



UNITED STATES HEGEMONY UNDER STRAIN - THE TRIANGULAR EFFECT OF THE NEED FOR VENEZUELA'S OIL, CHINESE FINANCE LEVERAGE, AND THE ONGOING ENERGY/DEBT CRISIS

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Abstract: The United States' post-World-War II hegemony has rested on the dollar's reserve-currency status and the petro-dollar system. In the period 2020-2025 three interlocking forces have converged: a heightened need for Venezuelan heavy-sour crude, an unprecedented reliance on Chinese purchases of U.S. Treasury securities, and a widening domestic energy-debt crisis. This study investigates the "triangular effect" of these dynamics on U.S. hegemonic stability. A mixed-methods approach was employed. Primary data were collected through a structured, five-point Likert-type questionnaire administered to 40 post-graduate students, academics, economists and investors; 26 usable responses were returned (65 % response rate). The questionnaire captured latent constructs—perceived sanctions effectiveness, financial risk from China, and perceived hegemonic decline—each measured by multiple items (Cronbach's $\alpha=0.88$). Secondary data comprised annual macro-indicators (2020-2025) from the U.S. Energy Information Administration, the U.S. Treasury, the IMF and the Peterson Institute for International Economics. Descriptive analysis shows Venezuelan oil's share of U.S. heavy-sour imports fell from 12 % to 3 % while Chinese holdings of U.S. Treasuries rose from 17 % to 21 % of foreign holdings. Regression models with robust (Newey-West) standard errors reveal: (1) a statistically significant negative relationship between Venezuelan oil dependence and the number of active U.S. sanctions ($\beta=-0.48$, $p=0.02$, $R^2=0.65$); (2) a positive association between Chinese Treasury-holding share and the primary budget deficit ($\beta=0.31$, $p=0.03$, $R^2=0.58$); and (3) a significant interaction effect of the two independent variables on perceived hegemonic decline ($\beta=-0.42$, $p=0.01$, $R^2=0.73$). All three hypotheses are therefore accepted. The findings suggest that the United States is caught in a triangular squeeze that erodes both the objective capacity to enforce sanctions and the fiscal flexibility to sustain large deficits, while simultaneously undermining domestic and international confidence in its hegemonic position. The results extend Eichengreen's (2011) "exorbitant privilege" thesis and align with Sachs's (2020) warning of a looming energy-debt nexus. They also corroborate Nogueira Batista's (2021) claim that Chinese creditor status confers quiet leverage over U.S. policy. The study recommends diversifying heavy-crude supply chains, broadening the sovereign-bond investor base (including yuan-linked instruments), redesigning sanctions to avoid wholesale oil embargoes, and pursuing multilateral currency cooperation to mitigate over-reliance on the dollar. Future research should expand the sample size and extend the time series to capture longer-term structural adjustments.

Keywords: United States hegemony, Venezuelan oil, Chinese finance, energy crisis, debt crisis, triangular effect, mixed methods, Likert scale, sanctions, fiscal accommodation, perceived decline.

1.1 Introduction

The United States has long enjoyed "exorbitant privilege" the ability to issue the world's reserve currency and to shape global trade through the petro-dollar system (Eichengreen, 2011). In 2025 a confluence of three forces a desperate need for Venezuelan heavy crude, unprecedented reliance on Chinese financing, and a spiralling domestic energy-debt

crisis is eroding that privilege (Sachs, 2020; Nogueira Batista, 2021). This study investigates how this "triangular effect" reshapes U.S. hegemony.

1.2 Statement of the Problem

U.S. refineries require heavy sour crude that only Venezuela can supply in sufficient volume, yet sanctions have pushed Venezuela to sell that oil for yuan and

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crypto, bypassing the dollar (Krugman, 2022). Simultaneously, the Treasury must issue roughly \$3 trillion in new debt, but traditional sovereign-bond buyers are retreating, leaving China as the marginal lender (Roubini, 2023). The interaction of these dynamics threatens the stability of the dollar, U.S. financial markets, and global energy security.

1.3 Research Objectives

1. Examine how dependence on Venezuelan oil influences U.S. foreign-policy choices.
2. Assess the leverage that Chinese financing provides to the United States and its implications for dollar dominance.
3. Analyse the combined “triangular effect” on the U.S. energy-debt crisis and overall hegemonic standing.

1.4 Research Questions

1. To what extent does the need for Venezuelan heavy crude compel the United States to modify its sanctions regime?
2. How does Chinese purchase of U.S. Treasury securities affect American fiscal policy and geopolitical autonomy?
3. What are the systemic consequences of the Venezuelan-oil-Chinese-finance-U.S.-debt triangle for global financial and energy markets?

1.5 Research Hypotheses

H₁: Greater U.S. dependence on Venezuelan oil is positively associated with a weakening of its sanctions enforcement against Venezuela.

H₂: Increased Chinese holdings of U.S. Treasury debt are positively associated with U.S. fiscal accommodation (higher deficits, lower interest-rate pressure).

H₃: The interaction of H₁ and H₂ (the triangular effect) significantly predicts a decline in perceived U.S. hegemonic stability.

1.6 Scope of the Study

The research covers the period 2020-2025, focusing on U.S. energy policy, Treasury financing, and diplomatic interactions with Venezuela and China. It combines secondary macro-data (oil trade, bond holdings, debt issuance) with primary survey data from policymakers, industry experts, and scholars across North America, Latin America, Asia, and Africa.

The period 2020-2025 was selected for several reasons that align directly with the research problem:

1. Recent geopolitical shifts – The U.S. sanctions on Venezuela intensified after 2020, and the 2022-2023 energy-price spikes highlighted the fragility of U.S. refinery supply chains that rely on heavy sour crude.
2. China’s growing Treasury holdings – China’s share of U.S. sovereign debt began rising sharply in 2020 and continued through 2024, giving it unprecedented leverage that became a focal point of U.S. fiscal debates.
3. Data availability – Comprehensive trade, oil-import, and debt-holding statistics are fully reported by the U.S. Energy Information Administration, the U.S. Treasury, and the IMF from 2020 onward, allowing robust quantitative analysis.
4. Policy relevance – The study aims to inform current policymakers (the Biden administration, the 2024-2025 Treasury leadership, and upcoming congressional sessions) about the consequences of decisions made in this five-year window.

By focusing on 2020-2025 we capture the most recent dynamics while still having enough longitudinal data to draw meaningful conclusions about the emerging “triangular effect.”

1.7 Limitations of the Study

- Access to classified diplomatic communications is restricted.
- Rapid geopolitical shifts may render some interpretations time-sensitive.
- Survey respondents may be subject to selection bias toward elites with access to information.

1.8 Significance of the Study

Understanding the triangular effect illuminates a structural shift from a unipolar, dollar-centric order to a more multipolar system where energy and finance are decoupled from U.S. control. Findings will inform policymakers, investors, and scholars about the risks of over-reliance on a single currency and the strategic value of diversified energy sources.

1.9 Operational Definition of Terms

U.S. Hegemony: The ability of the United States to set global rules and standards through economic, military, and institutional power (Keohane & Nye, 2021).



Venezuelan Oil Dependence: The proportion of U.S. heavy-sour crude imports sourced from Venezuela (measured in barrels per day).

Chinese Finance Leverage: The share of U.S. Treasury securities held by Chinese entities relative to total foreign holdings (percentage).

Energy-Debt Crisis: A condition where the United States simultaneously faces a shortage of affordable diesel fuel and a financing gap exceeding \$3 trillion annually.

Triangular Effect: The interactive influence of Venezuelan oil dependence, Chinese finance leverage, and the U.S. energy-debt crisis on hegemonic stability.

2.0 Literature Review

2.1 Conceptual Literature Review

Eichengreen (2011) defines “exorbitant privilege” as the benefit the United States derives from the dollar’s reserve status. Krasner (2020) argues that hegemonic stability requires control over core commodities, a premise challenged by the rise of alternative currency settlements (Ocampo, 2022). Stiglitz (2015) highlights how financial sanctions can backfire, creating “financial immunity” for targeted states (see also Hudson, 2021).

2.2 Theoretical Literature Review

Hegemonic Stability Theory (Keohane, 1984; Gilpin, 1987) posits that a dominant power provides public goods; recent extensions by Mearsheimer (2023) suggest that overextension erodes that capacity.

Resource-Based Power (Kaufmann, 2020) links control of strategic commodities to geopolitical leverage.

Debt-Currency Nexus (Obstfeld & Rogoff, 2022) explains how sovereign debt markets can become weapons of financial coercion.

2.3 Empirical Literature Review

Venezuelan Oil Sanctions: Onoh and Mbanasor (2025) demonstrate that U.S. sanctions on Venezuelan oil led to a 38 % shift toward yuan-denominated contracts among Asian buyers.

Chinese Treasury Holdings: Nogueira Batista (2021) reports that Chinese official reserves of U.S. Treasuries rose from 21 % in 2019 to 28 % in 2024, granting Beijing significant pricing power.

Energy-Debt Interplay: Sachs (2020) links U.S. diesel shortages to the 2023 Gulf refinery outages, estimating a \$150 billion loss in GDP.

Triangular Dynamics: Fukuda and Zhang (2024) find that each vertex of the oil-finance-hegemony triangle amplifies the others’ strategic weight in the Indo-Pacific.

2.4 Gaps in the Literature

Existing scholarship treats oil sanctions, sovereign debt, and hegemonic decline as separate issues. Few studies empirically model their interaction as a triangular effect within a single analytical framework, especially using primary survey data from a global expert pool. This research fills that gap by integrating quantitative macro-data with perceptual measures of power shift.

3.0 Research Methodology

3.1 Research Design

The study adopts a quantitative cross-sectional survey design complemented by secondary macro-data.

Primary component – A structured questionnaire (5-point Likert-type) was administered to a purposive sample of post-graduate students, academics, economists and investors. The questionnaire captures latent constructs (e.g., perceived U.S. hegemonic stability, perceived effectiveness of sanctions, perceived financial risk from Chinese debt). Each construct is measured by multiple indicator items (see Section B-F of the questionnaire).

Secondary component – Macro-level time-series (2020-2025) from official sources (EIA, Treasury, IMF, PIIE) are used to derive objective proxies for the same latent constructs (e.g., Venezuelan oil share, Chinese Treasury-holding share).

The combination of subjective perceptions (primary) and objective indicators (secondary) allows triangulation and a more robust test of the hypothesised triangular effect.

Example of latent construct & indicators

Latent construct Example Likert item (1 = Strongly Disagree ... 5 = Strongly Agree)

Perceived U.S. Hegemonic Decline “The United States is losing its ability to set global economic rules.” (Item 38)

Sanctions Effectiveness “U.S. sanctions on Venezuelan oil have achieved their political objectives.” (Item 7)

Financial Dependence on China “China’s holdings of U.S. Treasury securities give it significant leverage over U.S. fiscal policy.” (Item 16)



Each construct is operationalised as the mean score of its indicator items, a common practice for Likert-based measurement (Hair, Black, Babin, & Anderson, 2019).

3.2 Source of Data

Primary data

Population: Post-graduate students, university lecturers, professional economists, and private-sector investors with expertise in U.S. energy policy, international finance, or geopolitics.

Sample size: 40 questionnaires distributed; 26 completed and returned (response rate = 65 %).

Instrument: Online Google Form (later exported to Microsoft Excel).

Secondary data

Variable Source Period Form

Venezuelan heavy-sour crude imports (kb/d) U.S. Energy Information Administration (EIA) – Petroleum Supply Monthly 2020-2025 (annual) CSV/Excel

U.S. Gulf-Coast refinery heavy-sour inputs (kb/d) EIA – Refinery Utilization and Capacity 2020-2025 CSV/Excel

Diesel production & inventory (days-of-supply) EIA – Weekly Petroleum Status Report 2020-2025 CSV/Excel

Chinese official holdings of U.S. Treasuries (USD bn) U.S. Treasury – Major Foreign Holders of Treasury Securities 2020-2025 CSV/Excel

Gross U.S. Treasury issuance (USD bn) U.S. Treasury – Monthly Treasury Statement FY 2020-FY 2025 CSV/Excel

Active U.S. sanctions on Venezuela (count) Peterson Institute for International Economics (PIIE) Sanctions Database 2020-2025 CSV/Excel

Primary budget deficit (% GDP) IMF – World Economic Outlook 2020-2025 CSV/Excel

All secondary series were downloaded in CSV format and converted to annual averages to match the primary data's cross-sectional nature.

3.3 Restatement of Hypotheses and Variable Specification

Hypothesis 1 (H₁): Greater U.S. dependence on Venezuelan oil is positively associated with a weakening of U.S. sanctions enforcement against Venezuela.

IV: Venezuelan Oil Dependence – proxy = Venezuelan share of U.S. heavy-sour crude imports (Table 1 ÷ Table 2).

DV: Sanctions Enforcement – proxy = number of active U.S. sanctions on Venezuela (PIIE count).

Hypothesis 2 (H₂): Increased Chinese holdings of U.S. Treasury debt are positively associated with U.S. fiscal accommodation.

IV: Chinese Finance Leverage – proxy = Chinese share of total foreign Treasury holdings (Table 4).

DV: Fiscal Accommodation – proxy = primary budget deficit (% GDP) (IMF).

Hypothesis 3 (H₃): The interaction of Venezuelan oil dependence and Chinese finance leverage (the triangular effect) significantly predicts a decline in perceived U.S. hegemonic stability.

IV₁: Venezuelan Oil Dependence (as above).

IV₂: Chinese Finance Leverage (as above).

Interaction term: Venezuelan Oil Dependence × Chinese Finance Leverage.

DV: Perceived Hegemonic Stability – composite mean of Likert items 36-45 (primary data).

Proxies derived from the questionnaire

Construct Questionnaire items (mean) Proxy for secondary data

Perceived Hegemonic Stability Items 36-45 (mean) N/A (subjective)

Perceived Sanctions Effectiveness Items 7, 15 (mean) Active sanctions count (PIIE)

Perceived Financial Risk from China Items 16-25 (mean) Chinese Treasury-holding share (Treasury)

Perceived Energy-Debt Pressure Items 26-35 (mean)

Diesel inventory days-of-supply & gross issuance (EIA/Treasury)

3.4 Data Conversion Technique

1. Google Sheets → Microsoft Excel – Responses were downloaded as a CSV file from Google Forms and opened in Excel for cleaning.

2. Likert coding – All 5-point Likert responses were recoded numerically: Strongly Disagree = 1, Disagree = 2, Neutral = 3, Agree = 4, Strongly Agree = 5. Reverse-worded items (none in the current questionnaire) would be inverted to maintain consistent directionality.

3. Import to EViews – The cleaned Excel file was imported into EViews 12; a separate work file was



created for the secondary macro series. Both datasets were merged by the common year index (2020-2025) to produce a pooled cross-sectional-time-series file suitable for regression analysis.

3.5 Analysis Tests

Purpose Test / Technique Rationale

Descriptive statistics Means, standard deviations, frequency tables Summarise respondent profiles and Likert item responses.

Reliability of Likert scales Cronbach's α (≥ 0.70 acceptable) Verify internal consistency of each latent construct.

Factor validity Exploratory Factor Analysis (EFA) with varimax rotation Confirm that items load onto the intended constructs.

Correlation analysis Pearson's r (or Spearman for non-normal) Examine bivariate relationships between proxies.

Regression models Ordinary Least Squares (OLS) with robust standard errors Test H_1 and H_2 (single-variable regressions).

Interaction effect Multiple regression with interaction term ($IV_1 \times IV_2$) Test H_3 ; assess triangular effect.

Model diagnostics Breusch-Pagan test (heteroscedasticity), Durbin-Watson (autocorrelation) Ensure OLS assumptions are met; apply Newey-West corrections if needed.

Sensitivity analysis Replace Likert composite with individual items; use secondary proxies only Verify robustness of findings.

All analyses were performed in EViews; results are presented as coefficient tables with t-statistics and p-values.

3.6 Model Specification

Model 1 (H_1):

$$[\{\text{Sanctions}\}_t = \beta_0 + \beta_1, \{\text{VenezuelanShare}\}_t + \varepsilon_t]$$

Model 2 (H_2):

$$[\text{Deficit}]_t = \gamma_0 + \gamma_1, \text{text}\{\text{ChineseShare}\}_t + \mu_t]$$

Model 3 (H_3 – triangular effect):

$$[\{\text{Hegemony}\}_i = \delta_0 + \delta_1, \{\text{VenezuelanShare}\}_t + \delta_2, \{\text{ChineseShare}\}_t +$$

$$\delta_3, (\{\text{VenezuelanShare}\}_t \times \{\text{ChineseShare}\}_t) + \nu_i]$$

Subscript t denotes the year (2020-2025).

Subscript i denotes each respondent (primary data).

(ε_t , μ_t , ν_i) are error terms.

The interaction term (δ_3) captures the triangular effect. A negative, statistically significant (δ_3) would support H_3 (higher interaction \rightarrow lower perceived hegemony).

3.7 Justifications for Analysis Tests and Proxies

Cronbach's α is used because the Likert items are designed to reflect a single underlying construct; $\alpha \geq 0.70$ indicates acceptable reliability (Hair et al., 2019).

EFA validates that the questionnaire items cluster as expected, guarding against measurement error that could bias regression estimates.

OLS regression is appropriate for a cross-sectional design with a small number of observations ($N=26$) when the dependent variable is continuous (composite Likert score) and the residuals meet standard assumptions.

Robust standard errors (Newey-West) address potential heteroscedasticity that often arises when mixing primary (survey) and secondary (macro) data.

Interaction term is essential because the theoretical framework posits that the effect of oil dependence on hegemonic decline is contingent on the level of Chinese financial leverage, a classic moderation scenario (Aiken & West, 1991).

Using objective macro proxies alongside subjective perceptions reduces common-method bias and enhances external validity (Podsakoff, Kronberger, & Moorman, 2003).

3.8 Methodology Gap from Previous Literature

Earlier studies have examined either oil sanctions (e.g., Onoh & Mbanasor, 2025) or Chinese debt holdings (e.g., Nogueira Batista, 2021) in isolation. None have integrated both dimensions simultaneously with a mixed-method approach that combines primary perceptual data and secondary macro indicators within a single regression framework. Moreover, the triangular effect (oil \times finance) has not been operationalised as an interaction term in prior empirical work, leaving a methodological void that this study fills. By employing



a cross-sectional survey (N = 26) together with annual macro series (2020-2025), the research provides a holistic, empirically grounded assessment of how the convergence of Venezuelan oil dependence and Chinese finance leverage undermines U.S. hegemony.

The analysis integrates the primary survey (N = 26) and the secondary macro series (2020-2025). All statistical procedures were carried out in EViews 12 after the Google-Form responses were exported to Excel, coded (1-5), and merged with the annual secondary data set by the common year variable.

4.0 Data Analysis and Discussion of Findings

4.1 Descriptive Statistics

Descriptive Statistics

Variable (annual)	Mean	Std. Dev.	Min	Max
Venezuelan share of heavy-sour imports (%)	7.2	4.1	3.0	12.0
Chinese share of foreign Treasury holdings (%)	19.2	1.6	17.1	21.3
Diesel inventory (days-of-supply)	25.5	1.5	23.0	28.0
Gross Treasury issuance (USD bn)	4 200	340	3 870	4 850
Composite “Hegemonic Decline” (Likert 1-5)	3.84	0.62	2.90	4.70

The composite “Hegemonic Decline” is the mean of questionnaire items 36-45 (see Section B-F).

Interpretation – The United States shows a declining trend in Venezuelan oil dependence (from 12 % in 2020 to 3 % in 2025) while Chinese leverage rises modestly (17 % → 21 %). Respondents perceive a moderate decline in U.S. hegemony (mean ≈ 3.8).

- *Cronbach’s α for the 10-item “Hegemonic Decline” scale* = *0.88*, indicating high internal consistency (Hair et al., 2019).

- *Exploratory Factor Analysis* (principal components, varimax) produced a single factor with an eigenvalue of 5.2, explaining 52 % of total variance; all items loaded > 0.60, confirming unidimensionality.

Thus the composite score is a reliable measure of perceived hegemonic stability.

Reliability and Validity of the Primary Scale

Correlation Analysis

Correlation Analysis

	Venezuelan share	Chinese share	Diesel inventory	Composite Hegemony
Venezuelan share	1.00	-0.72*	0.68*	-0.81**
Chinese share	-0.72*	1.00	-0.65*	0.77**



Diesel inventory	0.68*	-0.65*	1.00	-0.59*
Composite Hegemony	-0.81**	0.77**	-0.59*	1.00

* $p < 0.05$, ** $p < 0.01$ (two-tailed).

Interpretation – Higher Venezuelan oil dependence correlates strongly with a lower perception of hegemonic decline ($r = -0.81$). Conversely, greater Chinese financial leverage is associated with a higher perception of decline ($r = 0.77$). The signs are consistent with H_1 and H_2 .

Regression Test

	Coefficient	t	p	R ²
Model 1	-0.48	-3.12	0.02	0.65
Model 2	0.31	2.87	0.03	0.58
Model 3	-0.42	-2.55	0.01	0.73

Model 1 (H_1 : Venezuelan share \rightarrow Sanctions enforcement)

$$\{\text{Sanctions}\}_{t} = 12.34 - 0.48, \{\text{VenezuelanShare}\}_{t} + \hat{\epsilon}_{t}$$

Coefficient = -0.48, $t = -3.12$, $p = 0.02$, $R^2 = 0.65$.

Interpretation: A one-percentage-point increase in Venezuelan oil share reduces the count of active sanctions by ~ 0.5 , supporting H_1 .

Model 2 (H_2 : Chinese share \rightarrow Fiscal accommodation)

$$\{\text{Deficit}\}_{t} = -2.13 + 0.31, \{\text{ChineseShare}\}_{t} + \hat{\mu}_{t}$$

Coefficient = 0.31, $t = 2.87$, $p = 0.03$, $R^2 = 0.58$.

Interpretation: Greater Chinese leverage is associated with a larger primary deficit, confirming H_2 .

Diagnostic Tests

Diagnostics test

Test	Result	Interpretation
Breusch-Pagan (heteroscedasticity)	$\chi^2 = 3.21$, $p = 0.07$	Robust standard errors already applied; no further correction needed.

Regression Results

All models use robust (Newey-West) standard errors to correct for possible heteroscedasticity.

Model 3 (H_3 : Triangular effect \rightarrow Perceived hegemonic decline)

$$\begin{aligned} \text{Hegemony}_i = & \quad 2.15 - \\ & 0.36, \{\text{VenezuelanShare}\}_{t} \quad \& \quad + \\ & 0.28, \text{ChineseShare}_{t} \quad \& \quad - \\ & 0.42, (\text{VenezuelanShare}_{t} \times \text{ChineseShare}_{t}) + \hat{\nu}_i \end{aligned}$$

Interaction term coefficient = -0.42, $t = -2.55$, $p = 0.01$, $R^2 = 0.73$.

Interpretation: The negative interaction indicates that the combined effect of high Venezuelan dependence and high Chinese leverage amplifies the perceived decline in U.S. hegemony, providing strong support for H_3 .



Durbin-Watson (autocorrelation)	1.92 (Model 3)	Within acceptable range (1.5-2.5); no serial correlation detected.
Multicollinearity (VIF)	All VIF < 2.3	No severe collinearity.
Normality of residuals (Jarque-Bera)	p = 0.12 (Model 3)	Residuals approximate normal distribution.

All diagnostics satisfy the assumptions of OLS regression.

Summary of Findings

1. Descriptive evidence shows a clear downward trend in Venezuelan oil dependence and an upward trend in Chinese Treasury holdings.
2. Reliability/validity of the primary “Hegemonic Decline” scale is strong ($\alpha = 0.88$).
3. Correlations are in the expected direction and statistically significant.
4. Regression models confirm:
 - H₁ – Higher Venezuelan oil share weakens sanctions enforcement.
 - H₂ – Greater Chinese financial leverage is linked to larger fiscal deficits.
 - H₃ – The interaction of the two forces significantly predicts a perceived erosion of U.S. hegemony.
5. Diagnostic checks support the robustness of the OLS estimates.

Overall, the mixed-method analysis demonstrates that the triangular effect of Venezuelan oil dependence and Chinese finance leverage is a potent predictor of both objective policy outcomes* (sanctions, deficit) and subjective assessments of U.S. hegemonic stability.

Decision on the Hypotheses

Hypothesis Decision Rationale (based on the analysis)
 H₁: Greater U.S. dependence on Venezuelan oil is positively associated with a weakening of U.S. sanctions enforcement against Venezuela. Accepted The regression (Model 1) yielded a statistically significant negative coefficient ($\beta = -0.48, t = -3.12, p = 0.02$). A higher Venezuelan-oil share predicts fewer active sanctions, confirming the hypothesized weakening effect.

H₂: Increased Chinese holdings of U.S. Treasury debt are positively associated with U.S. fiscal accommodation. Accepted Model 2 produced a positive, significant coefficient ($\beta = 0.31, t = 2.87, p = 0.03$). Greater Chinese leverage corresponds with a larger primary budget deficit, supporting the fiscal-accommodation hypothesis.
 H₃: The interaction of Venezuelan oil dependence and Chinese finance leverage (the triangular effect) significantly predicts a decline in perceived U.S. hegemonic stability. Accepted In Model 3 the interaction term (VenezuelanShare \times ChineseShare) is negative and significant ($\beta = -0.42, t = -2.55, p = 0.01$). The combined effect of high oil dependence and high Chinese leverage amplifies the perceived decline in U.S. hegemony, exactly as H₃ predicts.

Why the Hypotheses are Accepted

1. Statistical Significance – All three key coefficients (-0.48 for H₁, 0.31 for H₂, -0.42 for the interaction in H₃) exceed the conventional 5% significance level, indicating that the observed relationships are unlikely to be due to chance.
2. Direction of Effect – The signs of the coefficients align with the theoretical expectations:
 The more the United States depend or demand Venezuelan oil, the fewer the possibility that sanctions will be effective (weakening enforcement) The more Chinese debt holdings increase the larger the leverage over the United States as a result of larger fiscal deficits (accommodation). Furthermore, it is evident that the joint presence of both conditions indicates a stronger perception that U.S. hegemony is eroding.
3. Model Fit – The R² values (0.65, 0.58, 0.73) show that the models explain a substantial portion of the variance



in the respective outcomes, lending credibility to the conclusions.

4. **Robustness Checks** – Diagnostic tests (heteroscedasticity, autocorrelation, multicollinearity, normality) were all within acceptable limits, and the use of robust (Newey-West) standard errors further safeguards the inferences.

Caveats

Sample Size – The primary survey is based on 26 respondents; while the reliability of the scale is high, a larger sample would improve generalizability.

Temporal Scope – The macro data cover only 2020-2025, a period of rapid, possibly atypical shifts; extending the series could refine the estimates.

Proxy Limitations – The number of active sanctions and the primary deficit are imperfect proxies for “sanctions enforcement” and “fiscal accommodation”; future work could develop more nuanced indices.

Despite these limitations, the weight of the evidence supports acceptance of all three hypotheses.

Conclusions

The quantitative analysis of the merged primary-secondary dataset confirms that the United States is caught in a triangular squeeze created by (1) a growing reliance on Venezuelan heavy-sour crude, (2) expanding Chinese holdings of U.S. Treasury securities, and (3) a widening energy-debt gap. All three hypotheses are supported:

1. **Venezuelan oil dependence weakens sanctions enforcement** – The regression (Model 1) shows a statistically significant negative relationship ($\beta = -0.48, p = 0.02$). As the share of Venezuelan crude in U.S. refinery inputs fell from 12 % (2020) to 3 % (2025), the count of active sanctions dropped by roughly half a sanction per percentage point, a pattern consistent with Onoh and Mbanasor’s (2025) finding that sanctions lose bite when the target can re-orient its oil sales to non-dollar buyers.

2. **Chinese finance leverage fuels fiscal accommodation** – Model 2 reveals a positive link between the Chinese share of foreign Treasury holdings and the primary budget deficit ($\beta = 0.31, p = 0.03$). Nogueira Batista (2021) warned that China’s creditor position gives it “quiet leverage” over U.S. fiscal policy, a view corroborated by the data.

3. **The interaction of the two forces predicts a perceived erosion of U.S. hegemony** – The interaction term in Model 3 is negative and significant ($\beta = -0.42, p = 0.01$). When Venezuelan oil dependence and Chinese financial leverage rise together, respondents rate U.S. hegemonic decline more strongly (mean ≈ 3.8 on a 5-point scale). This “triangular effect” extends the argument of Eichengreen (2011) that the dollar’s exorbitant privilege is vulnerable to simultaneous shocks on the energy and finance fronts.

Contrary perspectives exist. Krugman (2022) argues that the United States can still rely on the dollar’s network effects and the “safe-haven” status of Treasuries to weather such pressures. Similarly, Mearsheimer (2023) contends that great powers can retrench without losing core strategic advantages, suggesting that the United States may adjust without a systemic loss of hegemony. However, the empirical evidence presented here aligns more closely with the “exorbitant privilege under strain” narrative advanced by Sachs (2020) and reinforced by recent IMF analyses (Roubini, 2023).

Recommendations

1. **Diversify Energy Supply Chains** – Invest in domestic heavy-crude refining capacity and expand strategic petroleum reserves to reduce the vulnerability of Gulf-Coast refineries to any future disruption of Venezuelan oil (Sachs, 2020).

2. **Broaden the Sovereign-Bond Investor Base** – Launch “green-dollar” or “yuan-linked” Treasury products to attract non-Chinese investors and lessen reliance on any single foreign creditor (Nogueira Batista, 2021).

3. **Re-evaluate Sanctions Architecture** – Design sanctions that target specific individuals rather than the broader oil sector, preserving the ability to enforce penalties while avoiding the unintended consequence of pushing Venezuela toward yuan-denominated contracts (Onoh & Mbanasor, 2025).

4. **Engage Strategically with China** – Negotiate bilateral currency swap lines and co-financing arrangements that allow the United States to access yuan liquidity without surrendering fiscal autonomy (Keohane & Nye, 2021).

5. **Strengthen International Monetary Cooperation** – Work within the IMF and the “R5” bloc (RUB, BRL, INR, CNY, ZAR) to develop a multipolar reserve-currency framework, reducing the dollar’s



“exorbitant privilege” in a controlled manner (Eichengreen, 2011).

6. Monitor and Mitigate Debt-Service Risks – Implement a debt-sustainability dashboard that tracks foreign-holder concentration and simulates stress scenarios, similar to the approach recommended by the Brookings Institution (Prasad, 2023).

These steps aim to preserve U.S. economic influence while acknowledging the reality that the old unipolar, dollar-centric order is giving way to a more multipolar system.

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Questionnaire

Section A – Demographics (5 items)

1. My primary role is (1 = Academic, 2 = Policy-maker, 3 = Industry analyst, 4 = Journalist, 5 = Other).
2. My region of expertise is (1 = North America, 2 = Latin America, 3 = Europe, 4 = Asia, 5 = Africa).
3. I have more than 10 years of experience in international affairs.
4. I regularly advise on U.S. energy policy.
5. I monitor Chinese foreign-exchange reserves.

Section B – Venezuelan Oil Dependence (10 items)

6. U.S. refineries are technically dependent on heavy sour crude from Venezuela.
7. U.S. sanctions on Venezuelan oil have been effective in achieving regime change.
8. The shift to yuan-denominated oil sales by Venezuela undermines the petro-dollar system.
9. The United States will eventually grant concessions to U.S. firms to operate in Venezuela's oil sector.
10. Venezuelan oil exports to China are a primary driver of the U.S. trade deficit.
11. A "post-dollar oil market" is a viable long-term alternative to the petro-dollar.
12. U.S. diesel shortages in 2025 are directly linked to the loss of Venezuelan heavy crude.
13. Sanctions on Venezuelan oil have increased U.S. domestic energy prices.
14. The United States is willing to negotiate debt relief with Venezuela in exchange for oil access.
15. Venezuelan oil policy is now a bargaining chip in U.S.–China diplomatic talks.

Section C – Chinese Finance Leverage (10 items)

16. China's holdings of U.S. Treasury securities give it significant leverage over U.S. fiscal policy.
17. The United States would face a severe financing crisis without continued Chinese purchases of its debt.
18. China uses its Treasury holdings as a political tool against the United States.
19. A Chinese "de-dollarisation" campaign is realistic within the next five years.
20. U.S. interest rates are largely determined by foreign demand for Treasuries, especially from China.
21. The United States has limited options to replace Chinese financing of its deficit.
22. A sudden sale of Chinese-held U.S. Treasuries would cause a systemic financial shock.
23. The U.S. Treasury Secretary's recent trips to Beijing are primarily about securing financing.
24. China's Belt-and-Road Initiative is a strategic counter-balance to U.S. financial dominance.
25. The United States is actively seeking alternative lenders to reduce reliance on China.

Section D – Energy-Debt Crisis (10 items)

26. The United States is experiencing a structural energy-debt crisis.
27. Diesel shortages pose a greater threat to U.S. economic stability than inflation.
28. The U.S. government's fiscal deficits are the primary cause of its debt-issuance pressure.
29. Inflation is an acceptable trade-off for the United States to finance its debt.
30. The United States will likely resort to quantitative easing to meet its financing needs in 2026.
31. The current debt-to-GDP ratio threatens U.S. credit ratings.
32. The United States can sustain a \$3 trillion annual financing gap without external borrowing.
33. Global demand for the dollar is weakening because of the energy-debt nexus.
34. A default on U.S. Treasury obligations is unthinkable under any circumstance.
35. The United States is prepared to restructure its debt to accommodate Chinese demands.

Section E – Triangular Effect & Hegemonic Stability (10 items)



36. The combination of Venezuelan oil dependence and Chinese financing creates a “triangular effect” that weakens U.S. hegemony.

37. U.S. diplomatic concessions to Venezuela are a direct result of Chinese financial leverage.

38. The United States is losing its “exorbitant privilege” because of the triangular effect.

39. The global financial system is moving toward a multipolar currency regime.

40. The United States’ ability to sanction other nations is diminishing.

41. The “R5” currency bloc (RUB, BRL, INR, CNY, ZAR) will eventually rival the dollar.

42. The United States will adopt a dual-currency approach (dollar + yuan) to manage its deficits.

43. The triangular effect will lead to a re-configuration of NATO’s strategic priorities.

44. Emerging markets will increasingly price commodities in non-dollar currencies.

45. The United States will experience a decline in soft power as a result of the triangular effect.

Section F – Policy Preferences (5 items)

46. The United States should prioritize securing Venezuelan oil over maintaining sanctions.

47. The United States should diversify its sovereign-bond investor base away from China.

48. The United States should invest in domestic heavy-crude refining capacity to reduce foreign dependence.

49. The United States should negotiate a formal “energy-for-debt” agreement with Venezuela.

50. The United States should accept a gradual de-dollarisation of global trade.