Institutional Drivers of Economic Development using HDI

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1. Introduction

Recent disruptions in the global economic order—from the resurgence of nationalist policy agendas to fragile multilateralism—have reignited debates on the true underpinnings of economic development. As international macroeconomic dynamics are increasingly shaped by endogenous shocks, governance volatility, and uneven globalization, the need to move beyond GDP-centric frameworks toward multidimensional development measures has become urgent. This research responds to that need by empirically examining how political, social, and economic factors—mediated through institutions and human capital—impact economic development across countries using the Human Development Index (HDI) as a comprehensive metric.

This study builds on foundational theories from Schumpeter, Lucas, and Haq, while incorporating contemporary empirical insights into institutional quality, labor reallocation, and financial intermediation. It integrates diverse strands of development economics to analyze how endogenous factors—rather than exogenous dependencies—shape national progress. As international macroeconomics increasingly centers human welfare, this work contributes to both academic literature and practical policy by offering a framework to inform equitable and sustainable development strategies. The results hold significant relevance for global policymakers seeking holistic, evidence-based approaches to development amid an era of rising geopolitical complexity and institutional fragmentation.

2. Methodology

1. Theoretical Framework

This research adopts the *Institutional Economics (IE)* theoretical framework to investigate how political, social, and economic factors influence economic development. Rooted in the works of Veblen, Coase, and North, IE emphasizes the evolutionary nature of institutions and their role in shaping economic behavior through transaction costs, power asymmetries, and structural path dependencies. It holds that institutions—formal and informal—mediate national outcomes by reducing risk, shaping human development, and enabling (or impeding) the efficient allocation of resources.

In applying IE, this study views institutions as vehicles through which social, political, and economic transactions influence economic development. Rather than testing institutional quality directly, this study focuses on explanatory variables that reflect institutional outputs and outcomes.

2. Research Equation and Hypotheses

The study aims to test the statistical relationship between selected explanatory variables and economic development, measured by the Human Development Index (HDI), a composite metric capturing health, education, and income dimensions.

Regression Model:

$$HDI_i=\beta_0+\beta_1 GINI_i+\beta_2 ECF_i+\beta_3 TFR_i+\beta_4 FDI_i+\beta_5 LM_i+\beta_6 FA_i-\beta_7 COMM_i+\beta_8 GLOB_i+\beta_9 POL_i+\varepsilon_i$$

Where:

- HDI: Human Development Index (response variable)
- GINI: Income Inequality
- ECF: Economic Freedom
- TFR: Total Fertility Rate
- FDI: Foreign Direct Investment
- LM: Labor Migration
- FA: Foreign Aid
- COMM: Commodity Dependence
- GLOB: Globalization
- POL: Political Freedom
- ϵi: Error term

Hypotheses (H1–H9):

Each explanatory variable is hypothesized to have a statistically significant relationship with HDI.

3. Data and Sample

This cross-country study includes a large sample of countries for which consistent and recent data are available for all variables. The selection ensures global diversity while maintaining data comparability.

Data Sources Include:

- UNDP (HDI, GINI)
- World Bank (FDI, TFR)
- OECD (FA)
- International Labor Organization (LM)
- Fraser Institute (ECF)
- KOF Globalization Index (GLOB)
- Freedom House or Polity V (POL)
- UNCTAD (Commodity Dependence)

4. Variable Measures

Variable	Definition
HDI	Human Development Index (0–1 scale)
GINI	Gini coefficient (0 = perfect equality; 100 = perfect inequality)
ECF	Composite index of economic freedom
TFR	Average number of children born per woman
FDI	Net inflows as % of GDP
LM	Net migration rate or migrant stock as % of population
FA	Net official development assistance received (% of GNI)
COMM	Share of commodity exports in total exports (%), indicating export dependency
GLOB	KOF globalization score (economic, political, and social integration)
POL	Index of political rights and civil liberties

5. Data Preparation

- **Timeframe**: Most recent 5-year average to reduce volatility and measurement error.
- **Normalization**: All variables are scaled or indexed to ensure comparability.
- **Outliers and Missing Data**: Robust imputation techniques will be applied for minor gaps; countries with significant data gaps will be excluded.

6. Quantitative Analysis

- **Model**: Cross-sectional Ordinary Least Squares (OLS) regression
- **Diagnostics**: Multicollinearity (VIF), heteroskedasticity (Breusch-Pagan), and normality (Shapiro-Wilk) will be tested.
- **Robustness Checks**: Re-estimation using alternative proxies (e.g., Social Progress Index, SPI, instead of HDI) and sensitivity analysis across income groupings (low-, middle-, high-income countries).

7. Policy Relevance

Findings will inform how different countries' institutions and external linkages shape development outcomes. The results aim to support evidence-based policymaking by identifying which policy levers (aid, migration, trade openness, governance) most effectively enhance human development under varying institutional environments. The significance is that as human development increases, institutional environment quality improves leading to increased economic development.

3. Data sources

Researcher Provided Data

We are requesting access to the following public and private datasets:

- UNDP (HDI), 2020-2024
- UNDP (GINI) 2020-2024
- World Bank (FDI, TFR), FDI 2020-2024; TFR 2020-2023, and if available 2024
- OECD (FA), 2020-2024
- International Labor Organization (LM), 2020-2023, and if available 2024
- Fraser Institute (ECF) 2020-2021; and if available 2022-2024
- KOF Globalization Index (GLOB), 2020-2022, and if available 2023-2024
- Freedom House or Polity V (POL), 2020-2024
- UNCTAD (Commodity Dependence), 2021-2023, and if available 2024

4. Project output and disclosure risk

Expected Statistical Output

Based on initial results, this research is expected to yield a robust econometric model that explains a significant portion of the variation in cross-country economic development, as proxied by the Human Development Index (HDI). The output will include the following key results:

1. Regression Summary

- **Model**: Ordinary Least Squares (OLS) cross-sectional regression
- **Dependent Variable**: Human Development Index (HDI)
- **Independent Variables**: Income Inequality (GINI), Economic Freedom (ECF), Total Fertility Rate (TFR), Foreign Direct Investment (FDI), Labor Migration (LM), Foreign Aid (FA), Commodity Dependence (COMM), Globalization (GLOB), Political Freedom (POL)

2. Expected Key Output

- **Regression Equation**: As previously estimated:

$$HDI_i=\beta_0+\beta_1 GINI_i+\beta_2 ECF_i+\beta_3 TFR_i+\beta_4 FDI_i+\beta_5 LM_i+\beta_6 FA_i-\beta_7 COMM_i+\beta_8 GLOB_i+\beta_9 POL_i+\varepsilon_i$$

- **R-squared / Adjusted R-squared**: Expected to be above 0.80, indicating strong explanatory power.
- **F-statistic**: Statistically significant ($p < 0.001$), confirming the model fit.
- **Significant Predictors**: TFR, LM, COMM, and GLOB are expected to show strong significance ($p < 0.05$), with potential borderline significance for FA and POL depending on model specification.
- **Residual Diagnostics**:
    - **Normality**: Anderson-Darling test, expected $p > 0.05$.
    - **Homoscedasticity**: White test, expected $p > 0.05$.

- **Multicollinearity**: Variance Inflation Factors (VIFs) < 5, suggesting no severe multicollinearity despite theoretical overlaps among variables (e.g., ECF and POL).

Disclosure Risk Summary

Given that the study uses secondary, cross-country, publicly available aggregate data, **the risk of personal or institutional disclosure is extremely low**. However, the following are potential disclosure concerns and mitigation strategies:

Potential Disclosure Risks:

1. **Country-Level Sensitivity**: Using and publicly reporting poor performance on HDI or politically sensitive indicators (e.g., POL or GINI) could cause reputational or diplomatic concerns if interpreted as targeting specific countries.
2. **Cross-Referencing Risk**: While the data is anonymized at the individual level, merging across multiple datasets may unintentionally allow identification of smaller, geopolitically vulnerable countries.
3. **Data Re-identification Risk**: Very small sample subsets (e.g., low-income countries with extreme values) could become identifiable in disaggregated tables or case-study discussions.

Mitigation and Recommendations:

- **Data Aggregation**: Avoid reporting values for individual countries unless those values are already publicly disseminated by the data source (e.g., UNDP, World Bank).
- **Country Anonymization (Optional)**: In regression outputs or sensitivity tables, refer to country clusters (e.g., "low-income SSA countries") instead of naming specific countries when discussing outliers or residuals.
- **Institutional Review Compliance**: Confirm that the study qualifies as "non-human subjects research" per IRB standards, given its exclusive use of public, aggregate data.
- **Appendix Placement**: Place detailed country-level tables, if necessary, in appendices with proper data source citations and disclaimers.

Recommended Journals for Submission

The plan is to write research paper(s) for academic journals (recommended journals listed below) and for presentations at academic and professional conferences. Given the empirical scope, theoretical framing, and global relevance of this research, the following peer-reviewed academic journals are suitable venues for submission:

Development and International Economics Focus

1. *World Development* (Elsevier) – interdisciplinary, policy-focused, and empirically grounded.
2. *Journal of Development Economics* (Elsevier) – top-tier, econometrics-heavy.
3. *The World Economy* (Wiley) – focuses on trade, globalization, and development.
4. *Review of Development Economics* (Wiley) – strong emphasis on cross-country empirical development work.
5. *Journal of International Development* (Wiley) – policy and practice-oriented development economics

Institutional and Political Economy Focus

6. *Journal of Institutional Economics* (Cambridge University Press) – ideal for theory-driven institutional analysis.
7. *Economics of Governance* – investigates institutional quality, governance, and policy outcomes.

Regional or Human Development Specific

8. *Human Development and Capabilities* (Taylor & Francis) – focuses on HDI and Sen's capability approach.
9. *Oxford Development Studies* – strong on interdisciplinary and applied research on global development.