“From vision to outcomes: How government leadership and foresight shape national development through institutional channels”

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FROM VISION TO OUTCOMES: HOW GOVERNMENT LEADERSHIP AND FORESIGHT SHAPE NATIONAL DEVELOPMENT THROUGH INSTITUTIONAL CHANNELS

Abstract

The widening development gap between well-governed and poorly governed nations – highlighted by the reversal since 2020 of two decades of human development convergence – underscores the need to understand which specific governance capabilities drive development and how. This study aims to estimate the effect of government leadership and foresight on national development and to identify the institutional channels through which this effect is transmitted. Drawing on the Chandler Good Government Index merged with World Bank and UNDP indicators, the analysis employs pooled OLS with year fixed effects, mediation analysis with bootstrap inference, and a comprehensive set of robustness tests on an unbalanced panel of 120 countries over 2021–2025. Leadership and foresight are positively and significantly associated with GDP per capita, life expectancy, and the Human Development Index ($\beta = 4.049$, $p < 0.01$ for ln GDP per capita; a one-standard-deviation increase corresponds to a 79% increase in GDP). The mediation analysis – the study's central contribution – reveals that 152.1% of the total effect is transmitted indirectly through other governance capabilities, principally robust laws (157.4%), strong institutions (137.6%), and attractive marketplace (133.4%), while the direct residual effect is negative ($\beta = -2.110$, $p < 0.01$), indicating a "vision–capacity gap." The effect is significant only in high-income economies ($\beta = 1.506$, $p < 0.01$) and absent in lower-income contexts. These findings demonstrate that leadership functions as a meta-governance capability whose developmental impact is channeled through, rather than independent of, the broader institutional architecture.

Keywords governance quality, leadership foresight, national development, institutional mediation, government effectiveness, income heterogeneity

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INTRODUCTION

National development depends not only on resource endowments but on the capacity of governments to set a long-term vision, anticipate emerging challenges, and coordinate the policy responses needed to translate that vision into outcomes – a capability commonly described as government leadership and foresight (World Bank, 2017). In an era marked by overlapping crises – the lingering effects of the COVID-19 pandemic, accelerating climate transition, and rapid technological disruption – this capability has become a defining attribute of government effectiveness. Yet its impact appears profoundly uneven: after two decades of convergence between rich and poor nations, the development gap began to widen again from 2020, with all OECD member states surpassing their 2019 HDI levels while only half of the least developed countries had recovered to their pre-crisis levels (UNDP, 2024). This divergence is not fully explained by differences in fiscal resources or external shocks: economies with comparable starting

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points have followed strikingly different trajectories. It raises a focused question: why do some governments succeed in translating leadership and foresight into measurable development outcomes, while others, despite similar ambitions, fail to do so?

Empirical research on the governance–development nexus has expanded significantly, with the Worldwide Governance Indicators – covering six dimensions across 214 economies since 1996 – serving as the primary measurement framework (Kaufmann & Kraay, 2024). Higher governance scores are robustly linked to stronger economic performance, longer life expectancy, and higher human development. However, the WGI and similar composite indicators treat governance as a relatively undifferentiated construct: they aggregate accountability, rule of law, regulatory quality, and government effectiveness without isolating the upstream capabilities that orient policy in the first place. As a result, leadership and foresight – the capacity of governments to formulate long-term goals, anticipate disruptions, and coordinate cross-sectoral responses – has received scant empirical attention as a distinct governance dimension. The Chandler Good Government Index (CGGI), first published in 2021 by the Chandler Institute of Governance, addresses this gap directly (Chandler Institute of Governance, 2025). By disaggregating government capabilities into seven pillars – leadership and foresight, robust laws and policies, strong institutions, financial stewardship, attractive marketplace, global influence and reputation, and helping people rise – measured through 35 indicators across 120 countries, the CGGI uniquely permits isolating the leadership and foresight pillar (hereafter L&F) as a standalone dimension and tracing the channels through which it shapes development outcomes.

1. LITERATURE REVIEW

The proposition that governance quality is a fundamental determinant of national development is among the most robust findings in the institutional economics literature, with institutional quality shown to "trump" geography and trade integration in explaining cross-country income differences (Rodrik et al., 2004). Within this consensus, however, a more specific question has received comparatively limited empirical attention: what role does the upstream capability of governmental leadership and foresight – the capacity to set long-term priorities, anticipate emerging challenges, and coordinate adaptive policy responses – play in shaping development outcomes? A growing but fragmented body of evidence is suggestive. At the executive level, ministerial education–portfolio alignment has been found to influence governance quality directly (Avižonienė & Navickas, 2026). Political will has been identified as the central orchestrator of public management reform, with the case of the United Arab Emirates demonstrating that development-focused leadership can enable institutional modernization even in clientelist state structures (Sarker et al., 2023). Cross-country and sectoral evidence reinforces this view. Government adaptability – encompassing long-term vision and institutional flexibility – mediates the relationship between national culture and economic performance across 57 countries (Shostya et al., 2023). Transformational leadership has been linked to improved public-sector performance in Greece (Gentsoudi, 2024). Finally, the application of system-dynamics-based foresight to workforce-readiness planning around Indonesia's capital relocation illustrates the operational dimension of policy foresight (Surahman et al., 2025). At the same time, ethical foresight and transparency-centered leadership are argued to be increasingly necessary for managing the societal implications of emerging technologies (Springs, 2025), while organizational culture and workforce digital readiness – both shaped by leadership decisions – emerge as primary barriers to institutional transformation during crisis periods (Conley, 2026). These contributions, while suggestive, rely on heterogeneous proxies and do not measure leadership and foresight as a standalone governance dimension comparable across countries – a limitation that motivates the present study.

A substantial body of cross-country research builds on this foundation by documenting how governance quality shapes economic and social outcomes more broadly. Bureaucratic quality and the rule of law significantly improve sustainable development across 66 developing countries

(Azam et al., 2021). High-quality institutions are essential for maintaining government effectiveness across European economies (Halaskova et al., 2023). Governance quality dimensions shape the achievement of Sustainable Development Goals across 145 countries (Ríos et al., 2026). Finally, governance quality has been identified as the primary driver of SDG progress among 167 UN member states, exceeding the impact of sector-specific policies (Makarenko et al., 2025). The governance–development nexus extends beyond aggregate economic output to encompass inclusive growth and social outcomes. The research landscape has shifted from general inclusive growth concepts toward detailed investigation of specific institutional determinants (Saher et al., 2024), with governance indicators confirmed to significantly influence financial inclusion and poverty alleviation across world economies (Eldomiaty et al., 2020; Hassan et al., 2020). Institutional quality has been shown to matter for sectoral development as well: a significant positive relationship between government effectiveness, regulatory quality, and tourism development in EU countries has been established using a system GMM approach (Beha, 2023), and institutional quality is critical for closing the gap between actual health expenditures and international spending commitments in Sub-Saharan Africa (Megbowon & Zerihun, 2025). In the fiscal domain, entrepreneurial activity and economic growth are shaped by both fiscal policy instruments in EU-27 countries (Lobonț et al., 2023) and entrepreneurial project financing across OECD economies (Berkane et al., 2025), while economic and people empowerment are significant growth drivers in South America. However, institutional capital shows limited direct significance (Hernández-Medina et al., 2024). Governance quality also shapes resilience to external shocks: policy responses and financial stability patterns during global crises vary significantly across income classifications, suggesting that institutional capacity determines crisis outcomes (Kaya, 2025).

The effectiveness of governance depends critically on regulatory integrity and transparency – dimensions that shape whether institutional quality translates into tangible outcomes. A consistent finding across this literature is that corruption and weak regulatory frameworks erode governance effectiveness through multiple channels. First, tax burden and institutional quality have been identified as key determinants of corruption in government (Bozhenko et al., 2022). Second, compliance with anti-money laundering frameworks varies systematically with institutional capacity (Kuzior et al., 2025). Third, digital innovation is emerging as the current frontier for strengthening regulatory transparency, particularly in insurance markets (Kuzior et al., 2023). Importantly, different governance dimensions operate through distinct temporal channels: improvements in corruption perceptions boost economic growth in the short run. At the same time, government effectiveness exerts a delayed but more durable positive effect (Brychko et al., 2025). This temporal heterogeneity suggests that governance reforms require sustained institutional commitment – a consideration that underscores the importance of understanding the mechanisms through which governance capabilities shape development.

While the positive association between governance and development is well established, the mechanisms through which institutional quality translates into development outcomes remain less understood. A growing body of evidence indicates that governance functions as a transmission filter that conditions the effectiveness of other policy inputs (Bagirzade, 2025). In the context of Ukraine's post-war recovery, institutional trust and governance effectiveness have been shown to mediate the impact of digital maturity on infrastructure reconstruction outcomes (Topazly et al., 2026). The negative impact of public debt on economic growth is significantly moderated by governance quality in West African economies (Krah et al., 2026), and the path from natural resource wealth to human capital development is mediated by governance frameworks that determine whether resources become a "blessing" or a "curse" (Muyambri, 2025). This transmission logic extends to environmental and energy policy as well. The efficiency of environmental tax reforms depends on institutional prerequisites, including the rule of law and digital skills (Samusevych et al., 2024). The effectiveness of feed-in tariff schemes varies across eight distinct country groupings reflecting different institutional frameworks (Lyeonov & Moroz, 2025). And renewable energy transitions depend on structural institutional and digital capacity factors across EU member states (Vasa et al.,

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2024). Further evidence suggests that governance effects are non-linear and context-dependent, with the role of institutional quality varying across quantiles of economic performance (Nguyen et al., 2024). Government expenditure patterns in the Baltic States are similarly determined primarily by structural economic factors, suggesting that fiscal governance operates through deeply embedded institutional channels (Filipova et al., 2025). These findings collectively indicate that governance capabilities do not affect development in isolation but interact with structural factors through complex intermediary pathways.

Methodological advances in mediation analysis – particularly resampling strategies for assessing indirect effects in multiple mediator models (Preacher & Hayes, 2008) and correlated random effects frameworks for panel estimation (Mundlak, 1978) – provide the toolkit for examining such indirect pathways. However, their application to governance–development research remains limited, with most studies employing direct-effect estimation rather than examining the channels through which specific governance dimensions operate.

Leadership quality shapes development not only through institutional reform but also through its effect on public trust and stakeholder confidence. Marketing tools and transparency mechanisms are pertinent for enhancing citizen trust in government services in the digital environment (Litovtseva et al., 2022; Sadigov et al., 2025), while innovative financial stewardship is critical for rebuilding public trust and improving service delivery in the South African public sector (Ntuli et al., 2026). At the firm level, governance structures prioritizing operational efficiency over intangible assets contribute to performance decline, suggesting that governance quality affects outcomes partly through its influence on institutional legitimacy (Shubita et al., 2025). These findings underscore that the quality of leadership decisions reverberates beyond immediate policy outputs to shape the institutional environment within which development occurs.

The alignment between different governance functions has emerged as a further dimension of this relationship. Institutional performance is maximized through the mutual reinforcement of financial and IT governance structures – a "synergistic governance" model (Riyadh et al., 2026) – and AI-driven predictive analytics significantly improve operational efficiency and risk management in Gulf financial systems (Morshed & Khrais, 2026). Board-level governance structures, particularly board size and independence, significantly impact bank performance in Nigeria (Otekunrin et al., 2024), and corporate governance standards boost IT-sector performance (Vintilă et al., 2025), providing micro-level evidence that governance quality generates measurable performance differentials across institutional settings. At the national level, government AI readiness accelerates renewable infrastructure capacity, though it does not automatically translate into output generation – a finding that echoes the distinction between governance capability and governance outcomes central to the present study (Lyeonov et al., 2025a). The integrity of the institutional environment also matters: corruption, cyber threats, and money laundering cumulatively degrade the business environment, with the effectiveness of countermeasures varying by national development level (Lyeonov et al., 2025b), reinforcing the argument that leadership must operate through robust institutional channels to generate developmental impact.

Despite this substantial body of evidence, three critical gaps persist. First, the existing literature relies almost exclusively on the Worldwide Governance Indicators (Kaufmann & Kraay, 2024), the International Country Risk Guide (Azam et al., 2021), and composite indices from the World Economic Forum (Shostya et al., 2023) – none of which disaggregate leadership and foresight as a distinct governance capability. The Chandler Good Government Index, which explicitly separates upstream leadership capabilities from downstream institutional outcomes across 120 countries, has received limited attention in peer-reviewed empirical research. Second, while individual governance dimensions have been tested as independent predictors of development, the mediation mechanism through which leadership and foresight shape other governance capabilities, which in turn determine development outcomes, remains largely

unexplored. Third, the income-contingent nature of governance effects – suggested by the heterogeneous findings of Azam et al. (2021) and Ciołek et al. (2025) – has not been systematically tested for the leadership dimension specifically. This study addresses these three gaps.

It aims to estimate the direct and mediated effects of government leadership and foresight on national development across 120 countries over 2021–2025, and to identify the specific institutional channels – legal frameworks, institutional capacity, and the business environment – through which leadership and foresight shape development outcomes.

2. METHODOLOGY

2.1. Data sources and sample

This study draws on three complementary data sources. The primary governance data are obtained from the Chandler Good Government Index (CGGI), an annual assessment of government effectiveness produced by the Chandler Institute of Governance (Singapore). The CGGI evaluates countries across seven capability pillars – leadership and foresight, robust laws and policies, strong institutions, financial stewardship, attractive marketplace, global influence, and helping people rise – each scored on a 0–1 scale. The index covers 104 countries across all five editions (2021–2025), with 16 additional countries entering in 2024–2025, resulting in an unbalanced panel of 120 countries. The full list of countries by income classification is provided in Table A1 (Appendix A).

Development outcome and control variable data are sourced from the World Bank's World Development Indicators (WDI) and the Worldwide Governance Indicators (WGI). To mitigate simultaneity, WDI and WGI values are lagged by one year relative to the CGGI observation (with a two-year fallback where unavailable). The Human Development Index (HDI) is obtained from the UNDP Human Development Report. Income group classifications follow the World Bank's 2024 taxonomy: 47 high-income, 32 upper-middle-income, 30 lower-middle-income, and 8 low-income countries (3 unclassified). The final estimation sample comprises 395–500 observations (depending on outcome variable availability), covering 104–118 countries over 2021–2025.

2.2. Variables

Three dependent variables capture distinct dimensions of national development: (i) the natural logarithm of GDP per capita (PPP), (ii) life expectancy at birth, and (iii) the Human Development Index (Table 1). The principal independent vari-

Table 1. Variable definitions, sources, and expected signs

Variable	Notation	Source	Period	Exp. sign
Dependent variables				
ln(GDP per capita, PPP)	ln(GDPpc)	World Bank WDI	2020–2024	–
Life expectancy at birth	LifeExp	World Bank WDI	2020–2024	–
Human Development Index	HDI	UNDP HDR	2020–2023	–
Independent variable				
Leadership & Foresight	L&F	CGGI	2021–2025	+
Mediator				
Other Governance Capabilities	OtherCap	CGGI (mean pillars 2–6)	2021–2025	+
Controls				
Trade openness (% of GDP)	Trade	World Bank WDI	2020–2024	+/–
Population (logged)	ln(Pop)	World Bank WDI	2020–2024	+/–
Fuel exports (% of merch.)	Fuel	World Bank WDI	2020–2024	–
Gross capital formation (%)	GCF	World Bank WDI	2020–2024	+
Robustness control				
Government Effectiveness	GovEff	World Bank WGI	2020–2023	+

Note: WDI and WGI values are lagged by one year (T–1) relative to the CGGI year, with a two-year (T–2) fallback. Other Governance Capabilities = arithmetic mean of CGGI pillars 2–6.

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able is the CGGI leadership and foresight pillar score. A composite mediator – other governance capabilities – is constructed as the arithmetic mean of pillars 2–6. Control variables capture structural economic characteristics: trade openness, logged population, fuel exports (resource dependence), and gross capital formation (investment intensity).

2.3. Empirical strategy

2.3.1. Baseline model

The primary specification is a pooled OLS regression with year fixed effects and standard errors clustered at the country level:

$$Y_{it} = \alpha + \beta_1 L\&F_{it} + \gamma_1 Trade_{it} + \gamma_2 ln(Pop)_{it} + \gamma_3 Fuel_{it} + \gamma_4 GCF_{it} + \delta_t + \varepsilon_{it}, \quad (1)$$

where Y_{it} denotes the development outcome for country i in year t, β_1 is the primary parameter of interest, $\gamma' X_{it}$ is a vector of control variables, δ_t captures year fixed effects, and ε_{it} is the idiosyncratic error. Given the short panel $(T = 5)$ and the dominance of between-country variation, the pooled estimator efficiently exploits the primary source of informative variation. Three alternative panel estimators are additionally reported:

$$Y_{it} = \alpha + \beta_1 L\&F_{it} + \gamma' X_{it} + \delta_t + u_i + \varepsilon_{it} \ [Random\ Effects], \quad (2)$$

$$Y_{it} = \alpha + \beta_1 L\&F_{it} + \gamma' X_{it} + \pi' \overline{X_i} + \delta_t + u_i + \varepsilon_{it} \ [Mundlak\ RE], \quad (3)$$

$$Y_{it} = \alpha + \beta_1 L\&F_{i,t-1} + \gamma' X_{it} + \delta_t + \varepsilon_{it} \ [Lagged\ L\&F], \quad (4)$$

where u_i is the country-specific random effect and $\overline{X_i}$ denotes country-level time-means of time-varying regressors (Mundlak, 1978). Equation (3) yields consistent estimates under both FE and RE assumptions; a joint test on π serves as a Hausman test analog (Wooldridge, 2010). Equation (4) addresses potential simultaneity using the prior year's governance assessment.

2.3.2. Mediation analysis

To examine the transmission channels, a Baron and Kenny (1986) mediation framework is adapted to the panel setting:

$$M_{it} = \alpha + a\,L\&F_{it} + \gamma' X_{it} + \delta_t + \varepsilon_{it} \ [Path\ a] \quad (5)$$

$$it = \alpha + \beta_1 L\&F_{it} + \beta_2 M_{it} + \gamma' X_{it} + \delta_t + \varepsilon_{it} \ [Path\ b + direct\ effect],$$

where M_{it} is the mediator (other governance capabilities or an individual pillar), a is the coefficient of $L\&F$ on the mediator, and β_2 is the effect of the mediator on the outcome conditional on $L\&F$. The indirect effect $(a \cdot \beta_2)$ is tested via 1,000 bootstrap replications using the percentile method (Preacher & Hayes, 2008). The decomposition is performed for both the aggregate mediator and each individual capability pillar.

2.3.3. Complementarity

$$Y_{it} = \alpha + \beta_1 L\&F_{it} + \beta_2 M_{it} + \beta_3 (L\&F_{it} \cdot M_{it}) + \gamma' X_{it} + \delta_t + \varepsilon_{it}. \quad (6)$$

A significant positive (negative) β_3 indicates complementarity (substitutability) between leadership and institutional capabilities.

2.3.4. Pillar decomposition

$$Y_{it} = \alpha + \beta_1 Pillar_{it}^{k} + \gamma' X_{it} + \delta_t + \varepsilon_{it} \quad (7)$$

for $k \in$ {L&F, robust laws, …, helping people rise, overall CGGI}. Comparing R^2 across specifications reveals which governance dimension most strongly predicts development.

2.3.5. Robustness checks

Sensitivity tests include: (i) country fixed effects (dropping the collinear ln Population term); (ii) a between-effects OLS estimator applied to country means; and (iii) augmented specifications controlling for government effectiveness (WGI) or the aggregate other capabilities index.

3. RESULTS

3.1. Descriptive statistics

The analysis draws on an unbalanced panel of 120 countries over 2021–2025 (545 country-year observations). Table 2 reports the descriptive statistics. Leadership and foresight scores range from 0.00 to 0.87 (mean = 0.443, SD = 0.144), reflecting considerable cross-country heterogeneity in strategic governance capabilities. Development outcomes display comparable variation: GDP per capita (PPP, constant 2021 international dollars) ranges from USD 1,457 to USD 133,572, life expectancy ranges from 53.1 to 84.6 years, and the Human Development Index ranges from 0.414 to 0.972. Control variables – trade openness, population, fuel exports, and gross capital formation – are available for over 94% of observations, while the HDI coverage is 78.0% due to the temporal lag in UNDP reporting. The Pearson correlation matrix (Table B1, Appendix B) confirms strong positive inter-pillar correlations, with L&F most closely associated with attractive marketplace (r = 0.882) and robust laws (r = 0.869), and moderately correlated with the development outcomes (r = 0.610 for ln GDP per capita).

3.2. The L&F–development nexus

The baseline pooled OLS estimates with year fixed effects and cluster-robust standard errors reveal a strong positive association between L&F and all three development outcomes (Table 3). A one-standard-deviation increase in L&F (0.144 points) is associated with approximately 79% higher GDP per capita (β = 4.049, SE = 0.533, p < 0.01), 3.1 additional years of life expectancy (β = 21.464, SE = 3.328, p < 0.01), and a 0.077-point increase in HDI (β = 0.533, SE = 0.074, p < 0.01). The lagged specification – regressing current outcomes on the previous year's L&F score – produces virtually identical coefficients (β = 4.140, p < 0.01, for ln GDP per capita), alleviating concerns that the contemporaneous association is driven by reverse causality. Figure 1 illustrates the cross-country relationship between L&F and economic development, with income group–specific regression lines highlighting the heterogeneous slopes.

The panel estimators yield a markedly different picture. For ln GDP per capita and HDI, both random effects and Mundlak correlated random effects produce near-zero and statistically insignificant L&F coefficients (β = 0.078, p = 0.273 and β = 0.014, p = 0.839, respectively, for ln GDP per capita). For life expectancy, the Mundlak estimator yields a significant negative coefficient (β = −4.273, p < 0.01), suggesting that within-country increases in L&F over the sample period are not associated with contemporaneous improvements in longevity – consistent with the long lags through which governance reforms affect health outcomes. The Mundlak test decisively rejects the null of RE consistency (p < 0.01 for L&F means across all specifications), confirming the presence of unobserved heterogeneity. The within-country standard deviation of L&F constitutes only 22.6% of the overall variation, while for GDP per capita

Table 2. Descriptive statistics

Variable	N	Mean	SD	Min	Max
Leadership & Foresight	545	0.443	0.144	0.000	0.870
Robust Laws & Policies	545	0.543	0.190	0.010	0.960
Strong Institutions	545	0.479	0.185	0.040	0.870
Financial Stewardship	545	0.547	0.183	0.120	0.990
Attractive Marketplace	545	0.518	0.165	0.040	0.970
Global Influence	545	0.499	0.218	0.120	0.940
Helping People Rise	545	0.638	0.146	0.330	0.920
GDP per capita (PPP, USD)	535	29,492	25,705	1,457	133,572
Life expectancy (years)	540	74.7	6.5	53.1	84.6
Human Development Index	425	0.779	0.140	0.414	0.972
Trade openness (% GDP)	529	88.2	53.5	20.6	402.6
Population (millions)	540	65.3	195.1	0.4	1,438.1
Gross capital formation (%)	526	24.2	7.3	1.2	47.9
Gov. Effectiveness (WGI)	540	0.217	0.906	–1.889	2.318

Note: Unbalanced panel, 120 countries, 2021–2025. GDP per capita in constant 2021 international dollars.

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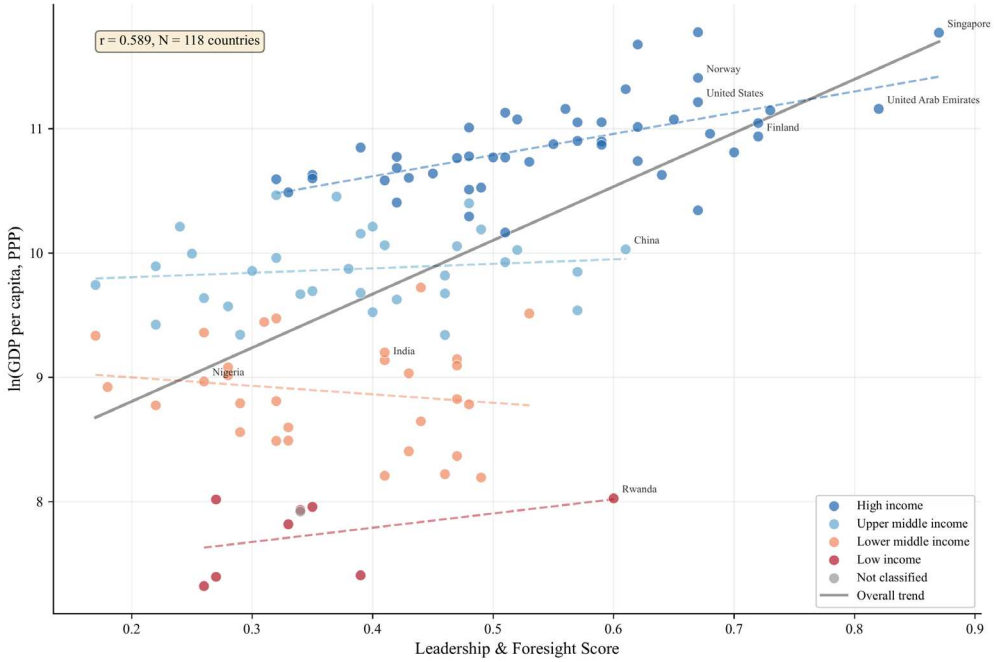

Figure 1. Leadership and foresight and economic development across countries

Table 3. Main estimation results: Leadership and foresight and development outcomes

Dep. variable	Model	β(L&F)	SE	p-value	R^2	N
ln(GDP pc PPP)	(1) Pooled OLS	4.049***	(0.533)	<0.01	0.469	500
	(2) RE	0.078	(0.071)	0.273	0.951	500
	(3) Mundlak RE	0.014	(0.067)	0.839	0.970	500
	(4) Lagged L&F	4.140***	(0.544)	<0.01	0.472	390
Life Expectancy	(1) Pooled OLS	21.464***	(3.328)	<0.01	0.344	500
	(2) RE	−0.565	(1.333)	0.672	0.960	500
	(3) Mundlak RE	−4.273***	(1.291)	0.001	0.974	500
	(4) Lagged L&F	21.511***	(3.439)	<0.01	0.348	390
HDI	(1) Pooled OLS	0.533***	(0.074)	<0.01	0.415	395
	(2) RE	0.002	(0.012)	0.889	0.911	395
	(3) Mundlak RE	−0.015	(0.012)	0.212	0.936	395
	(4) Lagged L&F	0.542***	(0.077)	<0.01	0.422	290

Note: Pooled OLS with year fixed effects and cluster-robust standard errors by country. RE = Random Effects. Mundlak RE includes country-level means of time-varying regressors. Lagged L&F uses L&F(t−1). Controls: trade openness, ln(population), fuel exports, gross capital formation. *** p < 0.01, ** p < 0.05, * p < 0.10.

this ratio is a mere 4.6%. The informative variation is cross-sectional – differences *between* Singapore and Nigeria, not *within* either country over time. The between-effects estimator confirms the magnitude of the baseline result ($\beta = 4.869$, $p < 0.01$).

3.3. How does leadership translate into development? Mediation analysis

The mediation analysis constitutes the central empirical contribution of this study (Table 4). Rather than affecting development directly, L&F operates predominantly as an upstream driver that shapes the quality of other governance capabilities, which in turn determine development outcomes. Figure 2 presents the mediation path diagram.

The evidence supporting this interpretation is threefold. First, L&F is a powerful predictor of the aggregate index of other governance capabilities (path *a*: $\beta = 0.911$, $p < 0.01$): a country scoring one unit higher on L&F scores 0.91 points higher on the composite of robust laws, strong

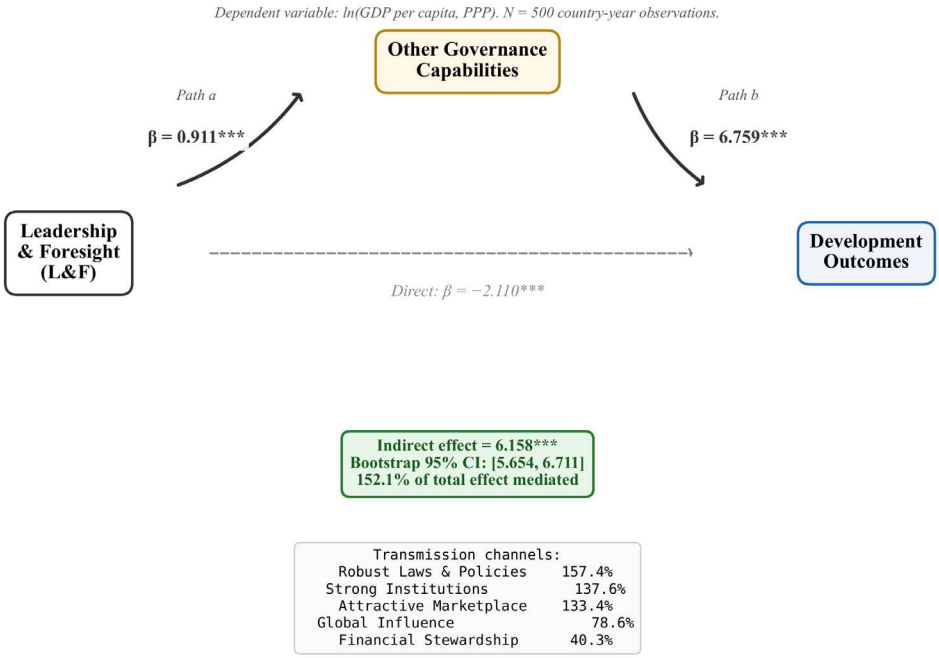

Figure 2. Mediation path diagram: L&F → Other governance capabilities → Development

institutions, financial stewardship, attractive marketplace, and global influence. Second, these capabilities strongly predict development conditional on L&F (path *b*: $\beta = 6.759$, $p < 0.01$, for ln GDP per capita). Third, the resulting indirect effect – the product of paths *a* and *b* – is 6.158 (bootstrap 95% CI: [5.654, 6.711]), accounting for 152.1% of the total effect on GDP per capita. The proportion exceeding 100% reflects the negative direct residual effect of L&F ($\beta = -2.110$, $p < 0.01$). This over-mediation pattern is consistent across dependent variables, with indirect effects representing 179.3% of the total for life expectancy and 166.4% for HDI.

The pillar-level decomposition reveals the specific transmission channels. The indirect effects through robust laws and policies (157.4% of the total effect on GDP per capita), strong institutions (137.6%), and attractive marketplace (133.4%) dominate, indicating that L&F enhances development primarily by strengthening legal frameworks,

Table 4. Mediation analysis: Transmission channels from L&F to development

Channel	Path a	Path b	Indirect	Bootstrap 95% CI	% mediated
Panel A: ln(GDP per capita)					
Aggregate (Other Cap.)	0.911***	6.759***	6.158***	[5.654, 6.711]	152.1%
Robust Laws	1.124***	5.669***	6.372		157.4%
Strong Institutions	0.986***	5.649***	5.571		137.6%
Attractive Marketplace	0.936***	5.772***	5.402		133.4%
Global Influence	0.851***	3.741***	3.183		78.6%
Financial Stewardship	0.658***	2.478***	1.632		40.3%
Direct effect of L&F			−2.110***		
Panel B: Life Expectancy					
Aggregate (Other Cap.)	0.911***	42.251***	38.494***	[34.922, 42.522]	179.3%
Direct effect of L&F			−17.030***		
Panel C: HDI					
Aggregate (Other Cap.)	0.919***	0.965***	0.887***	[0.804, 0.980]	166.4%
Direct effect of L&F			−0.354***		

Note: Path a: L&F → Mediator. Path b: Mediator → Development (controlling for L&F). Indirect = a × b. Bootstrap CI based on 1,000 replications. All models include year FE and controls. *** p < 0.01, ** p < 0.05, * p < 0.10.

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bureaucratic capacity, and the investment climate. Financial stewardship transmits the weakest indirect effect (40.3%), while global influence occupies an intermediate position (78.6%).

The negative direct effect invites careful interpretation. Conditional on a given level of institutional quality, higher L&F scores are associated with marginally lower development outcomes – a pattern consistent with the "vision–capacity gap" hypothesis: ambitious strategic orientation without commensurate institutional infrastructure may generate policy incoherence or resource misallocation.

3.4. Complementarity and pillar decomposition

The interaction analysis (Table 5) tests whether L&F and other capabilities are complements or substitutes. The interaction coefficients are statistically insignificant across all specifications (p = 0.221 for ln GDP per capita; p = 0.661 for life expectancy; p = 0.285 for HDI), indicating an additive structure: L&F and institutional quality contribute independently to development.

The pillar-level horse race (Table 6) confirms that all seven CGGI pillars significantly predict development. For ln GDP per capita, global influence (R^2 = 0.820) and helping people rise (R^2 = 0.782) exhibit the highest explanatory power, while L&F yields the lowest (R^2 = 0.469). This ranking reinforces the mediation interpretation: L&F's contribution is predominantly indirect, channeled through the very dimensions that rank higher.

3.5. Heterogeneity across income levels

The sub-sample analysis reveals a pronounced gradient (Table 7; Figure 3). Among high-income economies, L&F is significantly associated with all development outcomes (β = 1.506, p < 0.01, for ln GDP per capita; β = 0.232, p < 0.01, for HDI). For upper-middle-income countries, significance is retained only for GDP per capita (β = 0.863, p < 0.05). For lower-middle and low-income economies, the association is statistically insignificant (β = 0.744, p = 0.533). This gradient suggests that strategic leadership yields measurable returns primarily where foundational institutions are already operational.

Table 5. Complementarity: Interaction between L&F and other governance capabilities

Variable	ln(GDP pc)	Life Expectancy	HDI
L&F	−0.584	−21.050**	−0.154
Other Capabilities	7.997***	38.991***	1.130***
L&F × Other Cap.	−2.706	7.132	−0.358
p-value	(0.221)	(0.661)	(0.285)
R^2	0.821	0.724	0.817
N	500	500	395

Note: Pooled OLS with year FE and cluster-robust SE. Controls: trade openness, ln(population), fuel exports, gross capital formation. *** p < 0.01, ** p < 0.05, * p < 0.10.

Table 6. Pillar-level decomposition: Individual predictive power of CGGI dimensions

Pillar	ln(GDP per capita)	HDI
	B	SE
Leadership & Foresight	4.049***	(0.533)
Robust Laws & Policies	4.151***	(0.312)
Strong Institutions	4.715***	(0.318)
Financial Stewardship	3.573***	(0.403)
Attractive Marketplace	4.695***	(0.415)
Global Influence	4.051***	(0.218)
Helping People Rise	6.317***	(0.379)
Overall CGGI Score	5.946***	(0.365)

Note: Each row represents a separate regression. All models include year FE, cluster-robust SE, and controls. *** p < 0.01.

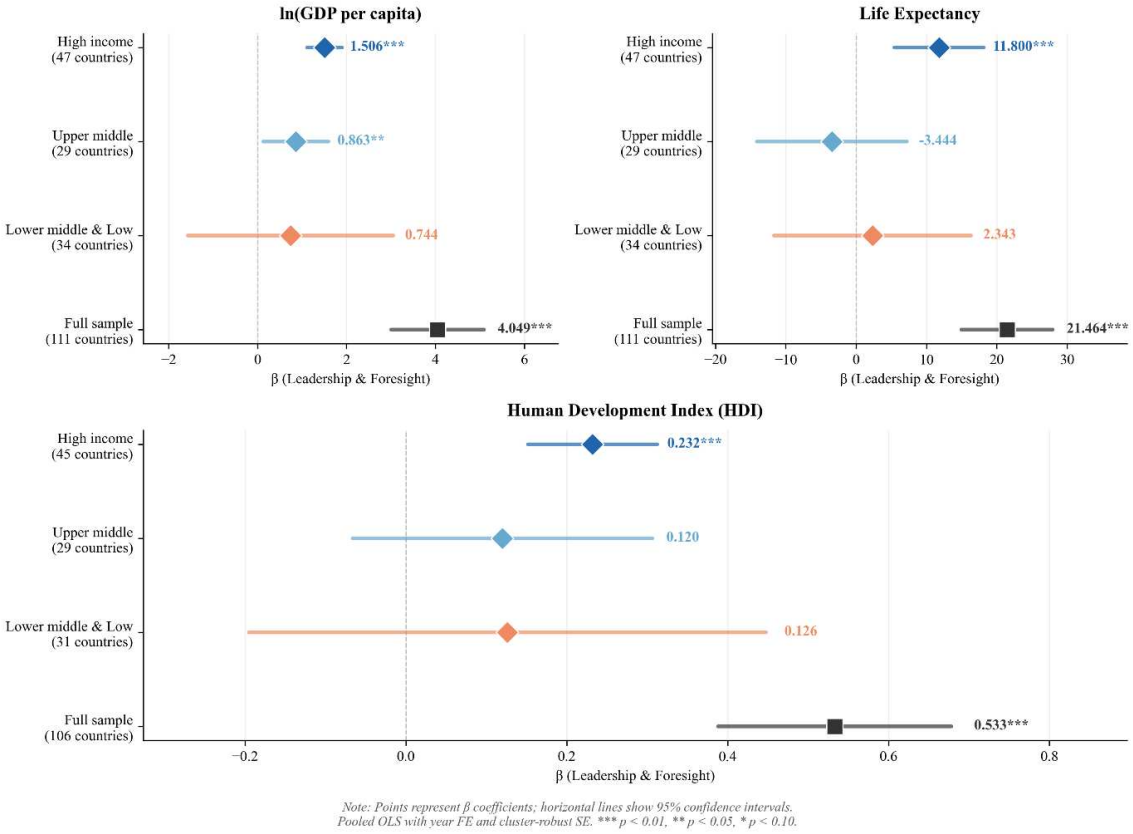

Figure 3. Heterogeneity of the L&F-development relationship across income groups

Table 7. Sub-sample analysis by income group

Income group	ln(GDP per capita)	HDI
	β(L&F)	SE
High income (47)	1.506***	(0.201)
Upper middle (29)	0.863**	(0.374)
Lower mid. + Low (34)	0.744	(1.179)

Note: Pooled OLS with year FE and cluster-robust SE. Number of countries in parentheses. Controls as in Table 3. *** p < 0.01, ** p < 0.05, * p < 0.10.

3.6. Country-level patterns

Table D1 (Appendix D) reports country-level L&F scores, development outcomes, and model residuals from the baseline specification for 111 countries with complete data. The residuals identify countries that systematically over- or underperform relative to their L&F scores and structural controls. Among high-income economies, Croatia (residual = 1.036), Romania (1.250), and Panama (1.353) substantially overperform, suggesting that factors beyond L&F – such as EU accession effects or canal-related trade advantages – contribute to their economic performance. Conversely, Singapore (–1.048) and the United Arab Emirates (–1.140) underperform relative to model predictions, consistent with their exceptionally high L&F scores that place them beyond the range where additional leadership gains translate linearly into GDP. Among low-income economies, Rwanda (residual = –2.200) and Mozambique (–2.241) exhibit the largest negative residuals. Rwanda exemplifies the vision–capacity gap: the highest L&F score among low-income economies (0.600) coexisting with structural constraints that limit developmental translation.

3.7. Robustness

The baseline findings withstand a battery of sensitivity tests (Table 8). The between-effects estima-

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Table 8. Robustness checks

Specification	ln(GDP per capita)	HDI	R^2 (GDP)	R^2 (HDI)
	β(L&F)	SE	β(L&F)	SE
Baseline	4.049***	(0.533)	0.533***	(0.074)
+ Other Capabilities	−2.110***	(0.497)	−0.354***	(0.071)
+ Gov. Effectiveness	−2.763***	(0.674)	−0.426***	(0.109)
Country FE	0.005	(0.059)	−0.015	(0.012)
Between OLS	4.869***	(0.731)	0.635***	(0.085)

Note: Baseline: Pooled OLS with year FE and cluster-robust SE. Between OLS uses country means. Country FE absorbs time-invariant heterogeneity (ln_population dropped due to collinearity). Gov. Effectiveness from the Worldwide Governance Indicators. *** p < 0.01, ** p < 0.05, * p < 0.10.

tor confirms the cross-sectional association (β = 4.869, $p < 0.01$). The country fixed effects specification produces near-zero and insignificant coefficients for ln GDP per capita (β = 0.005, p = 0.930) and HDI, though for life expectancy the within-country estimate is negative and significant (β = −4.330, $p < 0.01$), mirroring the Mundlak pattern and reflecting the long gestation period of health improvements. When government effectiveness from the worldwide governance indicators is introduced as a control, the L&F coefficient turns negative (β = −2.763, $p < 0.01$) – directly corroborating the mediation mechanism: once the institutional transmission channel is absorbed by the control variable, the residual L&F association reverses sign. An identical pattern emerges with the aggregate other capabilities index (β = −2.110, $p < 0.01$). A detailed comparison of pooled OLS and country fixed effects estimates across all three dependent variables is reported in Table C1 (Appendix C). These robustness tests provide convergent evidence that leadership enhances development through institutional channels.

4. DISCUSSION

The findings advance the governance–development literature by demonstrating that leadership and foresight operate not as a direct determinant of development but as a meta-governance capability whose effects are channeled through the broader institutional architecture.

The strong positive association between L&F and development outcomes (β = 4.049, $p <$ 0.01, for ln GDP per capita) is consistent with the foundational proposition that institutional quality drives long-run economic performance (Rodrik et al., 2004). However, the mediation analysis reveals a more nuanced mechanism: 152.1% of the total effect is transmitted indirectly through other governance capabilities, providing quantitative cross-country evidence that leadership shapes development primarily by building institutional capacity rather than exerting direct effects. This finding aligns with Sarker et al. (2023), who identified political will as the orchestrator of institutional modernization, and with Shostya et al. (2023), who found that government adaptability mediates the culture–growth relationship.

The negative direct effect of L&F after controlling for mediating capabilities (β = −2.110, p < 0.01) constitutes a novel empirical regularity. This "vision–capacity gap" suggests that an ambitious strategic orientation without commensurate institutional infrastructure may lead to policy incoherence or resource misallocation. The finding receives indirect support from Muyambri (2025), who documented a parallel "endowment–capacity gap" whereby natural resource wealth fails to translate into human capital development absent strong governance frameworks. This result appears to contrast with Shostya et al. (2023), who reported a direct positive effect of government adaptability on GDP per capita; however, the discrepancy likely reflects differences in operationalization, as the Government Adaptability Index conflates leadership with institutional flexibility, whereas the CGGI isolates leadership from downstream institutional dimensions. When these dimensions are separated, the direct contribution of leadership becomes negative, revealing the conditional nature of its effect. Our interaction analysis found no evidence of complementarity

(p = 0.221), suggesting that the relationship is additive and the vision–capacity gap reflects a genuine structural pattern rather than a measurement artefact.

The pronounced income gradient – with L&F significant only in high-income economies (β = 1.506, $p < 0.01$) – aligns with the heterogeneous institutional effects documented by Ciołek et al. (2025), who found that catching-up processes can temporarily drive growth regardless of institutional quality in transition economies. These findings suggest a sequencing logic: foundational institutional capacity must be established before strategic leadership can yield measurable development returns. Such income-contingent effects would remain invisible under aggregate governance measures – a limitation that the study's use of the CGGI directly addresses. Kaufmann and Kraay (2024) acknowledged that the WGI's aggregate dimensions are "often too coarse to guide the design of specific governance reforms." The present study demonstrates that disaggregation is not merely methodologically preferable but substantively consequential: treating governance as an undifferentiated construct obscures the hierarchical relationship between leadership and the institutional capabilities it enables.

Even so, the five-year CGGI panel limits within-country estimation and long-run inference; reverse causality is mitigated but not resolved by the lagged specification; minor CGGI revisions across editions may introduce measurement inconsistency, partially absorbed by year fixed effects; and the high correlation between L&F and other governance pillars (r = 0.82–0.88) is leveraged, not eliminated, by the mediation framework.

CONCLUSION

This paper investigated the effect of government leadership and foresight on national development and traced the institutional channels through which it operates, drawing on the Chandler Good Government Index for 120 countries over 2021–2025, merged with World Bank and UNDP indicators.

The central finding is that leadership and foresight function as a meta-governance capability whose development impact is predominantly indirect. Once the indirect channels operating through legal frameworks, institutional capacity, and the business environment are accounted for, the direct residual effect of leadership turns negative – a "vision–capacity gap" indicating that strategic ambition without commensurate institutional infrastructure can be counterproductive rather than merely ineffective. This effect concentrates in high-income economies and is absent in lower-income contexts, suggesting that institutional maturity is a precondition for leadership and foresight to translate into measurable developmental returns. These associations are primarily cross-sectional; within-country variation over the five-year panel is limited, and the findings should be interpreted as reflecting structural governance differences across countries.

These findings carry differentiated policy implications. In high-income contexts, strategic governance investments – long-term planning, evidence-based foresight, and adaptive regulation – can generate measurable performance gains. For middle- and lower-income countries, governance reform should ensure that leadership investments are accompanied by commensurate strengthening of legal frameworks, bureaucratic capacity, and the business environment – the institutional channels through which leadership generates developmental impact.

For governance assessment frameworks, the results underscore the value of disaggregated measurement: composite indices risk obscuring the hierarchical relationship between leadership and the institutional capabilities it enables. As the CGGI panel lengthens, within-country analysis will become feasible, enabling stronger causal inference.

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APPENDIX A

Table A1. Countries in the sample by World Bank 2024 income classification

#	Country	Income group	#	Country	Income group
1	Australia	High income	61	Guatemala	Upper middle income
2	Austria	High income	62	Indonesia	Upper middle income
3	Belgium	High income	63	Iran, Islamic Rep.	Upper middle income
4	Bulgaria	High income	64	Jamaica	Upper middle income
5	Canada	High income	65	Kazakhstan	Upper middle income
6	Chile	High income	66	Malaysia	Upper middle income
7	Costa Rica	High income	67	Mauritius	Upper middle income
8	Croatia	High income	68	Mexico	Upper middle income
9	Cyprus	High income	69	Moldova	Upper middle income
10	Czech Republic	High income	70	Mongolia	Upper middle income
11	Denmark	High income	71	Montenegro	Upper middle income
12	Estonia	High income	72	North Macedonia	Upper middle income
13	Finland	High income	73	Paraguay	Upper middle income
14	France	High income	74	Peru	Upper middle income
15	Germany	High income	75	Serbia	Upper middle income
16	Greece	High income	76	South Africa	Upper middle income
17	Hungary	High income	77	Thailand	Upper middle income
18	Iceland	High income	78	Türkiye	Upper middle income
19	Ireland	High income	79	Ukraine	Upper middle income
20	Israel	High income	80	Angola	Lower middle income
21	Italy	High income	81	Bangladesh	Lower middle income
22	Japan	High income	82	Benin	Lower middle income
23	Kuwait	High income	83	Bolivia	Lower middle income
24	Latvia	High income	84	Cambodia	Lower middle income
25	Lithuania	High income	85	Cameroon	Lower middle income
26	Luxembourg	High income	86	Côte d'Ivoire	Lower middle income
27	Malta	High income	87	Egypt	Lower middle income
28	Netherlands	High income	88	Ghana	Lower middle income
29	New Zealand	High income	89	Honduras	Lower middle income
30	Norway	High income	90	India	Lower middle income
31	Panama	High income	91	Jordan	Lower middle income
32	Poland	High income	92	Kenya	Lower middle income
33	Portugal	High income	93	Kyrgyzstan	Lower middle income
34	Romania	High income	94	Laos	Lower middle income
35	Russian Federation	High income	95	Lebanon	Lower middle income
36	Saudi Arabia	High income	96	Morocco	Lower middle income
37	Singapore	High income	97	Nepal	Lower middle income
38	Slovakia	High income	98	Nicaragua	Lower middle income
39	Slovenia	High income	99	Nigeria	Lower middle income
40	South Korea	High income	100	Pakistan	Lower middle income
41	Spain	High income	101	Philippines	Lower middle income
42	Sweden	High income	102	Senegal	Lower middle income
43	Switzerland	High income	103	Sri Lanka	Lower middle income
44	United Arab Emirates	High income	104	Tajikistan	Lower middle income
45	United Kingdom	High income	105	Tanzania	Lower middle income
46	United States	High income	106	Tunisia	Lower middle income
47	Uruguay	High income	107	Vietnam	Lower middle income
48	Albania	Upper middle income	108	Zambia	Lower middle income
49	Algeria	Upper middle income	109	Zimbabwe	Lower middle income
50	Argentina	Upper middle income	110	Burkina Faso	Low income
51	Armenia	Upper middle income	111	Madagascar	Low income
52	Bosnia and Herzegovina	Upper middle income	112	Malawi	Low income
53	Botswana	Upper middle income	113	Mali	Low income
54	Brazil	Upper middle income	114	Mozambique	Low income
55	China	Upper middle income	115	Rwanda	Low income
56	Colombia	Upper middle income	116	Sierra Leone	Low income
57	Dominican Republic	Upper middle income	117	Uganda	Low income
58	Ecuador	Upper middle income	118	Ethiopia	Not classified
59	El Salvador	Upper middle income	119	Namibia	Not classified
60	Georgia	Upper middle income	120	Venezuela	Not classified

Note: N = 120 countries (47 high income, 32 upper middle income, 30 lower middle income, 8 low income, 3 not classified). Classification: World Bank, July 2024.

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APPENDIX B

Table B1. Pearson correlation matrix

	L&F	Rob.Laws	Str.Inst.	Fin.Stew.	Attr.Mkt.	Glob.Inf.	Help.Rise	ln(GDP)	Life Exp.
L&F	1.000								
Rob.Laws	0.869	1.000							
Str.Inst.	0.807	0.912	1.000						
Fin.Stew.	0.609	0.684	0.670	1.000					
Attr.Mkt.	0.882	0.915	0.856	0.674	1.000				
Glob.Inf.	0.566	0.764	0.834	0.596	0.743	1.000			
Help.Rise	0.682	0.814	0.865	0.772	0.800	0.820	1.000		
ln(GDP)	0.610	0.773	0.851	0.647	0.739	0.843	0.867	1.000	
Life Exp.	0.529	0.676	0.760	0.607	0.668	0.771	0.838	0.854	1.000

Note: All coefficients significant at $p < 0.01$. N = 500. Pooled observations with complete data.

APPENDIX C

Table C1. Pooled OLS vs. Country fixed effects

Dep. Variable	Estimator	β(L&F)	SE	p	R^2	N
ln(GDP per capita)	Pooled OLS	4.049***	(0.533)	<0.001	0.469	500
	Country FE	0.005	(0.067)	0.938	0.651	500
Life Expectancy	Pooled OLS	21.464***	(3.328)	<0.001	0.344	500
	Country FE	−4.330***	(1.466)	0.003	0.562	500
HDI	Pooled OLS	0.533***	(0.074)	<0.001	0.415	395
	Country FE	−0.015	(0.014)	0.272	0.610	395

Note: Pooled OLS: year FE, cluster-robust SE, full controls. Country FE: year FE, cluster-robust SE, controls excl. ln(population). Within-country variation: L&F = 22.6%, GDP = 4.6% of total. *** $p < 0.01$.

APPENDIX D

Table D1. Country-level scores, outcomes, and model residuals

Country	Inc.	L&F	Other Cap.	GDP pc	Pred. ln(GDP)	Resid.	Life Exp.	HDI
Australia	HI	0.620	0.780	60,685	10.514	0.499	83.1	–
Austria	HI	0.520	0.718	64,536	10.210	0.865	81.5	–
Belgium	HI	0.590	0.690	63,095	10.816	0.236	82.4	–
Bulgaria	HI	0.420	0.570	33,074	9.965	0.441	75.7	–
Canada	HI	0.680	0.758	57,517	10.759	0.201	81.6	–
Chile	HI	0.480	0.644	29,564	9.780	0.514	81.2	–
Costa Rica	HI	0.510	0.552	25,980	10.114	0.051	80.8	–
Croatia	HI	0.350	0.612	41,320	9.593	1.036	78.5	–
Cyprus	HI	0.390	0.614	51,454	10.521	0.328	81.6	–
Czech Republic	HI	0.500	0.694	47,558	10.161	0.609	79.9	–
Denmark	HI	0.730	0.828	69,379	11.184	-0.037	81.9	–
Estonia	HI	0.640	0.730	41,289	11.001	-0.373	78.5	–
Finland	HI	0.720	0.822	56,251	10.979	-0.041	81.7	–
France	HI	0.570	0.740	54,297	10.183	0.720	82.9	–
Germany	HI	0.570	0.804	63,039	10.224	0.828	80.5	–
Greece	HI	0.480	0.592	36,701	10.291	0.220	81.5	–
Hungary	HI	0.430	0.566	40,333	10.053	0.551	76.8	–
Iceland	HI	0.510	0.704	68,118	10.142	0.987	82.6	–
Ireland	HI	0.620	0.774	117,862	11.217	0.461	82.9	–
Israel	HI	0.510	0.648	47,527	9.921	0.848	83.2	–
Italy	HI	0.550	0.650	52,870	10.066	0.809	83.7	–

Table D1 (cont.). Country-level scores, outcomes, and model residuals

Country	Inc.	L&F	Other Cap.	GDP pc	Pred. ln(GDP)	Resid.	Life Exp.	HDI
Japan	HI	0.530	0.714	45,859	9.801	0.932	84.0	–
Kuwait	HI	0.420	0.476	47,777	10.531	0.244	83.2	–
Latvia	HI	0.490	0.630	37,278	10.289	0.237	75.7	–
Lithuania	HI	0.620	0.682	46,160	10.961	-0.221	77.0	–
Luxembourg	HI	0.670	0.752	130,049	12.446	-0.670	83.4	–
Malta	HI	0.480	0.600	60,418	10.772	0.237	83.5	–
Netherlands	HI	0.560	0.794	70,199	10.764	0.395	81.9	–
New Zealand	HI	0.700	0.756	49,508	10.654	0.156	83.0	–
Norway	HI	0.670	0.830	90,085	11.163	0.245	83.1	–
Panama	HI	0.330	0.460	35,873	9.135	1.353	79.6	–
Poland	HI	0.420	0.622	43,673	9.855	0.829	78.5	–
Portugal	HI	0.450	0.656	41,768	9.917	0.723	82.3	–
Romania	HI	0.350	0.520	40,117	9.350	1.250	76.6	–
Russian Federation	HI	0.320	0.440	39,887	9.448	1.103	73.3	–
Saudi Arabia	HI	0.650	0.550	64,482	10.913	0.161	78.7	–
Singapore	HI	0.870	0.856	129,555	12.820	-1.048	82.9	–
Slovakia	HI	0.410	0.596	39,518	10.204	0.381	78.0	–
Slovenia	HI	0.480	0.662	47,977	10.387	0.392	82.0	–
South Korea	HI	0.590	0.726	54,029	10.221	0.677	83.4	–
Spain	HI	0.470	0.690	47,323	9.835	0.930	83.9	–
Sweden	HI	0.720	0.828	62,663	11.017	0.028	83.3	–
Switzerland	HI	0.610	0.816	82,295	10.660	0.658	84.1	–
United Arab Emirates	HI	0.820	0.744	70,240	12.299	-1.140	82.9	–
United Kingdom	HI	0.590	0.746	52,593	10.331	0.539	81.2	–
United States	HI	0.670	0.706	74,159	10.425	0.788	78.4	–
Uruguay	HI	0.670	0.610	31,059	10.645	-0.302	78.1	–
Albania	UMI	0.510	0.514	20,481	10.110	-0.183	79.6	–
Argentina	UMI	0.240	0.384	27,230	8.723	1.489	77.4	–
Armenia	UMI	0.380	0.462	19,403	9.748	0.125	77.5	–
Bosnia and Herzegovina	UMI	0.220	0.384	19,805	8.981	0.912	77.8	–
Botswana	UMI	0.570	0.486	18,932	10.140	-0.292	69.2	–
Brazil	UMI	0.300	0.478	19,080	9.059	0.798	75.8	–
China	UMI	0.610	0.566	22,687	9.775	0.255	78.0	–
Colombia	UMI	0.460	0.496	18,383	10.029	-0.210	77.7	–
Dominican Republic	UMI	0.470	0.450	23,282	9.626	0.430	73.7	–
Ecuador	UMI	0.280	0.374	14,343	9.194	0.377	77.4	–
El Salvador	UMI	0.290	0.342	11,425	9.218	0.125	72.1	–
Georgia	UMI	0.520	0.602	22,591	10.219	-0.194	74.5	–
Guatemala	UMI	0.220	0.398	12,385	8.773	0.651	72.6	–
Indonesia	UMI	0.570	0.552	13,890	10.010	-0.471	71.1	–
Iran, Islamic Rep.	UMI	0.170	0.264	17,045	8.658	1.086	77.7	–
Kazakhstan	UMI	0.370	0.470	34,703	9.688	0.767	74.4	–
Malaysia	UMI	0.480	0.574	32,858	10.233	0.167	76.7	–
Mauritius	UMI	0.490	0.508	26,635	10.379	-0.189	73.4	–
Mexico	UMI	0.250	0.488	21,917	8.869	1.126	75.1	–
Moldova	UMI	0.390	0.428	15,990	9.698	-0.018	71.2	–
Mongolia	UMI	0.350	0.430	16,223	9.994	-0.300	72.1	–
Montenegro	UMI	0.400	0.464	27,244	10.072	0.140	77.6	–
North Macedonia	UMI	0.410	0.446	23,455	9.929	0.134	75.3	–
Paraguay	UMI	0.340	0.442	15,826	9.488	0.182	73.8	–
Peru	UMI	0.260	0.512	15,328	8.922	0.716	77.7	–
South Africa	UMI	0.400	0.498	13,695	9.627	-0.103	66.1	–
Thailand	UMI	0.320	0.506	21,191	9.455	0.506	76.4	–
Türkiye	UMI	0.320	0.496	35,069	8.972	1.493	77.2	–
Ukraine	UMI	0.460	0.396	15,917	9.835	-0.160	73.4	–

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Table D1 (cont.). Country-level scores, outcomes, and model residuals

Country	Inc.	L&F	Other Cap.	GDP pc	Pred. ln(GDP)	Resid.	Life Exp.	HDI
Angola	LMI	0.280	0.260	8,788	9.755	-0.674	64.6	–
Benin	LMI	0.460	0.386	3,721	9.449	-1.227	60.8	–
Bolivia	LMI	0.260	0.238	11,616	9.047	0.313	68.6	–
Cambodia	LMI	0.320	0.384	6,695	9.337	-0.528	70.7	–
Cameroon	LMI	0.330	0.302	4,875	9.492	-1.000	63.7	–
Côte d'Ivoire	LMI	0.480	0.378	6,521	9.790	-1.008	61.9	–
Egypt	LMI	0.440	0.412	16,691	9.683	0.040	71.6	–
Ghana	LMI	0.470	0.360	6,809	10.106	-1.280	65.5	–
Honduras	LMI	0.220	0.390	6,468	8.941	-0.166	72.9	–
India	LMI	0.410	0.460	9,302	9.264	-0.126	72.0	–
Jordan	LMI	0.470	0.456	9,381	9.636	-0.511	77.8	–
Kenya	LMI	0.440	0.350	5,692	9.589	-0.943	63.6	–
Kyrgyzstan	LMI	0.290	0.390	6,576	9.262	-0.471	72.2	–
Lebanon	LMI	0.170	0.254	11,330	9.164	0.172	77.8	–
Morocco	LMI	0.470	0.426	8,915	9.789	-0.693	75.3	–
Nepal	LMI	0.320	0.332	4,861	8.838	-0.349	70.4	–
Nicaragua	LMI	0.180	0.334	7,497	8.829	0.093	74.9	–
Pakistan	LMI	0.330	0.308	5,419	9.061	-0.464	67.6	–
Philippines	LMI	0.410	0.492	9,899	9.465	-0.265	69.8	–
Senegal	LMI	0.470	0.380	4,305	9.659	-1.292	68.7	–
Sri Lanka	LMI	0.320	0.352	13,025	9.035	0.439	77.5	–
Tajikistan	LMI	0.430	0.342	4,472	9.544	-1.138	71.8	–
Tanzania	LMI	0.490	0.408	3,621	9.416	-1.221	67.0	–
Tunisia	LMI	0.310	0.358	12,651	9.623	-0.177	76.5	–
Vietnam	LMI	0.530	0.524	13,546	10.312	-0.798	74.6	–
Zambia	LMI	0.410	0.296	3,673	9.477	-1.268	66.3	–
Zimbabwe	LMI	0.290	0.250	5,218	9.124	-0.564	62.8	–
Burkina Faso	LI	0.330	0.278	2,486	9.211	-1.392	61.1	–
Madagascar	LI	0.270	0.304	1,629	8.972	-1.576	63.6	–
Malawi	LI	0.390	0.296	1,649	9.443	-2.035	67.4	–
Mali	LI	0.350	0.256	2,860	9.257	-1.299	60.4	–
Mozambique	LI	0.260	0.280	1,512	9.563	-2.241	63.6	–
Rwanda	LI	0.600	0.482	3,063	10.227	-2.200	67.8	–
Uganda	LI	0.340	0.386	2,791	9.064	-1.130	68.3	–
Ethiopia	NC	0.340	0.306	2,758	8.957	-1.035	67.3	–

Note: Most recent year with complete data. Predicted ln(GDP) and residuals from baseline pooled OLS (Eq. 1). Positive residual = overperformance relative to L&F and controls. Inc. = Income group: HI = High, UMI = Upper middle, LMI = Lower middle, LI = Low, NC = Not classified. GDP pc in constant 2021 int'l USD (PPP). N = 111 countries (9 excluded due to missing controls).