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Governance Quality in ASEAN: An Accounting Data Analytics Approach to Globalisation, Fiscal Capacity, and Health Expenditure

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ABSTRACT

Globalisation produces extensive cross-country economic, fiscal, social, and institutional data, yet these sources are rarely integrated through an accounting data analytics lens to explain governance quality in ASEAN. This study examines long- and short-run relationships between economic, political, and social globalisation and governance quality, while treating government and health expenditure as direct institutional-capacity factors. The analysis integrates the KOF Globalisation Index, Worldwide Governance Indicators, and World Development Indicators for 232 country-year observations across eight ASEAN economies during 1996–2024; ARDL(1,1) estimations use 224 observations. PMG, MG, and DFE estimators are compared. Significant negative error-correction terms support long-run adjustment. Under PMG, economic globalisation is negatively associated with governance quality, while political and social globalisation and government expenditure are positive; health expenditure is negative. The study extends accounting data analytics beyond firm- and audit-level applications by transforming integrated public-sector data into governance intelligence for accountability, fiscal oversight, and evidence-based decision-making.

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1. INTRODUCTION

Good governance is central to sustainable development, institutional stability, and effective public service delivery. However, the institutional effects of globalisation are theoretically ambiguous and empirically mixed. Greater economic, political, and social integration can diffuse international standards, improve access to information, and increase external monitoring, but it can also expose domestic institutions to regulatory competition, external shocks, and implementation pressures. ASEAN is a particularly useful setting because its economies are highly integrated while differing substantially in governance quality, fiscal capacity, and public-sector capability. From an accounting perspective, these differences also create a data-analytics problem: large volumes of fiscal, social, and institutional information must be transformed into decision-relevant evidence for accountability and policy evaluation. Accounting data analytics provides a suitable lens because it extends accounting from retrospective recording towards systematic extraction of patterns, risks, and decision signals from complex datasets (Vasarhelyi et al., 2015; Earley, 2015). A directly relevant ASEAN benchmark is Darusalam et al. (2021), who applied panel ARDL to examine ICT diffusion, globalisation, and governance quality and reported a positive association between globalisation and governance quality. More recent ASEAN evidence shows that institutional quality shapes the consequences of trade openness (Nam et al., 2024), while evidence from developing Asia suggests that deeper trade integration may have non-linear effects on governance quality (Saleem et al., 2025).

This analytics-oriented view is consistent with the broader transformation of accounting and assurance. Deniswara et al. (2020) highlight the growing importance of big data capabilities for accountants, while Deniswara et al. (2023) demonstrate how technology acceptance shapes the adoption of computer-assisted audit techniques. More recent evidence shows that financial auditors increasingly engage with Big Data Analytics (Mulyawan et al., 2024), and accounting analytics can be used to convert financial-statement patterns into fraud-risk signals (Deniswara et al., 2024). Building on this stream, the present study moves the analytics lens from the firm and audit-engagement level to the macro public-sector level. It integrates cross-country accounting-relevant expenditure data with globalisation and governance indicators to generate what this study terms governance intelligence: analytically derived evidence that supports assessment of institutional risk, accountability, and resource effectiveness.

This study uses Institutional Theory to explain why external global pressures should be interpreted alongside domestic implementation capacity. Institutional Theory views governments and organisations as responding to regulative, normative, and cognitive pressures in their external environment (Amenta & Ramsey, 2010; Schiavi et al., 2024). Economic, political, and social globalisation represent distinct channels through which such pressures enter the domestic institutional environment. Fiscal resources and health-system capacity, in turn, represent domestic institutional resources associated with governments' ability to absorb, implement, and sustain institutional change. The theoretical expectation is therefore not that globalisation automatically improves governance, but that observed governance outcomes reflect the broader institutional environment in which external pressures and domestic capacity coexist.

Prior research has generally examined either the direct association between globalisation and institutional quality or the separate importance of fiscal and social-sector capacity. Darusalam et al. (2021) provide an important ASEAN benchmark by jointly considering globalisation and governance through a dynamic panel ARDL design, but their study focused primarily on ICT diffusion and did not position fiscal and

health expenditure within an accounting data analytics framework. Evidence on government spending indicates that globalisation can alter the scale and composition of public expenditure (Heimberger, 2021), while health research shows that spending outcomes depend materially on governance quality (Banik et al., 2023; Kouadio & Njong Mom, 2025). At the same time, the accounting data analytics literature has concentrated predominantly on firm-level reporting, auditing, technology adoption, and fraud detection (Appelbaum et al., 2017; Deniswara et al., 2023; Mulyawan et al., 2024). Much less is known about how an accounting data analytics perspective can be extended to macro-level public-sector governance by integrating multidimensional globalisation, fiscal capacity, health expenditure, and institutional indicators in a dynamic ASEAN framework that distinguishes long-run equilibrium relationships from short-run adjustment.

Accordingly, this study examines the long-run and short-run relationships between economic, political, and social globalisation and governance quality and evaluates the roles of government expenditure and health expenditure as domestic institutional-capacity variables. The harmonised descriptive panel contains 232 country-year observations across eight ASEAN economies and 29 annual periods (1996–2024), while the ARDL(1,1) estimations contain 224 observations after lagging. The study makes four contributions. First, it introduces a public-sector accounting data analytics lens that treats fiscal, health, globalisation, and governance indicators as an integrated evidence environment rather than isolated macroeconomic variables. Second, it connects this analytics lens with Institutional Theory to explain how external institutional pressures can be interpreted alongside domestic capacity. Third, it compares PMG, MG, and DFE estimators to generate robust long-run and short-run governance signals under different assumptions about cross-country heterogeneity. Fourth, it translates the empirical results into governance intelligence relevant to public-sector accountants, auditors, controllers, and policymakers concerned with fiscal oversight, accountability, and institutional performance.

2. LITERATURE REVIEW

Good governance encompasses the quality of public institutions, including government effectiveness, regulatory quality, rule of law, accountability, and corruption control. Its determinants reflect both domestic institutional arrangements and exposure to external economic and political forces. Because these dimensions are increasingly observed through large cross-country financial and institutional datasets, the literature review first positions the study within accounting data analytics and governance intelligence, then uses Institutional Theory to connect globalisation with governance, and finally considers fiscal and health capacity as domestic conditions that may shape institutional responses.

2.1 Accounting Data Analytics and Governance Intelligence

Accounting data analytics can be understood as the systematic acquisition, integration, analysis, and interpretation of accounting-relevant data to support judgement, assurance, risk assessment, and decision-making. The expansion of accounting evidence from conventional transaction records to broader structured and unstructured data has created new opportunities for measurement and assurance (Vasarhelyi et al., 2015). In auditing, data analytics can increase the breadth of evidence examined, reveal exceptions and unusual patterns, and support more targeted professional judgement, although implementation also creates methodological and governance challenges (Earley, 2015; Appelbaum et al., 2017). This analytical logic is

relevant to public-sector accounting because fiscal and service-delivery data are not merely expenditure records; when combined with institutional indicators, they can reveal patterns of capacity, accountability, and resource effectiveness.

The development of this field is also reflected in accounting and auditing research by Deniswara and colleagues. Big data has been linked to changing accountant competencies and the need for analytics-oriented professional capabilities (Deniswara et al., 2020). Technology acceptance influences the adoption of computer-assisted audit techniques (Deniswara et al., 2023), while financial auditors' behavioural intention to adopt Big Data Analytics has been examined as part of the transition towards more data-driven audit practice (Mulyawan et al., 2024). Prasetya et al. (2024) further examine Big Data Analytics in relation to audit quality using an information-systems perspective, and Deniswara et al. (2024) demonstrate how analytical financial ratios can be used to identify fraud-related signals in the healthcare industry. At the public-sector level, Darusalam et al. (2024) show how administrative digitalisation, process transparency, and organisational design can affect corruption risks, reinforcing the importance of traceable information for governance and accountability. Collectively, this literature shows that analytics creates accounting value when heterogeneous data are transformed into interpretable risk and decision signals. The present study extends that principle to cross-country public-sector data and uses the term governance intelligence to describe analytically derived information about institutional risk, fiscal capacity, accountability, and governance performance.

2.2 Institutional Theory and Governance

Institutional Theory explains institutional change as a response to external regulative, normative, and cognitive pressures. In a globalised environment, governments are exposed to international rules, policy models, peer expectations, information flows, and legitimacy pressures that can encourage institutional adaptation (Amenta & Ramsey, 2010; Schiavi et al., 2024). The theory is directly relevant to this study because it connects external pressure with domestic implementation: similar global pressures need not produce similar governance outcomes when countries differ in administrative resources, fiscal space, and public-sector capability.

From this perspective, globalisation is not treated as a single force. Economic globalisation creates market and investment pressures; political globalisation increases participation in international institutions and agreements; and social globalisation expands cross-border information and societal interaction. Fiscal capacity and health expenditure represent domestic resources that may strengthen or constrain institutional adaptation. This theoretical linkage motivates the study's objective of testing whether different dimensions of globalisation are associated with governance quality and whether domestic capacity helps explain the strength and direction of those relationships.

2.3 Globalisation and Governance

Globalisation encompasses multiple dimensions, typically classified into economic, political, and social categories. Each dimension affects governance in distinct ways, and current research has yielded varied results.

Economic Globalisation

Economic globalisation expands cross-border trade, investment, and financial flows. It may improve governance by increasing competitive pressure, investor scrutiny, and demand for predictable regulation, but it can also expose weak institutions to external volatility and bargaining pressures (Bergh et al., 2014; Dreher, 2006). Recent developing-Asia evidence suggests that the trade-governance relationship may be non-linear, reinforcing the need to consider domestic institutional conditions rather than assuming uniformly positive effects (Saleem et al., 2025).

Political Globalisation

Political globalisation reflects participation in international organisations, treaties, and diplomatic networks. Such participation can transmit governance standards through monitoring, policy learning, and shared rules. Institutional Theory predicts that these external pressures can encourage greater transparency and regulatory convergence, although implementation still depends on domestic administrative capability.

Social Globalisation

Social globalisation captures cross-border information, communication, people-to-people contact, and cultural exchange. Greater information access can strengthen civic awareness and public demand for transparency, thereby increasing accountability pressures. Recent work also shows that globalisation can reshape social values and expectations, which may affect institutional behaviour and legitimacy (Yeganeh, 2024).

2.4 The Role of Fiscal Capacity in Governance

Fiscal capacity is an important institutional resource because governments require financing to operate regulatory agencies, digital systems, oversight mechanisms, and public services. Stronger state capacity and effective administration are closely linked to the ability to mobilise and deploy public resources (Besley et al., 2022). Government expenditure can therefore support institutional adaptation to global pressures, although spending levels alone do not guarantee effective governance; transparency and spending quality remain important (Chen & Neshkova, 2020; Heimberger, 2021).

2.5 Health Expenditure and Governance

Health expenditure is both a social investment and an indicator of public-sector capacity. Evidence indicates that the development effect of health spending depends on governance quality and the effectiveness with which resources are converted into services (Banik et al., 2023; Kouadio & Njong Mom, 2025). A resilient health system may strengthen social trust and state legitimacy, but inefficient or crisis-driven spending may not translate into broader institutional improvement. The expected relationship is therefore conditional rather than mechanically positive.

2.6 Empirical Studies on Globalisation, Governance, and Institutional Capacity

Empirical evidence on globalisation and governance remains heterogeneous across regions, dimensions of globalisation, and estimation methods. ASEAN research shows that institutional quality can moderate the consequences of trade openness (Nam et al., 2024), while developing-Asia evidence finds that the governance effect of trade integration can change as openness deepens (Saleem et al., 2025). From an accounting data analytics standpoint, this heterogeneity is important because it implies that governance signals should not be inferred from a single indicator or pooled relationship. The present study therefore separates economic, political, and social globalisation, integrates fiscal and health expenditure as accounting-relevant capacity measures, and triangulates PMG, MG, and DFE results within a dynamic panel framework.

2.7 Conceptual Framework and Hypotheses Development

The conceptual framework combines Institutional Theory with an accounting data analytics logic. The three dimensions of globalisation represent external institutional pressures, governance quality is the institutional outcome, and fiscal and health expenditure represent domestic institutional-capacity factors examined alongside those pressures. Socioeconomic conditions are included as controls for structural differences across countries. Analytically, the framework treats these variables as an integrated evidence system in which the value of the data lies not in any single indicator but in the patterns revealed across external pressure, resource capacity, and governance outcomes. The hypotheses below translate these theoretical and analytical channels into testable direct relationships.

Economic globalisation and governance quality

Economic integration can promote regulatory discipline and administrative efficiency, but it can also magnify external volatility and expose weaknesses in domestic institutions. Accordingly, the direction of the relationship is treated as an empirical question rather than assumed to be uniformly positive (Bergh et al., 2014; Saleem et al., 2025).

H1: Economic globalisation is significantly associated with governance quality.

Political globalisation and governance quality

Political globalisation can expose governments to international standards, peer monitoring, and policy learning. These institutional pressures are expected to influence domestic governance practices, although the magnitude of the effect may differ across ASEAN countries.

H2: Political globalisation is significantly associated with governance quality.

Social globalisation and the quality of governance

Social globalisation expands cross-border information flows and societal interaction. Greater access to information can strengthen public scrutiny and demand for accountability, creating incentives for institutional responsiveness (Yeganeh, 2024).

H3: Social globalisation is significantly associated with governance quality.

The Role of Government Expenditure

Government expenditure represents fiscal resources available for public administration, regulatory enforcement, and institutional development. Adequate fiscal capacity may support governments in implementing institutional reforms, maintaining administrative capability, and responding to external economic and political pressures (Besley et al., 2022; Chen & Neshkova, 2020). Accordingly, the empirical model tests government expenditure as a direct institutional-capacity factor associated with governance quality.

H4: Government expenditure is significantly associated with governance quality.

The Role of Health Expenditure

Health expenditure captures an important dimension of welfare and public-sector capacity. Higher spending can strengthen resilience and public trust when resources are converted effectively into services, although nominal expenditure may also reflect crisis response, cost pressures, or inefficiency (Banik et al., 2023; Kouadio & Njong Mom, 2025). Accordingly, the empirical model tests health expenditure as a direct institutional-capacity factor associated with governance quality.

H5: Health expenditure is significantly associated with governance quality.

3. METHODOLOGY

This study employs a quantitative dynamic panel design framed as a public-sector accounting data analytics workflow. The objective is not merely to estimate isolated coefficients, but to integrate multiple accounting-relevant and institutional datasets, test their time-series properties, model dynamic relationships, and compare alternative estimators to generate interpretable governance signals. A panel Autoregressive Distributed Lag (ARDL) framework is appropriate when regressors are a mixture of $I(0)$ and $I(1)$, but not $I(2)$, and when the research objective requires simultaneous estimation of long-run equilibrium relationships and short-run adjustment. The analysis compares PMG, MG, and DFE estimators because they impose progressively different restrictions on cross-country parameter homogeneity (Pesaran & Smith, 1995; Pesaran et al., 1999).

Operationally, the analytics workflow consists of cross-source data integration, variable harmonisation, descriptive and correlation diagnostics, panel unit-root testing, dynamic ARDL estimation, and model triangulation across PMG, MG, and DFE. This sequence mirrors the core logic of accounting analytics: data are first converted into comparable analytical variables, then tested for quality and statistical properties, and finally transformed into evidence that can support interpretation and decision-making. The use of multiple estimators functions as an analytical robustness layer, reducing the risk that governance conclusions depend on a single assumption about cross-country homogeneity.

3.1 Data and Variables

The analytics architecture combines three internationally comparable data sources. Governance quality is constructed from the Worldwide Governance Indicators because the WGI provide harmonised cross-country measures of government effectiveness, regulatory quality, rule of law, and control of corruption (Kaufmann et al., 2011; World Bank, 2025). Economic, political, and social globalisation are drawn from the KOF Globalisation Index, which explicitly separates these dimensions of global integration (Gygli et al., 2019). Government expenditure, health expenditure, and socioeconomic controls are obtained from the World Development Indicators (World Bank, 2026). Integrating these sources creates a cross-domain accounting data environment in which expenditure measures can be analysed jointly with institutional outcomes and external pressures. ASEAN is selected because the region combines deep economic integration with substantial institutional and fiscal heterogeneity, providing a relevant setting for examining whether similar external pressures are associated with different governance outcomes.

The descriptive panel contains 232 country-year observations across eight ASEAN economies over 1996–2024. The ARDL(1,1) regressions report 224 observations because the first lag removes one observation for each cross-sectional unit. The 29-year time dimension is consistent with the recalculated WGI 2025 series, which provides annual governance estimates from 1996 to 2024, and supports dynamic heterogeneous-panel estimation. The relatively small cross-sectional dimension should nevertheless be considered when interpreting generalisability beyond the sampled ASEAN economies.

Table 1. Variable measurement

Variables	Indicators	Scale of Measurement	Source of Data
Quality of Governance	Voice and Accountability	Index	Worldwide Governance Indicators (WGI), World Bank
	Political Stability and Absence of Violence/Terrorism		
	Government Effectiveness		
	Regulatory Quality		
	Rule of Law		
Economic Globalisation	Control of Corruption.	Index	KOF Globalisation Index
	Trade in goods and services		
Political globalisation	Financial Flows	Index	KOF Globalisation Index
	Participates in international organisations, embassies		
	UN peacekeeping missions		
Social Globalisation	International treaties	Index	KOF Globalisation Index
	International telephone traffic		

Variables	Indicators	Scale of Measurement	Source of Data
Government Expenditure	Internet usage	Index	World Development Indicators (WDI), World Bank
	Trade in cultural goods,		
	The presence of international brands like McDonald's or IKEA		
	Expenditure in current or constant local currency or U.S. dollars, Annual growth rates, and breakdowns by function like research and development		
Health Expenditure	Life expectancy	Index	World Development Indicators (WDI), World Bank
	Mortality rates (infant, under-five, and maternal)		
	Health financing metrics like current health expenditure		
Socioeconomic	Gross Domestic Product per Capita	Index	World Development Indicators (WDI), World Bank
	Human Capital		

Source: Authors' compilation from KOF Globalisation Index, Worldwide Governance Indicators, and World Development Indicators

3.2 Specification of the Model

The baseline ARDL(1,1) specification allows the current outcome to depend on its own lag and on current and lagged explanatory variables. In the error-correction representation, a negative and statistically significant error-correction coefficient indicates convergence toward a long-run equilibrium after a short-run disturbance. Consistent with the reported regression table, the estimated specification includes the three globalisation dimensions, government expenditure, health expenditure, and socioeconomic conditions as direct regressors. No interaction terms are included.

Panel ARDL specification

Panel ARDL model:

$$QoG_{it} = \alpha_i + \sum_{j=1 \dots p} \lambda_{ij} QoG_{i,t-j} + \sum_{k=0 \dots q} \delta'_{ik} X_{i,t-k} + \varepsilon_{it} \quad (1)$$

where:

QoG_{it} is the quality of governance for country i at time t ;

$X_{it} = [EG, PG, SG, SEC, GOVE, HEALTH]'$ is the vector of explanatory variables;

EG, PG, and SG represent economic, political, and social globalisation; GOVE and HEALTH are direct institutional-capacity variables; SEC is the socioeconomic control;

α_i captures country-specific effects;

ε_{it} is the error term.

Error-correction representation:

$$\Delta QoG_{it} = \phi_i(QoG_{i,t-1} - \theta_i X_{i,t-1}) + \sum_{m=1}^s \psi_{im} \Delta X_{i,t-m} + \mu_{it} \quad (2)$$

where

ϕ_i is the **error-correction term (ECT)** measuring adjustment toward long-run equilibrium;

X_{it} includes the globalisation variables, direct institutional-capacity variables, and the socioeconomic control.

Government expenditure and health expenditure are entered as direct regressors in the reported PMG, MG, and DFE models. Because no globalisation $\times$ expenditure interaction terms are estimated, H4 and H5 are interpreted as direct-effect hypotheses rather than moderation hypotheses.

3.3 Justification of the Estimators

PMG constrains long-run coefficients to be common across countries while allowing short-run coefficients, intercepts, and error variances to differ; this is useful when ASEAN economies are expected to share a long-run relationship but adjust differently in the short run (Pesaran et al., 1999). MG estimates separate country equations and averages the coefficients, allowing both long-run and short-run parameters to vary across countries (Pesaran & Smith, 1995). DFE is more restrictive because it pools slope coefficients while allowing country-specific intercepts. Reporting all three provides a robustness comparison across alternative assumptions about heterogeneity rather than treating any one estimator as universally superior.

3.4 Estimation Procedure

Estimation proceeds in three steps. First, panel unit-root tests verify that the variables are $I(0)$ or $I(1)$ and not $I(2)$; the IPS test allows heterogeneous autoregressive parameters (Im et al., 2003), while the LLC test provides a complementary common-unit-root assessment (Levin et al., 2002). Second, the lag structure is selected using the Akaike Information Criterion, leading to the ARDL(1,1) specification. Third, PMG, MG, and DFE estimates are compared for the long-run coefficients, short-run dynamics, and error-correction speed.

4. FINDINGS AND DISCUSSION

This section reports descriptive statistics, correlations, unit-root results, and the panel ARDL estimates. Consistent with an accounting data analytics perspective, the analysis moves from data profiling to relationship diagnostics and finally to dynamic modelling. The interpretation distinguishes descriptive association from regression evidence and compares PMG, MG, and DFE results to assess sensitivity to alternative assumptions about cross-country heterogeneity. Government expenditure and health expenditure are interpreted from their directly estimated coefficients; no moderation inference is made because the model contains no interaction terms. The resulting coefficients are interpreted as governance signals rather than mechanical causal scores.

4.1 Summary Statistic

Table 2 shows substantial cross-country and intertemporal variation. Governance quality averages 5.51 (SD = 1.01), while economic, political, and social globalisation average 67.66, 66.99, and 50.96, respectively. Government expenditure and health expenditure also vary materially across the sample, supporting the use of panel methods that exploit both cross-sectional and time-series variation.

Table 2. Summary statistics

Variable	Obs	Mean	Std. dev.	Min	Max
QoG	232	5.511597	1.005278	3.65278	7.42708
EG	232	67.66392	15.74683	40.4533	98.22308
PG	232	66.98948	20.42472	22.6524	102.302
SG	232	50.96319	24.7232	4.55719	93.3097
SEC	232	6.478079	2.205679	1	11
GOVE	232	22.80482	8.090146	8.208528	59.983
HEALTH	232	3.645001	1.344308	1.136518	6.946231

Source: Authors' calculations

4.2 Correlation Analysis

Table 3 reports positive bivariate associations between governance quality and economic globalisation ($r = 0.6566$), social globalisation ($r = 0.7610$), socioeconomic conditions ($r = 0.2643$), government expenditure ($r = 0.3021$), and health expenditure ($r = 0.0917$); the correlation with political globalisation is small ($r = 0.0119$). These descriptive relationships do not establish causality. The high correlation between economic and social globalisation ($r = 0.9261$) also indicates that coefficient estimates involving both dimensions should be interpreted cautiously because of potential multicollinearity.

Table 3. Correlation analysis

	QoG	EG	PG	SG	SEC	GOVE	HEALTH
QoG	1.0000						
EG	0.6566	1.0000					
	0.0000						
PG	0.0119	0.2903	1.0000				
	0.8571	0.0000					
SG	0.7610	0.9261	0.3567	1.0000			
	0.0000	0.0000	0.0000				
SEC	0.2643	-0.0525	-0.0892	0.0303	1.0000		
	0.0000	0.4265	0.1757	0.6459			
GOVE	0.3021	0.1827	-0.2081	0.2324	0.0455	1.0000	
	0.0000	0.0052	0.0014	0.0004	0.4900		
HEALTH	0.0917	0.2360	0.3014	0.1900	-0.0638	0.2324	1.0000
	0.1637	0.0003	0.0000	0.0037	0.3334	0.0004	

Source: Authors' calculations

4.3 Unit Root Test

Table 4. Panel unit-root test

Variable	Level	1 st Difference
QoG	-2.574***	-12.031***
EG	-1.554	-8.873***
PG	1.325	-7.871***
SG	1.261	-8.822***
SEC	0.069	-9.324***
GOVE	-1.287	-11.327***
HEALTH	2.373	-11.061***

Source: Authors' calculations

The unit-root results indicate that most explanatory variables are non-stationary in levels but stationary after first differencing, while governance quality is stationary at level. This I(0)/I(1) pattern is compatible with panel ARDL estimation provided that no variable is integrated of order two. The results therefore support use of the ARDL framework for separating long-run equilibrium relationships from short-run adjustment.

4.4 ARDL Regression

The ARDL estimates indicate a stable long-run relationship because the error-correction terms are negative and statistically significant across PMG, MG, and DFE. Under PMG, economic globalisation has a negative and significant long-run coefficient, whereas political and social globalisation are positive and significant. Socioeconomic conditions and the direct coefficient on government expenditure are also positive in the PMG long run, while the direct coefficient on health expenditure is negative. Short-run coefficients are generally weaker and less stable, suggesting that institutional responses are observed mainly through gradual long-run adjustment rather than immediate changes.

Table 5. Panel ARDL estimates (PMG, MG, and DFE)

VARIABLES	Long-Run	Short-Run	Long-Run	Short-Run	Long-Run	Short-Run
	PMG		MG		DFE	
Error Correction		-0.273*		-0.751***		-0.751***
		(0.140)		(0.114)		(0.114)
EG		-0.000988		0.00279		0.00279
		(0.00183)		(0.00325)		(0.00325)
PG		0.00314		0.00257		0.00257
		(0.00397)		(0.00187)		(0.00187)
SG		0.0106		-0.000618		-0.000618
		(0.0112)		(0.00407)		(0.00407)
Sec		-437.6		2,148		2,148
		(437.6)		(2,148)		(2,148)
Gove		-0.00283		3.83e-05		3.83e-05
		(0.00269)		(0.00284)		(0.00284)
Health		0.0497		-0.00780		-0.00780

VARIABLES	Long-Run	Short-Run	Long-Run	Short-Run	Long-Run	Short-Run
	PMG		MG		DFE	
		(0.0328)		(0.0229)		(0.0229)
EG	-0.00340**		-0.00728*		-0.00728*	
	(0.00147)		(0.00400)		(0.00400)	
PG	0.00200***		-0.000851		-0.000851	
	(0.000415)		(0.00884)		(0.00884)	
SG	0.00285*		0.0147		0.0147	
	(0.00164)		(0.0183)		(0.0183)	
Sec	0.0128***		0.238		0.238	
	(0.00322)		(0.353)		(0.353)	
Gove	0.00106***		-0.0203		-0.0203	
	(0.000389)		(0.0188)		(0.0188)	
Health	-0.0430***		0.0877		0.0877	
	(0.00547)		(0.134)		(0.134)	
Constant		-3.267		18.74		18.74
		(3.748)		(16.88)		(16.88)
Observations	224	224	224	224	224	224

Note: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$

Source: Authors' calculations

More specifically, the PMG error-correction coefficient is -0.273 ($p < .10$), while MG and DFE report faster adjustment at -0.751 ($p < .01$). In the PMG long run, economic globalisation is negative (-0.00340, $p < .05$), political globalisation is positive (0.00200, $p < .01$), and social globalisation is positive (0.00285, $p < .10$). Socioeconomic conditions (0.0128, $p < .01$) and the direct coefficient on government expenditure (0.00106, $p < .01$) are also positive, whereas the direct coefficient on health expenditure is negative (-0.0430, $p < .01$). The divergence between PMG and the alternative estimators indicates that the strength and, in some cases, the sign of long-run associations depend on the degree of cross-country homogeneity imposed by the model. These estimates do not constitute evidence of moderation because interaction terms are not included.

4.5 Discussion

The negative PMG long-run association between economic globalisation and governance quality is consistent with the view that deeper integration can expose institutional weaknesses when regulatory and administrative capacity does not adjust at the same pace. The result also provides a useful contrast with Darusalam et al. (2021), who reported a positive overall globalisation-governance relationship in an earlier ASEAN panel. The difference is substantively informative rather than necessarily contradictory because the present study separates economic, political, and social globalisation and uses a different data window and governance-data architecture. Saleem et al. (2025) similarly report a non-linear trade-governance relationship in developing Asia, while Nam et al. (2024) show that institutional quality conditions the consequences of trade openness in ASEAN. These studies provide contextual evidence that the institutional consequences of integration vary across dimensions, periods, and model specifications; the present estimates should therefore be interpreted as direct long-run associations rather than as tests of moderation.

By contrast, the positive PMG coefficients for political and social globalisation are consistent with Institutional Theory. Participation in international networks can transmit governance standards and policy expectations, while cross-border information flows can strengthen public scrutiny and accountability. The weaker significance of these dimensions under MG and DFE, however, suggests that the magnitude of these relationships is not uniform across modelling assumptions and should not be generalised mechanically to every ASEAN country.

The positive direct PMG coefficient on government expenditure supports the argument that fiscal capacity is associated with stronger governance through resources available for regulatory enforcement, public administration, and institutional reform. This interpretation is consistent with research linking state capacity to effective administration (Besley et al., 2022) and with evidence that fiscal transparency is associated with lower corruption (Chen & Neshkova, 2020). The finding supports H4 in the PMG long-run specification, but it should not be interpreted as evidence that government expenditure changes the slope of globalisation because no interaction term is estimated. The policy implication is not simply to increase expenditure, but to ensure that spending is transparent, targeted, and administratively effective.

The negative direct PMG long-run coefficient on health expenditure should be interpreted cautiously. Health spending is an input rather than a direct measure of service quality; higher expenditure can reflect crisis response, cost pressures, or inefficient allocation as well as stronger capacity. Existing evidence shows that governance quality materially affects how health expenditure translates into development and health outcomes (Banik et al., 2023; Kouadio & Njong Mom, 2025). This interpretation is also consistent with accounting analytics research in the healthcare context: Deniswara et al. (2024) demonstrate how financial-ratio patterns can be transformed into fraud-risk signals, illustrating why nominal expenditure values should be accompanied by analytical scrutiny of efficiency, accountability, and reporting risk. The significant PMG coefficient provides evidence for H5 as a direct association, not as a moderating effect. The result therefore highlights the importance of spending quality and governance rather than implying that health investment itself is undesirable.

Overall, the results show distinct long-run associations between the three globalisation dimensions, domestic institutional-capacity variables, and governance quality in ASEAN. For policy, regional and global integration should be accompanied by stronger public financial management, regulatory capability, transparency, and service-delivery systems. For theory, the findings are consistent with Institutional

Theory's view that external institutional pressures and domestic organisational resources jointly characterise the institutional environment, without implying that their statistical interaction has been tested. For accounting, the results demonstrate how cross-country expenditure and institutional data can be converted into governance intelligence that is potentially useful for public-sector oversight and accountability.

4.6 Accounting Data Analytics Implications

The accounting data analytics contribution of the study lies in the evidence architecture rather than in any single statistical coefficient. Economic globalisation can be read as a potential institutional-risk signal when integration outpaces regulatory capacity; government expenditure operates as a resource-capacity signal; and health expenditure requires an efficiency-and-accountability interpretation rather than a simple 'more is better' assumption. This logic parallels audit and fraud analytics, where the value of data comes from converting large or heterogeneous datasets into exceptions, patterns, and risk indicators that guide professional judgement (Appelbaum et al., 2017; Mulyawan et al., 2024; Deniswara et al., 2024). It also aligns with public-sector digital-governance evidence showing that transparency, process design, and information traceability matter for corruption control (Darusalam et al., 2024). In a public-sector setting, the same principle can support governance dashboards, fiscal-risk monitoring, comparative benchmarking, and prioritisation of areas requiring deeper audit or policy review. The study therefore positions accounting data analytics as a bridge between financial information, institutional analysis, and evidence-based governance.

5. CONCLUSION

This study examines the long-run and short-run relationships between economic, political, and social globalisation and governance quality in ASEAN using PMG, MG, and DFE panel ARDL estimators. The negative and significant error-correction terms support the existence of long-run adjustment. Under PMG, economic globalisation is negatively associated with governance quality, while political and social globalisation are positively associated. Government expenditure has a positive direct long-run association and health expenditure has a negative direct long-run association, while short-run effects are comparatively weak. Because the estimated models do not include interaction terms, these expenditure coefficients are interpreted as direct institutional-capacity effects rather than moderation effects.

The study contributes by repositioning a macro-governance question within an accounting data analytics framework. Conceptually, it extends analytics beyond traditional firm-level reporting and audit applications toward public-sector governance intelligence. Methodologically, it integrates multiple cross-country datasets and compares PMG, MG, and DFE estimates so that conclusions do not rely on a single heterogeneity assumption. Substantively, it shows that expenditure levels should not be interpreted in isolation: their governance meaning must be considered alongside institutional context and implementation quality. The broader implication is that accountants and auditors can play a stronger role in governance by transforming fiscal and institutional data into interpretable evidence for accountability, risk assessment, and decision-making.

The analysis is subject to several limitations. The sample is limited to eight ASEAN economies over 1996–2024, governance measures are composite perception-based indicators, and the small cross-sectional dimension limits generalisation. The high correlation between economic and social globalisation may also affect coefficient precision. In addition, panel ARDL estimates describe dynamic associations but do not by themselves eliminate all endogeneity concerns, and the present specification does not estimate interaction terms; therefore, it cannot establish whether fiscal or health expenditure statistically moderates the effects of globalisation. Future research can extend the accounting data analytics architecture by explicitly testing interaction terms, incorporating spending-efficiency measures, disaggregated public-sector accounting data, audit findings, procurement indicators, or corruption-risk variables, and applying complementary causal-identification, interpretable machine-learning, anomaly-detection, or dashboard approaches to identify country-specific governance risks while preserving transparency in model interpretation.

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7. CONFLICT OF INTEREST STATEMENT

The authors declare that they have no known financial, commercial, or personal conflicts of interest that could have influenced the research reported in this manuscript.

8. AUTHORS' CONTRIBUTIONS

Kevin Deniswara: Conceptualisation, research design, methodology, data curation, formal analysis, investigation, validation, interpretation, writing – original draft, writing – review and editing, visualisation, project administration, and supervision; Vu Thi Thanh Binh: Conceptualisation, methodology, validation, and writing – review and editing; Nurhidayah Yahya: Conceptualisation, validation, supervision, and writing – review and editing; Ahnaf Alsmady: Methodology, formal analysis, validation, and writing – review and editing. All authors reviewed and approved the final manuscript.

9. DECLARATION OF GENERATIVE AI IN THE WRITING PROCESS

During the preparation of this work, the authors used OpenAI ChatGPT to assist with language refinement, readability, clarity, and consistency. No generative AI tool was used to generate or analyse the empirical dataset or to determine the reported statistical results. The authors reviewed and verified the manuscript, references, interpretations, and final wording and take full responsibility for the content of the publication.

10. DATA AVAILABILITY/SUPPLEMENTARY MATERIALS

The underlying indicators used in this study are publicly available from the KOF Globalisation Index, the World Bank Worldwide Governance Indicators, and the World Development Indicators. The harmonised

analytical dataset and supporting estimation files are available from the corresponding author on reasonable request, subject to the terms of use of the original data providers. 10.17632/p8zzgc5rht.1

11. ETHICS STATEMENT

This study uses publicly available country-level secondary data and does not involve human participants, identifiable personal data, animals, or clinical interventions. Ethics approval and informed consent were therefore not required.

12. REFERENCES

- Amenta, E., & Ramsey, K. M. (2010). Institutional theory. In K. T. Leicht & J. C. Jenkins (Eds.), *Handbook of politics: State and society in global perspective* (pp. 15–39). Springer. https://doi.org/10.1007/978-0-387-68930-2_2
- Appelbaum, D., Kogan, A., & Vasarhelyi, M. A. (2017). Big data and analytics in the modern audit engagement: Research needs. *Auditing: A Journal of Practice & Theory*, 36(4), 1–27. <https://doi.org/10.2308/ajpt-51684>
- Banik, B., Roy, C. K., & Hossain, R. (2023). Healthcare expenditure, good governance and human development. *Economia*, 24(1), 1–23. <https://doi.org/10.1108/ECON-06-2022-0072>
- Bergh, A., Mirkina, I., & Nilsson, T. (2014). Globalization and institutional quality—A panel data analysis. *Oxford Development Studies*, 42(3), 365–394. <https://doi.org/10.1080/13600818.2014.884555>
- Besley, T., Burgess, R., Khan, A., & Xu, G. (2022). Bureaucracy and development. *Annual Review of Economics*, 14, 397–424. <https://doi.org/10.1146/annurev-economics-080521-011950>
- Chen, C., & Neshkova, M. I. (2020). The effect of fiscal transparency on corruption: A panel cross-country analysis. *Public Administration*, 98(1), 226–243. <https://doi.org/10.1111/padm.12620>
- Darusalam, Omar, N., Janssen, M., Said, J., & Sohag, K. (2021). The influence of ICT diffusion and globalization on the quality of governance: A study using panel data from ASEAN countries. *Information Development*, 39(1), 46–59. <https://doi.org/10.1177/02666669211026363>
- Darusalam, D., Janssen, M., Jayanti, S., Sitompul, R., Said, J., & Sanusi, Z. (2024). Public administration digitalization effects on corruption: Lesson learned from Indonesia. *Digital Government: Research and Practice*, 5(4), Article 38. <https://doi.org/10.1145/3691351>
- Deniswara, K., Handoko, B. L., & Mulyawan, A. N. (2020). Big data analytics: Literature study on how big data works towards accountant millennial generation. *International Journal of Management*, 11(5), 376–389. <https://doi.org/10.34218/IJM.11.5.2020.037>
- Deniswara, K., Henky, T., Mulyawan, A. N., Armand, W. K., & Mustapha, M. (2023). The role of external auditor in the adoption of computer-assisted audit techniques with unified theory of acceptance and use of technology: An empirical study in public audit firms in Jakarta. *The Winners*, 24(1), 1–11. <https://doi.org/10.21512/tw.v24i1.8124>
- Deniswara, K., Mulyawan, A. N., & Prawira, P. (2024). Hexagon fraud analysis using Beneish ratio index method on Indonesia healthcare industry. *E-Jurnal Akuntansi*, 34(4), 846–860. <https://doi.org/10.24843/EJA.2024.v34.i04.p01>
- Dreher, A. (2006). Does globalization affect growth? Evidence from a new index of globalization. *Applied Economics*, 38(10), 1091–1110. <https://doi.org/10.1080/00036840500392078>

- Earley, C. E. (2015). Data analytics in auditing: Opportunities and challenges. *Business Horizons*, 58(5), 493–500. <https://doi.org/10.1016/j.bushor.2015.05.002>
- Gygli, S., Haelg, F., Potrafke, N., & Sturm, J.-E. (2019). The KOF Globalisation Index—revisited. *The Review of International Organizations*, 14(3), 543–574. <https://doi.org/10.1007/s11558-019-09344-2>
- Heimberger, P. (2021). Does economic globalization affect government spending? A meta-analysis. *Public Choice*, 187, 349–374. <https://doi.org/10.1007/s11127-020-00784-8>
- Im, K. S., Pesaran, M. H., & Shin, Y. (2003). Testing for unit roots in heterogeneous panels. *Journal of Econometrics*, 115(1), 53–74. [https://doi.org/10.1016/S0304-4076\(03\)00092-7](https://doi.org/10.1016/S0304-4076(03)00092-7)
- Kaufmann, D., Kraay, A., & Mastruzzi, M. (2011). The Worldwide Governance Indicators: Methodology and analytical issues. *Hague Journal on the Rule of Law*, 3(2), 220–246. <https://doi.org/10.1017/S1876404511200046>
- Kouadio, M., & Njong Mom, A. (2025). Health expenditure, governance quality, and health outcomes in West African countries. *The International Journal of Health Planning and Management*, 40(2), 427–441. <https://doi.org/10.1002/hpm.3887>
- Levin, A., Lin, C.-F., & Chu, C.-S. J. (2002). Unit root tests in panel data: Asymptotic and finite-sample properties. *Journal of Econometrics*, 108(1), 1–24. [https://doi.org/10.1016/S0304-4076\(01\)00098-7](https://doi.org/10.1016/S0304-4076(01)00098-7)
- Mulyawan, A. N., Deniswara, K., & Setiadi, R. (2024). Analysis on behavioral intention of financial auditors in adopting Big Data Analytics. *Business Economic, Communication, and Social Sciences Journal (BECOSS)*, 6(2), 91–105. <https://doi.org/10.21512/becossjournal.v6i2.11538>
- Nam, H.-J., Frijns, B., & Ryu, D. (2024). Trade openness and income inequality: The moderating role of institutional quality. *Global Finance Journal*, 60, Article 100959. <https://doi.org/10.1016/j.gfj.2024.100959>
- Pesaran, M. H., & Smith, R. (1995). Estimating long-run relationships from dynamic heterogeneous panels. *Journal of Econometrics*, 68(1), 79–113. [https://doi.org/10.1016/0304-4076\(94\)01644-F](https://doi.org/10.1016/0304-4076(94)01644-F)
- Pesaran, M. H., Shin, Y., & Smith, R. P. (1999). Pooled mean group estimation of dynamic heterogeneous panels. *Journal of the American Statistical Association*, 94(446), 621–634. <https://doi.org/10.1080/01621459.1999.10474156>
- Prasetya, A. R., Sari, R., & Deniswara, K. (2024). Role of Big Data Analytics in audit quality using IS Success Model as a basis. In Proceedings of the 2024 8th International Conference on E-Commerce, E-Business, and E-Government (pp. 62–67). *Association for Computing Machinery*. <https://doi.org/10.1145/3675585.3675589>
- Saleem, R., Iqbal, M., Arshed, N., Olah, J., & Naeem, M. (2025). Trade and governance in developing Asia: The role of FinTech in shaping institutional quality and global integration. *Research in Globalization*, 11, Article 100326. <https://doi.org/10.1016/j.resglo.2025.100326>
- Schiavi, G. S., Behr, A., & Marcolin, C. B. (2024). Institutional theory in accounting information systems research: Shedding light on digital transformation and institutional change. *International Journal of Accounting Information Systems*, 52, Article 100662. <https://doi.org/10.1016/j.accinf.2023.100662>
- Vasarhelyi, M. A., Kogan, A., & Tuttle, B. M. (2015). Big data in accounting: An overview. *Accounting Horizons*, 29(2), 381–396. <https://doi.org/10.2308/acch-51071>
- World Bank. (2025). Worldwide Governance Indicators, 2025 revision [Data set]. <https://www.worldbank.org/en/publication/worldwide-governance-indicators>
- World Bank. (2026). World Development Indicators [Data set].

<https://datacatalog.worldbank.org/search/dataset/0037712/world-development-indicators>

Yeganeh, H. (2024). Conceptualizing the patterns of change in cultural values: The paradoxical effects of modernization, demographics, and globalization. *Social Sciences*, 13(9), Article 439. <https://doi.org/10.3390/socsci13090439>



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