9	+24.8	-2.1
Uzbekistan	+33.8	+64.8	-16.1	+24.3	+1.6	+8.0
Vanuatu	-78.3	-242.7	+65.6	+9.9	-20.3	+1.4
Vietnam	+57.3	+132.0	-34.7	+18.1	+28.6	+7.8
Yemen	+35.6	+85.0	-48.4	-9.8	-18.6	-8.7
Zambia	+57.0	+59.5	-1.2	-28.1	+0.0	-5.0
Zimbabwe	+22.6	+51.3	-2.9	-22.3	+7.9	+0.9

Note: Demeaned fixed effects ($\alpha_i - \bar{\alpha}$) are estimated from the two-way (country and year) fixed effects model for each dependent variable separately. Values represent deviations from the cross-country average: positive values indicate above-average baseline levels of the respective outcome. For poverty and mortality, positive deviations indicate worse baseline conditions (higher poverty/mortality than the average country); for education, electricity, employment, and the SDG Index, positive deviations indicate better baseline conditions. Specification: $SDG_{it} = \alpha_i + \lambda_t + \beta \cdot CPIA_{it} + \gamma' X_{it} + \varepsilon_{it}$. Controls: CPIA overall, ln(GDP per capita), net ODA/GNI, trade openness, ln(population). Clustered standard errors at the country level. “-” denotes insufficient observations for estimation. 13 of the 76 sample countries are excluded due to incomplete covariate coverage (primarily trade openness): Burundi, Dominica, Eswatini, Fiji, Grenada, Liberia, Myanmar, Nigeria, Papua New Guinea, São Tomé and Príncipe, St. Lucia, St. Vincent and the Grenadines, and Tuvalu. Pov. = poverty \$2.15/day (%); Mort. = under-5 mortality (%); Educ. = primary completion rate (%); Elec. = access to electricity (%); Empl. = employment-to-population ratio (%); SDG Ix = SDG Index (composite score).