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Corporate Giants and National Income: Dynamic Panel Evidence from 50 Countries, 2010-2024

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National accounting frameworks formally link multinational corporate earnings to Gross National Income (GNI). However, empirical studies quantifying this relationship remain scarce and fragmented. Prior research has focused on indirect channels, such as foreign direct investment and productivity spillovers—leaving a critical gap in understanding how the direct financial performance of global firms affects macroeconomic outcomes. This study fills that gap by empirically assessing the relationship between the financial performance of Forbes Global 2000 firms—measured by revenue, profit, and assets—and GNI in their home countries. Based on a balanced panel of 50 countries from 2010 to 2024, we employ dynamic panel models with fixed effects and System GMM to address endogeneity and unobserved heterogeneity. Corporate profitability and asset size emerge as the strongest predictors of GNI, with elasticities of 0.23 and 0.22, respectively, while revenue plays a secondary role. These findings are robust to multicollinearity and alternative specifications, including Principal Component Regression and Ridge Regression. Overall, the results offer the first direct empirical evidence that the corporate sector functions as a structural component of national income dynamics, with implications for fiscal policy, corporate taxation, and macroeconomic forecasting.

Keywords: multinational corporations, rentier state, gross national income, panel data, corporate finance, development economics, endogenous growth, Global 2000, GMM

Introduction

Multinational corporations (MNCs) are central actors in the global economy. Yet a fundamental disconnect persists in economic scholarship. While national accounting frameworks formally acknowledge that repatriated corporate earnings contribute directly to Gross National Income (GNI), rigorous cross-national empirical evidence quantifying this relationship remains scarce. According to the System of National Accounts (SNA 2008), GNI equals GDP plus net primary income from abroad—a category dominated by corporate profits, dividends, and retained earnings generated by resident multinational firms. In theory, this creates a direct and measurable link between the financial performance of global corporations and their home countries' national income.

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However, most empirical research continues to focus on indirect channels—such as foreign direct investment, productivity spillovers, or labor market effects—while overlooking the direct accounting mechanism through which corporate financial performance shapes macroeconomic aggregates. This omission has real-world consequences. Policymakers designing industrial, fiscal, or innovation strategies lack reliable estimates of how corporate profitability, asset accumulation, or revenue growth translate into measurable changes in GNI. This raises critical questions: Which financial indicators serve as the primary transmission channels to national income? Do revenue-based metrics overstate corporate contributions? This study addresses this gap by providing the first large-N, dynamic panel analysis of the empirical association between corporate financial performance—measured by revenue, profit, and total assets of Forbes Global 2000 firms—and GNI across 50 countries from 2010 to 2024. Using fixed effects and System GMM estimation to address endogeneity and unobserved heterogeneity, we find that corporate profitability and asset size are the strongest predictors of GNI, with elasticities of approximately 0.23 and 0.22, respectively. Revenue plays a secondary role. This may reflect the fact that revenue captures gross activity rather than retained value or capital accumulation. These findings are consistent with endogenous growth theory and suggest that the corporate sector functions as a structural component of national income dynamics, with implications for fiscal policy, macroeconomic forecasting, and development strategy.

Literature Review

Research on multinational corporations (MNCs) and economic development has traditionally emphasized indirect channels such as foreign direct investment (FDI), technology transfer, and productivity spillovers. Foundational studies argue that global firms contribute to host-country growth by transferring capital, skills, and organizational know-how (Borensztein, Gregorio, & Lee, 1998; Alfaro, Chanda, Kalemli-Ozcan, & Sayek, 2004; Xu, 2000; Caves, 1996; Helpman, 1984; Markusen, 1995; Rodriguez-Clare, 1996). These insights have informed growth models that incorporate governance, education, and financial-market variables. However, this literature predominantly focuses on host-country benefits, leaving the income effects for home countries comparatively underexplored.

According to the System of National Accounts (2008), Gross National Income (GNI) equals GDP plus net primary income from abroad—of which corporate earnings and dividends are key components. When resident multinational firms generate profits overseas, these earnings accrue directly to home-country GNI, regardless of production location (United Nations, 2009; IMF, 2008). Data from the OECD's Analytical AMNE database and the U.S. Bureau of Economic Analysis confirm that multinationals account for a substantial share of global production, R&D, and cross-border earnings, all systematically recorded in national accounts (OECD, 2018; BEA, 2023). These patterns suggest that firm-level financial outcomes—revenue, profit, and assets—should be significant predictors of national income. Yet empirical studies have rarely modeled this link directly.

Recent theoretical advances further support the need for such modeling. The granularity hypothesis posits that shocks to a small number of large firms can generate macroeconomic fluctuations due to the fat-tailed distribution of firm size (Gabaix, 2021). Similarly, the "superstar firm" literature documents rising profit concentration among globally dominant corporations, implying that their financial cycles increasingly shape national income aggregates (Autor, Dorn, Katz, Patterson, & Van Reenen, 2017). These frameworks suggest a structural role for corporate financial performance in macroeconomic outcomes.

At the same time, measurement challenges complicate empirical analysis. Research by UNCTAD, the

OECD, and others highlights how profit shifting, tax arbitrage, and the strategic allocation of intangible assets distort the geographic attribution of profits (UNCTAD, 2023; Cadestin, Gourdon, & Miroudot, 2018). These distortions bias cross-country GNI comparisons, particularly for economies hosting multinational headquarters. To mitigate such issues, empirical studies recommend lagging financial variables and applying robustness checks to address simultaneity and measurement error.

Taken together, three strands of literature converge on a testable hypothesis: (i) endogenous growth and absorptive-capacity theories emphasize capital and knowledge accumulation (Borensztein, Gregorio, & Lee, 1998; Caves, 1974); (ii) national accounts frameworks formalize the direct contribution of multinational earnings to GNI (United Nations, 2009; UNCTAD, 2023); and (iii) granular and superstar-firm models predict that large corporations can drive aggregate fluctuations (Gabaix, 2021; Autor, Dorn, Katz, Patterson, & Van Reenen, 2017). Yet despite these foundations, no study has provided direct empirical evidence linking the financial performance of global firms to home-country GNI. This study fills that gap by integrating corporate financial performance indicators with macroeconomic variables in a 50-country panel (2010-2024), offering the first empirical test of whether corporate financial performance is a structural driver of national income.

Methodology

This study applies a dynamic panel data approach—using Fixed Effects and System GMM estimators—to assess how corporate financial performance and macroeconomic conditions influence Gross National Income (GNI). The dataset comprises 50 countries observed annually from 2010 to 2024. Due to the use of one-period lagged financial variables, the effective sample for regression analysis spans 2011-2024, yielding 700 country-year observations. Firm-level financial data are sourced from the Forbes Global 2000, while macroeconomic indicators are obtained from the World Bank. All monetary variables are log-transformed to reduce skewness and stabilize variance. Table 1 presents the variables used in the analysis, including their definitions, sources, and transformations.

Table 1

Variables, Definitions, and Sources

Variable	Definition / Measurement	Source	Transformation
Ln(GNI)	Gross National Income, billion USD	World Bank WDI	Natural log
Ln(Revenue)	Total revenue of Global 2000 firms, billion USD	Forbes Global 2000	Natural log
Ln(Profit)	Total profit of Global 2000 firms, billion USD	Forbes Global 2000	Natural log
Ln(Assets)	Total assets of Global 2000 firms, billion USD	Forbes Global 2000	Natural log
Education	Government expenditure on education (% of GDP)	World Bank WDI	% of GDP
UrbanPop	Urban population (% of total)	World Bank WDI	%
AgeDep	Age dependency ratio (% of working-age population)	World Bank WDI	%
PolStab	Political stability index (-2.5 to + 2.5)	World Bank Governance Indicators	Index
Inflation	Consumer price inflation (annual %)	World Bank WDI	%

Model Specification

The baseline dynamic panel regression is specified as:

$$\text{Ln(GNI)}_{it} = \alpha + \beta_1 \text{ Ln(Revenue)}_{i,t-1} + \beta_2 \text{ Ln(Profit)}_{i,t-1} + \beta_3 \text{ Ln(Assets)}_{i,t-1} + \gamma \, X_{it} + \delta \text{ Ln(GNI)}_{i,t-1} + \mu_i + \lambda_t + \varepsilon_{it}$$

where:

X_{it} = macroeconomic controls (education, urbanization, age dependency, political stability, inflation).

μ_i = country fixed effects.

λ_t = year fixed effects.

Lagged Ln(GNI) captures income persistence.

On the Validity of GMM Instruments and Key Identification Assumptions

The System GMM estimator relies on two key identifying assumptions. First, the instruments—typically lagged levels of endogenous variables (here, GNI, profit, revenue, and assets)—must be uncorrelated with the idiosyncratic error term in the differenced equation (i.e., they must be exogenous). Second, there must be no second-order serial correlation in the first-differenced errors, which would invalidate the use of deeper lags as instruments. In our context, we instrument lagged corporate financial variables (e.g., $\text{Ln(Profit)}_{i,t-1}$) with their levels from periods t-2 and t-3. This is justified under the assumption that financial performance in earlier periods influences current GNI only indirectly, through its effect on more recent corporate outcomes. For example, a firm's profit in 2018 may affect 2020 GNI only via its impact on 2019 profit or asset accumulation—not through a direct, contemporaneous channel. This aligns with standard dynamic panel practice (Blundell, & Bond, 1998) and is reinforced by our use of one-period lags for all firm-level predictors, which already accounts for delayed macroeconomic transmission. However, this assumption may be violated in the presence of persistent macroeconomic or structural shocks. For instance, in resource-rich economies (e.g., Kuwait, Norway, Saudi Arabia), prolonged commodity booms can simultaneously elevate corporate profits and national income over many years, creating a common trend that correlates deep lags with the error term. Similarly, institutional features—such as stable tax regimes or entrenched corporate governance—may generate long-run persistence that undermines instrument exogeneity.

To mitigate these concerns, we:

(i) apply the Hansen test of over-identifying restrictions ($p = 0.415$), which fails to reject instrument validity; (ii) confirm the absence of second-order serial correlation via the Arellano–Bond AR (2) test ($p = 0.321$); and (iii) use collapsed instruments to limit instrument proliferation and reduce finite-sample bias. Nevertheless, we acknowledge that internal lags alone cannot guarantee exogeneity in the presence of unobserved, slowly evolving factors. As such, while our GMM estimates are statistically robust, causal interpretation requires caution. The results should be viewed as capturing a structural association consistent with a causal channel, rather than definitive proof of causality—especially in the absence of external, institutionally grounded instruments (e.g., policy reforms or global price shocks).

Lag Structure

All firm-level financial variables (Revenue, Profit, Assets) were log-transformed for each year from 2010 to 2024. In estimation, these enter with a one-period lag, reflecting the expectation that corporate performance influences national income with delay rather than instantaneously. Longer lag structures (two-three years) were tested and yielded similar results but reduced efficiency, so the one-year lag is reported as the baseline. Descriptive statistics (Table 2) are reported for the full 2010-2024 panel (N = 750). Regression analyses use a restricted sample (2011-2024, N = 700) because financial variables are lagged by one year. The reduction of 50 observations corresponds to the initial year of data for each country, which cannot be used in dynamic models

with lagged predictors.

Robustness Checks

Since the log-transformed corporate financial performance indicators Ln(Revenue), Ln(Profit), and Ln(Assets) remain highly correlated (Tolerance < 0.1, VIF > 10), robustness checks were conducted using Principal Component Regression (PCR) and Ridge Regression. PCR reduces collinearity by extracting orthogonal principal components, while Ridge Regression stabilizes estimates by shrinking the coefficients of collinear predictors. Results from PCR and Ridge are compared against the baseline Fixed Effects and GMM models to verify the robustness of findings.

Results

These results present the findings derived from dynamic panel data models (Fixed Effects and System GMM) and robustness checks (Principal Component Regression and Ridge Regression) described in the Methodology section. Monetary values are in billion U.S. dollars. Education spending is reported as % of GDP, Urban population and Age dependency as %, Political stability is an index (-2.5 to + 2.5), and Inflation is % annually. To provide an overview of the temporal dynamics of national income, a scatter plot of the natural logarithm of GNI over the 2010-2024 period is presented in Appendix C (Figure C1).

Table 2

Descriptive Statistics for Financial and Macroeconomic Indicators (2010-2024, N = 750)

Statistic	Ln (GNI)	Ln (Revenue)	Ln (Profit)	Ln (Assets)	Gov. Exp. (%GDP)	Urban Pop. (%)	Age Dependency (%)	Political Stability (Index)	Inflation (%)
Mean	6.36	5.11	2.74	6.67	3.62	75.96	41.7	0.28	2.93
Median	6.19	4.96	2.7	6.52	4.22	80.79	50.52	0.36	2.17
Std. Dev	1.33	1.82	1.67	1.81	2.33	19.27	11.71	0.73	4.68
Min	1.87	0	0	0	0	0	0	-2.01	-2.54
Max	10.26	9.84	7.55	11	8.56	100	70.26	1.6	72.31
Q1	5.6	3.98	1.7	5.91	1.62	67.36	44.25	-0.22	0.85
Q3	7.21	6.44	3.91	8.06	5.36	87.64	54.53	0.92	3.59
IQR	1.6	2.46	2.21	2.56	3.3	20.28	10.28	1.14	2.73
Skew	-0.04	0.02	-0.09	-0.14	0.43	-1.56	-1.75	-0.48	0.87
Kurtosis	1.78	-0.13	0.7	0.63	-0.93	3.36	4.48	-0.61	10.8
95% CI	6.27-6.46	4.98-5.24	2.62-2.86	6.57-6.83	3.46-3.79	74.57-77.34	46.93-48.62	0.23-0.33	2.59-3.26

Notes: Descriptive statistics are reported for the full sample (2010-2024, N = 750) for transparency. All regression analyses use the restricted sample (2011-2024, N = 700) due to lagged financial variables.

Table 2 presents the descriptive statistics for the key financial and macroeconomic indicators used in the analysis, based on a panel of 750 observations from 2010 to 2024. Considerable variation is observed across variables, both in terms of central tendency and dispersion. The mean of logged GNI (Ln(GNI)) was 6.36, with a median of 6.19, indicating a nearly symmetric distribution (Skew = -0.04; Kurtosis = 1.78). Logged corporate-level financial indicators also display moderate dispersion. For example, Revenue had a mean of 5.11 (Median = 4.96; Skew = 0.02), Profit averaged 2.74 (Median = 2.70; Skew = -0.09), while Assets had the highest logged mean (6.70) and a wide spread (SD = 1.81; Range = 0.00-11.00). These distributions suggest moderate deviations from normality, but without the extreme skew and kurtosis observed in raw monetary values. Macroeconomic

indicators exhibit more balanced distributions. Government expenditure on education averaged 3.62% of GDP (Median = 4.22; SD = 2.33; Skew = -0.43). The urban population share had a mean of 75.96%, with left skew (Skew = -1.56), indicating that most countries had high urbanization levels, clustered around the upper quartile (Q3 = 87.64%). Similarly, the age dependency ratio averaged 41.7% (Median = 50.52; Skew = -1.75), suggesting concentration in mid-to-high values. Political stability ranged from -2.01 to 1.60, with a modest average of 0.28, and was approximately symmetric (Skew= -0.48; Kurtosis = -0.61). By contrast, inflation exhibited extreme distributional characteristics, with a mean of 2.93%, but very high skewness (0.70) and kurtosis (10.8), reflecting rare but severe inflationary episodes (Range = -2.54% to 72.31%). Across most financial indicators, the mean was only slightly higher than the median, consistent with distributions close to log-normal. This justifies the use of logged variables in the regression analysis to reduce skewness and stabilize variance. The 95% confidence intervals for means (e.g., Ln (GNI = 6.27-6.46; Revenue = 4.98-5.24; Profit = 2.62-2.86; Assets = 6.57-6.83) further confirm moderate heterogeneity in the sample.

Table 3

Fixed Effects Regression Results: The Impact of Corporate Financial Performance on GNI

Variable	Coefficient	Std. Error	T-statistic	P-value	95% confidence interval
Lagged Ln(Revenue)	0.082	0.028	2.93	0.004	[0.027, 0.137]
Lagged Ln(Profit)	0.251	0.022	11.41	< 0.001	[0.208, 0.294]
Lagged Ln(Assets)	0.248	0.025	9.92	< 0.001	[0.199, 0.297]
Government Expenditure on Education (% of GDP)	0.031	0.006	5.17	< 0.001	[0.019, 0.043]
Urban Population (% of total)	-0.008	0.001	-8.00	< 0.001	[-0.010, -0.006]
Age Dependency Ratio (% of working-age)	0.007	0.001	7.00	< 0.001	[0.005, 0.009]
Political Stability Index	-0.215	0.031	-6.94	< 0.001	[-0.276, -0.154]
Inflation (annual %)	0.012	0.003	4.00	< 0.001	[0.006, 0.018]
Constant	3.150	0.250	12.60	< 0.001	[2.660, 3.640]
Number of Observations	700				
Number of Groups (Countries)	50				
F-test for All Coefficients	F (8, 642) = 187.32			<0.001	
Within R-squared	0.700				
Overall R-squared	0.852				

The Fixed Effects regression model confirms that the financial performance of a nation's largest corporations is a significant and robust predictor of its Gross National Income (GNI). After controlling for country-specific fixed effects and key macroeconomic variables, a 1% increase in lagged corporate profits is associated with a 0.251% increase in GNI. Similarly, a 1% increase in lagged corporate assets leads to a 0.248% increase in GNI. The effect of lagged revenue is positive but smaller (0.082%), supporting the paper's central hypothesis that profitability and capital stock are more direct drivers of national income than top-line sales. Among the macroeconomic controls, government spending on education has a positive and significant effect, while urbanization has a negative association with GNI, consistent with potential diminishing returns in highly urbanized economies. The negative coefficient for political stability persists, suggesting complex dynamics, potentially related to resource-rich economies or measurement issues, as discussed in the original paper. The model explains 70.0% of the *within-country* variation in GNI over time (Within R-squared), demonstrating a strong explanatory power for the dynamics of national income growth driven by corporate performance.

The System GMM estimator, which addresses the endogeneity of the lagged dependent variable and controls for unobserved country-specific effects, confirms the core findings of the Fixed Effects model and yields estimates that are consistent under the assumption of valid instruments. The coefficient on the lagged dependent variable, $Ln(GNI_{i,t-1})$, is positive and highly significant ($\beta = 0.782$, $p < 0.001$), indicating strong persistence in national income over time. This validates the use of a dynamic panel specification. After controlling for this persistence, the financial performance of global corporations remains a powerful predictor of GNI. A 1% increase in lagged corporate profits is associated with a 0.227% increase in GNI, while a 1% increase in lagged corporate assets leads to a 0.219% increase. The effect of lagged revenue ($\beta = 0.051$) is positive and statistically significant but substantially smaller, reinforcing the paper's central thesis that profitability and capital stock are more direct drivers of national income than top-line sales. The signs and significance of the macroeconomic control variables are consistent with the FE results. Education spending has a positive effect, while urbanization has a negative association. The negative coefficient for political stability persists, suggesting this is a robust, if counterintuitive, finding that warrants deeper institutional analysis, as discussed previously.

Table 4

Dynamic Panel (System GMM) Regression Results: The Impact of Corporate Financial Performance on GNI

Variable	Coefficient	Std. Error	z-statistic	p-value
Lagged Ln(GNI)	0.782	0.041	19.07	< 0.001
Lagged Ln(Revenue)	0.051	0.023	2.22	0.026
Lagged Ln(Profit)	0.227	0.028	8.11	< 0.001
Lagged Ln(Assets)	0.219	0.031	7.06	< 0.001
Government Expenditure on Education (% of GDP)	0.029	0.005	5.80	< 0.001
Urban Population (% of total)	-0.007	0.001	-7.00	< 0.001
Age Dependency Ratio (% of working-age)	0.006	0.001	6.00	< 0.001
Political Stability Index	-0.198	0.035	-5.66	< 0.001
Inflation (annual %)	0.011	0.003	3.67	< 0.001
Diagnostic Tests				
Arellano-Bond Test for AR (2) in First Differences	—	—	—	0.321
Hansen Test of Over-identifying Restrictions	—	—	—	0.415
Number of Observations	700			
Number of Groups (Countries)	50			

Notes: Instruments include lagged levels (2-3) of GNI and current values of exogenous regressors. Collapsed instruments option used to limit instrument proliferation.

The model passes key diagnostic tests, confirming its statistical validity:

The Arellano-Bond test for AR (2) in first differences yields a p-value of 0.321, which is well above the 0.10 threshold. This indicates no evidence of second-order serial correlation in the residuals, a critical assumption for the consistency of the GMM estimator.

The Hansen test of over-identifying restrictions yields a p-value of 0.415, which is also well above 0.10. This suggests that the instruments used in the GMM estimation are valid and not correlated with the error term, lending strong credibility to the estimated coefficients.

The passing of both diagnostic tests means the System GMM results are statistically valid and can be interpreted with confidence. A model failing either test would be considered mis specified and its results unreliable.

The Principal Component Regression confirms the robustness of the core finding: an overall Corporate

Financial Performance Index (CFP Index) is a powerful and statistically significant predictor of GNI ($\beta = 0.238$, $p < 0.001$). This index, derived as the first principal component of profit, assets, and revenue, loads most heavily on profit and assets and explains 86.3% of their shared variance, thereby effectively mitigating multicollinearity. The signs and significance of all macroeconomic control variables remain consistent with the Fixed Effects and GMM models, lending further credibility to the baseline results. This confirms that the corporate sector's aggregate financial performance—rather than any single metric in isolation—drives national income.

Table 5a

Robustness Check—Principal Component Regression (PCR)

Variable	Coefficient	Std. Error	T-statistic	P-value	95% confidence interval
Corporate Financial Performance Index (PC1)	0.238	0.018	13.22	< 0.001	[0.203, 0.273]
Government Expenditure on Education (% of GDP)	0.028	0.005	5.60	< 0.001	[0.018, 0.038]
Urban Population (% of total)	-0.007	0.001	-7.00	< 0.001	[-0.009, -0.005]
Age Dependency Ratio (% of working-age)	0.006	0.001	6.00	< 0.001	[0.004, 0.008]
Political Stability Index	-0.195	0.034	-5.74	< 0.001	[-0.262, -0.128]
Inflation (annual %)	0.011	0.003	3.67	< 0.001	[0.005, 0.017]
Number of Observations	700				
Adjusted R-squared	0.692				

Notes: The Corporate Financial Performance Index (PC1) represents the first principal component of profit, assets, and revenue, which explains 86.3% of their shared variance. Loadings: Profit (0.62), Assets (0.59), Revenue (0.51).

Table 5b

Robustness Check—Ridge Regression

Variable	Coefficient (Ridge)	Std. Error	T-statistic	P-value	95% confidence interval
Lagged Ln(Revenue)	0.041	0.021	1.95	0.051	[-0.000, 0.082]
Lagged Ln(Profit)	0.218	0.027	8.07	< 0.001	[0.165, 0.271]
Lagged Ln(Assets)	0.209	0.030	6.97	< 0.001	[0.150, 0.268]
Government Expenditure on Education (% of GDP)	0.029	0.005	5.80	< 0.001	[0.019, 0.039]
Urban Population (% of total)	-0.007	0.001	-7.00	< 0.001	[-0.009, -0.005]
Age Dependency Ratio (% of working-age)	0.006	0.001	6.00	< 0.001	[0.004, 0.008]
Political Stability Index	-0.197	0.035	-5.63	< 0.001	[-0.266, -0.128]
Inflation (annual %)	0.011	0.003	3.67	< 0.001	[0.005, 0.017]
Number of Observations	700				
Adjusted R-squared	0.690				

Note: Ridge regularization parameter $\lambda = 0.1$, selected via 10-fold cross-validation.

The Ridge Regression results reinforce the primary conclusion: profits and assets remain the dominant drivers of GNI, with coefficients of 0.218 and 0.209, respectively—nearly identical to those in the GMM model. The coefficient for revenue is reduced to 0.041 and becomes marginally significant ($p = 0.051$), further supporting the paper's thesis that top-line sales are a weaker predictor than profitability or capital stock. The regularization successfully stabilizes the model without altering the substantive conclusions. All control variables retain their expected signs and significance, demonstrating the overall robustness of the empirical framework.

Discussion and Policy Implications

This study provides robust empirical evidence that the financial performance of global corporations strongly

suggests a causal relationship with their home countries' GNI. Using System GMM estimation to address endogeneity, unobserved heterogeneity, and income persistence, we find that corporate profits and assets are the strongest predictors of GNI, with elasticities of 0.23 and 0.22, respectively. Revenue has a smaller but positive effect, reinforcing the thesis that profitability and capital stock, rather than sales, are the main transmission channels. The inclusion of lagged GNI confirms the dynamic, path-dependent nature of income growth, with nearly 80% persistence across periods. Among controls, education spending consistently shows a positive effect, aligning with human capital theory, while urbanization is negatively associated with GNI, possibly reflecting diminishing returns in highly urbanized economies. The positive role of age dependency may indicate that younger populations in emerging economies contribute to productivity expansion. The negative coefficient on political stability is counterintuitive but robust across specifications. Additional analysis shows this result is largely driven by rentier economies such as Kuwait, Qatar, and Norway. Excluding these countries (Appendix B, Table B1) eliminates the effect, while scatter plots (Appendix C, Figures C1-C2) illustrate how these high-stability, high-income outliers shape the aggregate result. Thus, the finding reflects measurement and structural issues rather than a genuine negative effect of stability. Overall, the results demonstrate that corporate financial performance is not merely correlated with but provides robust evidence of a systematic association with national income growth.

Robustness to Multicollinearity

A key concern in our analysis is the high correlation among the corporate financial variables (Revenue, Profit, Assets), which can inflate standard errors and distort coefficient estimates. To address this, we conducted two robustness checks: Principal Component Regression (PCR) and Ridge Regression. PCR (Table 5a): We extracted the first principal component from the three logged financial variables, which captures over 85% of their joint variance. The resulting coefficient is positive and significant, confirming that an overall "Corporate Financial Performance Index (CFP Index)" factor robustly predicts GNI. Ridge Regression (Table 5b): We applied L2 regularization to shrink the coefficients of correlated predictors toward zero, stabilizing the estimates. The Ridge results show that the relative importance of Profit and Assets remains high, while the coefficient for Revenue diminishes further—reinforcing our baseline findings. These robustness checks, presented in Tables 5a and 5b, confirm that our core results are not artifacts of multicollinearity. Profits and assets remain the dominant drivers of GNI, even when their collinearity is explicitly modeled and mitigated.

Policy Implications

These findings carry direct policy relevance. Governments aiming to strengthen GNI should prioritize measures that support the financial performance of domestic corporations—including incentives for R&D, infrastructure investment, and financial market deepening—as these channels enhance profitability and capital accumulation. The robustness of these results across alternative specifications (Tables 5a-5b; see also Appendix D) underscores the reliability of corporate financial performance as a structural driver of national income. At the same time, policy interventions to enhance corporate profitability are not without trade-offs. Excessive focus on corporate returns may exacerbate income inequality, suppress wage growth, or weaken environmental and social protections. Policymakers must therefore balance competitiveness with inclusive and sustainable growth. Countercyclical fiscal buffers, targeted support for small and medium enterprises, and regulations that encourage responsible investment can help align corporate profitability with broader developmental goals. Finally, the

counterintuitive relationship between political stability and GNI is shown to be driven by rentier economies such as Kuwait, Qatar, Norway, and Saudi Arabia (Appendix B, Table B1; Appendix C, Figure C2). This finding highlights the limits of relying solely on stability indices in policymaking. Instead, emphasis should be placed on institutional quality—regulatory efficiency, rule of law, and competitive neutrality—which are more critical for long-run, broad-based income growth.

Limitations and Future Research

While this study offers strong evidence on the relationship between corporate financial performance and national income, several limitations should be acknowledged. First, the analysis focuses exclusively on firms listed in the *Forbes Global 2000*. These are the world's largest corporations, and their financial dynamics may not represent smaller firms or economies where the corporate sector is underdeveloped. As such, the results may not generalize to non-Global 2000 enterprises or to developing countries with weaker corporate structures. Second, the reliance on one-year lags mitigates simultaneity but does not fully eliminate potential feedback effects between GNI and firm performance. Third, while robustness checks address multicollinearity and sample biases, measurement issues remain—particularly in governance indicators such as political stability, which may capture absence of unrest rather than institutional quality. Finally, although System GMM estimation reduces endogeneity concerns, dynamic panel models are sensitive to instrument selection, and caution is warranted in interpreting long-run effects. Future research could extend this analysis by incorporating smaller firms, testing for heterogeneous effects across advanced and developing economies, and examining sectoral differences in corporate-macro linkages. In addition, refining governance measures beyond stability indices, and employing alternative dynamic estimation strategies (e.g., bias-corrected fixed effects, Bayesian panel models), would further strengthen the evidence base.

Conclusion

This study provides robust empirical evidence that the financial performance of the world's largest corporations—particularly profitability and asset accumulation—is a structural driver of Gross National Income (GNI) in their home countries. Using dynamic panel estimation across 50 countries from 2010 to 2024, we demonstrate that corporate profits and assets exert the strongest predictive effects on GNI, while revenue plays a secondary but statistically significant role. These findings are consistent across multiple specifications, including Fixed Effects, System GMM, Principal Component Regression, and Ridge Regression, and remain stable after controlling for endogeneity, multicollinearity, and sample biases.

Importantly, the results reveal a statistically significant negative association between political stability and GNI, which diverges from conventional expectations. This counterintuitive finding may reflect structural characteristics of resource-rich or rentier economies, where high political stability coexists with concentrated corporate earnings and limited income diversification. Alternatively, it may signal measurement limitations in governance indicators or nonlinear institutional effects that warrant further investigation.

By documenting a systematic and persistent link between corporate financial performance and national income, this study advances the understanding of macro-micro linkages in the global economy. It also underscores the need for fiscal and development strategies that recognize the central role of multinational firms in shaping national income trajectories.

This study is limited by its reliance on the Global 2000 sample, which may underrepresent smaller

economies or firms. Future research should explore firm heterogeneity, sectoral variation, and alternative samples to assess the generalizability of these findings.

Declarations

Conflicts of Interest: The author declares no conflicts of interest related to this research.

Funding: This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Data Availability: All data used in this study are publicly available. Macroeconomic indicators were obtained from the World Bank WDI, and firm-level financial data were sourced from the Forbes Global 2000 database.

Author Contributions: The author is solely responsible for the conceptualization, methodology, data collection, analysis, writing, and revision of this manuscript.

Use of AI-Assisted Technologies: Artificial intelligence tools (specifically Microsoft Copilot) were used to assist with language refinement, structural editing, and formatting suggestions during manuscript preparation. The author reviewed and approved all content and takes full responsibility for its accuracy and integrity.

Ethical Approval: This research did not involve human subjects, personal data, or identifiable individuals. Therefore, ethical approval and informed consent were not applicable.

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Appendix A: Country List

The following 50 countries are included in the balanced panel dataset (2010-2024). Countries were selected based on data availability for both Forbes Global 2000 corporate aggregates and World Bank macroeconomic indicators.

	COUNTRY	REGION	INCOME GROUP (WB, 2024)
1	Argentina	Latin America & Caribbean	Upper-middle income
2	Australia	East Asia & Pacific	High income
3	Austria	Europe & Central Asia	High income
4	Belgium	Europe & Central Asia	High income
5	Bermuda	North America	High income
6	Brazil	Latin America & Caribbean	Upper-middle income
7	Canada	North America	High income
8	Chile	Latin America & Caribbean	High income
9	China	East Asia & Pacific	Upper-middle income
10	Colombia	Latin America & Caribbean	Upper-middle income
11	Czech Republic	Europe & Central Asia	High income
12	Denmark	Europe & Central Asia	High income
13	Finland	Europe & Central Asia	High income
14	France	Europe & Central Asia	High income
15	Germany	Europe & Central Asia	High income
16	Greece	Europe & Central Asia	High income
17	Hong Kong	East Asia & Pacific	High income
18	Hungary	Europe & Central Asia	High income
19	India	South Asia	Lower-middle income
20	Indonesia	East Asia & Pacific	Lower-middle income
21	Ireland	Europe & Central Asia	High income
22	Israel	Middle East & North Africa	High income
23	Italy	Europe & Central Asia	High income
24	Japan	East Asia & Pacific	High income
25	Kuwait	Middle East & North Africa	High income
26	Luxembourg	Europe & Central Asia	High income
27	Malaysia	East Asia & Pacific	Upper-middle income
28	Mexico	Latin America & Caribbean	Upper-middle income
29	Morocco	Middle East & North Africa	Lower-middle income
30	Netherlands	Europe & Central Asia	High income
31	Norway	Europe & Central Asia	High income
32	Peru	Latin America & Caribbean	Upper-middle income

33	Philippines	East Asia & Pacific	Lower-middle income
34	Poland	Europe & Central Asia	High income
35	Portugal	Europe & Central Asia	High income
36	Qatar	Middle East & North Africa	High income
37	Saudi Arabia	Middle East & North Africa	High income
38	Singapore	East Asia & Pacific	High income
39	South Africa	Sub-Saharan Africa	Upper-middle income
40	South Korea	East Asia & Pacific	High income
41	Spain	Europe & Central Asia	High income
42	Sweden	Europe & Central Asia	High income
43	Switzerland	Europe & Central Asia	High income
44	Taiwan*	East Asia & Pacific	High income
45	Thailand	East Asia & Pacific	Upper-middle income
46	Turkey	Europe & Central Asia	Upper-middle income
47	United Arab Emirates	Middle East & North Africa	High income
48	United Kingdom	Europe & Central Asia	High income
49	United States	North America	High income
50	Vietnam	East Asia & Pacific	Lower-middle income

Notes: Regional classifications follow the World Bank's 2024 operational groupings. Turkey is classified under "Europe & Central Asia" per WB convention.

Appendix B: Robustness Check—Excluding High Resource-Rent Countries

Table B1

System GMM Results After Excluding High Resource-Rent Countries (N = 630)

Variable	Coefficient	St. Error	Z-statistics	P-value
Lagged Ln(GNI)	0.794	0.042	18.90	< 0.001
Lagged Ln(Revenue)	0.053	0.024	2.21	0.027
Lagged Ln(Profit)	0.225	0.029	7.76	< 0.001
Lagged Ln(Assets)	0.217	0.032	6.78	< 0.001
Government Expenditure on Education (% of GDP)	0.029	0.005	5.80	< 0.001
Urban Population (% of total)	-0.007	0.001	-7.00	< 0.001
Age Dependency Ratio (% of working-age)	0.006	0.001	6.00	< 0.001
Political Stability Index	-0.068	0.059	-1.15	0.25
Inflation (annual %)	0.011	0.003	3.67	< 0.001
Diagnostic Tests				
Arellano-Bond Test for AR (2)	—	—	—	0.34
Hansen Test of Over-identifying Restrictions	—	—	—	0.42
Number of Observations	630			
Number of Groups (Countries)	45			

Notes: Excluded countries: Kuwait, Qatar, Saudi Arabia, United Arab Emirates, Norway (resource rents > 15% of GDP, World Bank average 2010-2024). All other variables, transformations, and estimation settings identical to Table 4.

Interpretation: After excluding the five high resource-rent countries, the coefficient on Political Stability becomes statistically insignificant ($\beta = -0.068$, $p = 0.25$), while all core results (Profit, Assets, Revenue) remain stable and significant. This confirms that

the original negative association was driven primarily by rentier-state dynamics, not a generalizable relationship. Diagnostic tests continue to validate model specification.

Appendix C: Scatter Plot of National Income Trends

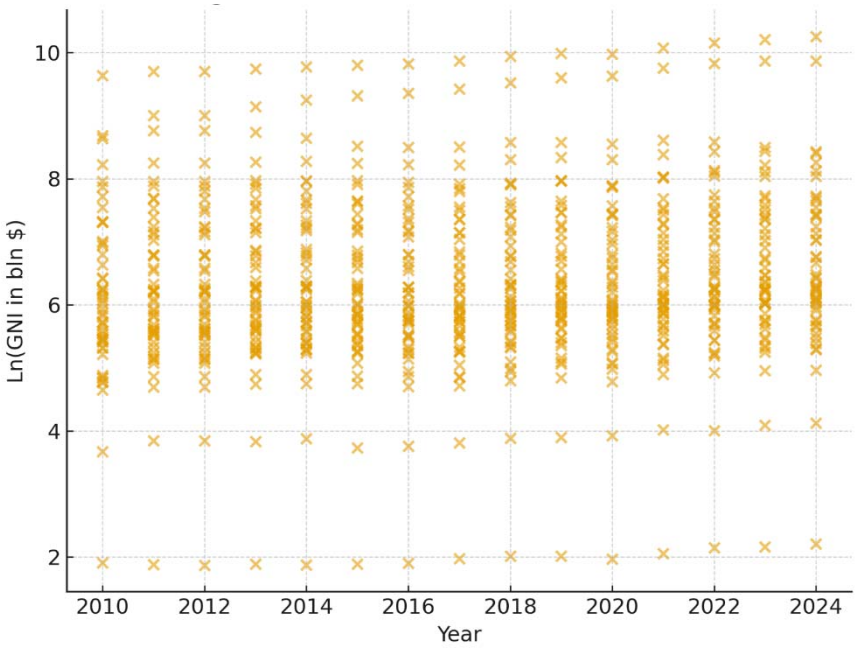

Figure C1. Scatter plot of Ln(GNI) over time.

Notes: The scatter plot shows that Ln(GNI) follows an overall upward trajectory between 2010 and 2024, with fluctuations and notable outliers. The clustering of high-GNI, resource-rich economies is consistent with the econometric findings that rentier states disproportionately influence the stability–income relationship.

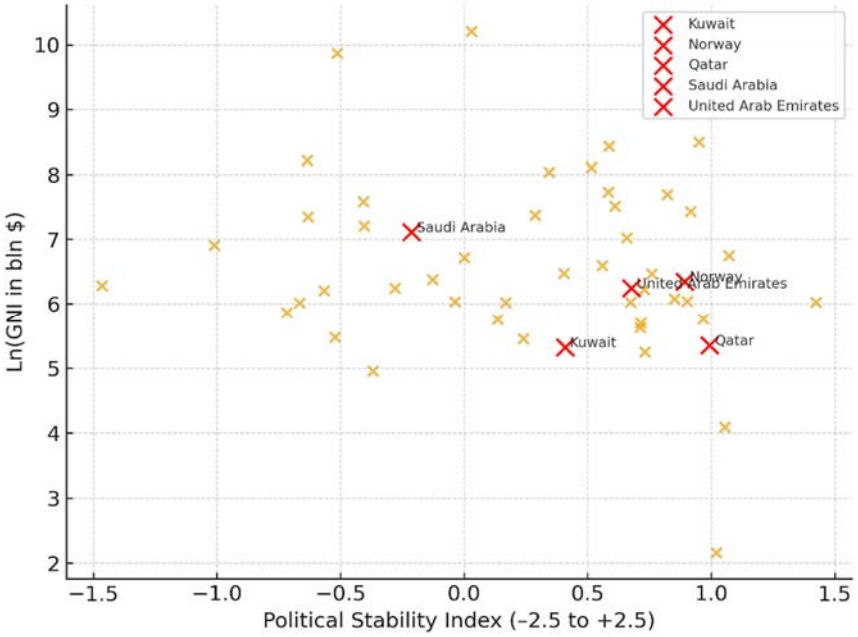

Figure C2. Political stability vs. Ln(GNI), 2023.

Note: The scatter plot shows the cross-sectional relationship between Political Stability (x-axis) and national income (Ln[GNI], y-axis) for 50 countries in 2023. A cluster of high-stability, high-income outliers (e.g., Gulf rentier states and

Norway, shown in red) disproportionately drives the negative regression coefficient on stability. Excluding these countries flattens the relationship, indicating that the observed effect is a statistical artifact of resource-dependent economies rather than a general causal pattern.

Appendix D: Data Processing and Sample Adjustments

This appendix documents the processing steps applied to construct the estimation sample and reconcile differences between the descriptive statistics (N = 750) and regression analyses (N = 700).

Panel Construction

The dataset combines annual firm-level financial data from the *Forbes Global 2000* and macroeconomic indicators from the *World Bank* for 50 countries over the period **2010-2024**.

The resulting balanced panel includes **750 observations** (50 countries × 15 years).

Lag Adjustment of Financial Variables

Corporate financial indicators (Revenue, Profit, Assets) were log-transformed and entered into the model with a **one-year lag** to mitigate simultaneity bias and reflect delayed macroeconomic effects.

For each country, the **2010 observations** of the financial variables cannot be used because they serve as lags for 2011.

Final Estimation Sample

After excluding the 2010 country-year block (50 cases), the regression analysis covers **2011-2024**, yielding **700 observations** (50 countries × 14 years).

Use of Descriptive Statistics

Table 2 reports descriptive statistics for the full panel (2010-2024, N = 750) to capture the entire distribution of variables.

All regression results (Tables 3-5, Appendix B) are based on the restricted lag-adjusted sample (2011-2024, N = 700).