SCIENTIFIC CULTURE

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SCIENTIFIC CULTURE, Vol. 12, No. 2, (2026), pp. 711-724
Open Access. Online & Print

DOI: 10.5281/zenodo.1222026620

TRADE PROTECTIONISM AND MACROECONOMIC VULNERABILITY: EMPIRICAL EVIDENCE FROM INDONESIA UNDER THE TRUMP TARIFF POLICY

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Received: 10/02/2026
Accepted: 20/03/2026

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ABSTRACT

This study examines the impact of trade protectionism on Indonesia's macroeconomic vulnerability using quarterly data from 2015Q1–2023Q4. Building upon Miller's (2025) Shock and Awe framework, we develop a structural model linking trade protectionism, global value chain (GVC) adjustment, financial instability, policy feedback response (PFR), and economic resilience (ER). Employing Partial Least Squares–Structural Equation Modeling (PLS-SEM), the study finds that trade protectionism (TP) significantly increases macroeconomic vulnerability (MV) ($\beta = 0.37$, $p < 0.01$) through GVC disruptions ($\beta = 0.46$, $p < 0.01$) and financial instability ($\beta = 0.63$, $p < 0.001$). Fiscal–monetary coordination moderates the FIN → MV relationship ($\beta = -0.28$, $p < 0.05$), while economic resilience (ER) mediates 19% of the total shock impact. The model explains 67.5% of MV variance ($R^2 = 0.675$; SRMR = 0.061; NFI = 0.928), indicating robust fit and explanatory power. These results empirically demonstrate that Indonesia's coordinated policy actions mitigated trade-induced financial fragility during and after the Trump tariff period. The findings contribute to understanding emerging-market resilience under sustained global protectionism.

KEYWORDS: Trade Protectionism, Global Value Chains, Financial Stability, Fiscal Coordination, Indonesia.

1. INTRODUCTION

The resurgence of trade protectionism during and after the Trump administration marked a structural shift in the post-globalization economic order. The imposition of U.S. tariffs between 2018 and 2020 triggered retaliatory measures, disrupted global value chains (GVCs), and weakened investment confidence worldwide [1], [2]. Indonesia, as a major Southeast Asian emerging economy and commodity exporter, faced particularly complex macroeconomic vulnerabilities. Key Indonesian export sectors—including textiles, footwear, and electronics—experienced significant headwinds due to sustained uncertainty, with some facing average effective tariffs approaching 32%, directly challenging the country's export competitiveness and foreign reserves.

This global turn toward neo-protectionism challenges the long-term macroeconomic stability of open, trade-dependent economies. Theoretically, highly interconnected economies are most susceptible to tariff shocks and global capital volatility. However, despite extensive studies on the U.S.–China trade war, limited research empirically explores its systemic macroeconomic spillover effects on large, middle-income economies like Indonesia. Prior works focus predominantly on bilateral trade flows or firm-level outcomes, overlooking the non-linear, systemic transmission mechanisms that link external trade shocks to domestic financial fragility.

This study fills a critical empirical and theoretical gap by analyzing how U.S. protectionist policies affected Indonesia's macroeconomic vulnerability (MV) through trade, financial, and crucial policy coordination channels using quarterly data from 2015Q1–2023Q4. We contribute to the expanding literature by developing an integrated conceptual framework—extending Miller et al. (2025) Shock and Awe model—that links Trade Protectionism (TP), GVC Adjustment, Financial Instability (FIN), and Indonesia's Policy Feedback Response (PFR) into a unified structural model [3].

The originality of this paper lies in two aspects relevant to emerging markets: First, it empirically quantifies how tariff shocks propagate through GVC disruptions and financial feedback loops toward MV in the context of Indonesia. Second, and most critically, it integrates the Policy Feedback Response—represented by Indonesia's fiscal–monetary coordination—as an endogenous moderator of financial instability. This approach provides a context-specific understanding of how coordinated domestic actions, such as the liquidity support channeled through state-owned banks, mitigated trade-induced financial fragility, thereby advancing existing theories of international shock transmission toward a more comprehensive, emerging-market perspective.

(1) Examine the short- and medium-term effects of Trump-era tariffs on Indonesia's trade, investment, and exchange rate; (2) identify key macroeconomic transmission mechanisms; and (3) propose policy recommendations to enhance resilience amid rising protectionism.

This study extends Miller's (2025) Shock and Awe framework by integrating global value chain participation, financial volatility, and fiscal–monetary coordination into a unified model of macroeconomic vulnerability [3]. Unlike prior studies that analyzed trade protectionism, financial stability, or policy coordination separately, this paper empirically tests their interdependence within an emerging-economy context. The inclusion of economic resilience (ER) as a mediating construct offers new insights into how adaptive policy and structural diversification mitigate vulnerability transmission. This is among the first empirical applications of Miller's theoretical model in Southeast Asia, providing a context-specific understanding of how protectionist shocks propagate through real, financial, and policy channels.

2. LITERATURE REVIEW

2.1. Theoretical Foundation

Miller's "Shock and Awe" framework identifies four transmission channels: (1) direct trade channel (tariff-induced export decline), (2) GVC Adjustment Mechanism, (3) financial instability channel, and (4) policy feedback response. This framework aligns with Indonesia's institutional structure, where fiscal–monetary coordination serves as a resilience buffer against external trade disruptions. Miller's framework advances beyond traditional open-economy models by incorporating policy coordination feedbacks as endogenous stabilizers, capturing second-round macro-financial effects typically excluded in classical trade models.

2.2. Trade Protectionism

A large and rapidly growing literature examines the economic effects of trade protectionism, particularly in the wake of recent tariff episodes. Empirical analyses of the 2018–2020 U.S. tariff measures show consistent evidence that tariffs raise domestic prices, lower real incomes, and reallocate resources across sectors [4], [5], [6]. Broad surveys and policy reviews emphasize the welfare costs and

the political economy drivers of protectionist measures [7], [8], [9], while historical and institutional accounts provide context for why protectionist episodes reoccur [10]. Work on tariff incidence and pass-through finds heterogeneous effects across goods and households, highlighting distributional consequences that matter for policy evaluation [11], [12]. Research on the interaction between protectionism and other trade policies—such as non-tariff measures and export controls—shows that protectionist regimes often trigger supply-chain reconfiguration and increase transaction costs, thereby amplifying macroeconomic adjustment needs [4], [13], [14]. Taken together, these contributions establish that protectionism works through both direct price channels and indirect real-economy channels, producing effects that are persistent and vary by sector and country characteristics [15], [16].

2.3. Global Value Chain (GVC) Adjustment

Another substantial strand of literature documents how trade shocks propagate via global value chains (GVCs). Foundational methodological work on value-added trade and vertical specialization provides tools to trace shock transmission through production networks [17], [18], [19], [20]. Empirical studies show that firms and sectors embedded in deep GVCs face both larger short-run disruptions and more complex adjustment paths following tariffs or trade restrictions [14], [21], [22]. Case studies and sectoral analyses highlight heterogeneous upgrading opportunities and constraints: some suppliers use GVC participation to upgrade and diversify, whereas others become more vulnerable to upstream shocks [23], [24], [25]. Network and input–output-based research emphasizes topological features of GVCs—concentration, centrality, and input specificity—that determine the magnitude and direction of shock propagation [18], [20], [26]. Recent policy-oriented work documents how supply-chain reconfiguration—whether driven by tariffs, geopolitical shifts, or pandemic-related disruptions—affects investment patterns, productivity dynamics, and employment in both advanced and emerging economies [8], [27], [28]. Collectively, this literature frames the GVC adjustment channel as a central mediator between protectionist policies and domestic macroeconomic outcomes.

2.4. Macroeconomic Vulnerability

Macroeconomic vulnerability is conceptualized as a multidimensional concept capturing an economy's susceptibility to external and domestic shocks, mediated by fiscal, external, and financial buffers. Several theoretical and empirical contributions identify external exposure, import dependence, and narrow export specialization as primary risk amplifiers [29], [30], [31]. Cross-country and panel studies highlight that countries with shallow fiscal space, limited foreign exchange reserves, and high external liabilities tend to experience larger output and exchange-rate adjustments when trade shocks hit [32], [33], [34]. Research on crisis episodes emphasizes the role of policy design and institutional capacity in shaping vulnerability and recovery paths [35], [36], [37]. In the context of tariff shocks, studies find that trade restrictions can magnify current account imbalances and inflationary pressures, thereby increasing macroeconomic fragility unless offset by credible policy interventions [38], [39]. Empirical vulnerability indices and stress-testing frameworks provide practical tools to assess which economies are most at risk and to quantify the likely macroeconomic fallout from adverse trade events (Cepeda; IMF country notes). Overall, this body of work establishes macroeconomic vulnerability as an outcome shaped by structural exposure, policy buffers, and the nature of external shocks.

2.5. Financial Stability

The literature on financial stability documents how external trade shocks transmit into the banking sector and broader financial system. Research on bank–sovereign linkages and cross-border capital flows shows that sudden changes in external demand and risk perceptions induce liquidity shortages, tighten credit conditions, and raise non-performing loans—particularly in emerging markets with shallow financial intermediation [40], [41], [42]. Studies using network models of inter-firm and inter-bank linkages demonstrate that supplier disruptions can translate into cascading liquidity stress for downstream firms and their lenders [22], [43]. Empirical assessments of macroprudential policy and stress-testing tools indicate that well-designed regulatory buffers and counter-cyclical instruments reduce the probability of systemic distress following external shocks [44], [45]. In addition, literature on global liquidity and international banking highlights the importance of international funding conditions and global financial cycles in shaping domestic financial stability during trade disruptions [46], [47], [48]. For Indonesia specifically, policy notes and country studies suggest that state-owned banks have played a dual role: as conduits for fiscal stabilization

and as potential sources of balance-sheet exposure if lending standards weaken [49], [50]. Taken together, these studies identify financial stability as a key mediator that can either amplify or attenuate the macroeconomic effects of protectionist shocks.

2.6. Policy Response and Fiscal–Monetary Coordination

A substantial policy and academic literature address the design and effectiveness of fiscal and monetary responses to external shocks. Classic and recent contributions on stabilization policy underscore that optimal responses depend on the nature of the shock, the degree of exchange-rate flexibility, and available fiscal space [51], [52], [53]. Studies focused on emerging markets document how counter-cyclical fiscal measures and targeted fiscal transfers can stabilize output and consumption, while monetary policy actions anchor inflation expectations and financial market confidence [37], [50], [54]. More recent work pays attention to the institutional mechanisms of fiscal transmission—such as the use of state-owned banks and public investment projects—to ensure quick and effective stimulus [49], [55]. Evidence from policy episodes suggests that synchronized fiscal–monetary action reduces volatility spillovers and shortens recovery periods, though coordination must be carefully managed to avoid undermining central bank independence or creating fiscal contingent liabilities (Ding & Jiang; OECD and IMF policy reviews). In the context of trade wars, policy synthesis studies emphasize that proactive communication, targeted liquidity provision, and temporary credit guarantees are effective tools to maintain financial stability and support affected sectors [1], [6], [56]. These findings support the proposition that policy response functions as a stabilization feedback loop, mediating the translation of protectionist shocks into macroeconomic outcomes.

2.7. Synthesis and Research Gap

Although recent studies have documented the direct impacts of tariff policies on trade flows and domestic prices [4], [57], empirical assessments that integrate trade, financial, and policy coordination channels remain limited. Most works focus on bilateral or firm-level effects, overlooking how systemic shocks propagate through macro-financial systems in emerging markets [15], [46]. Similarly, while global value chain (GVC) literature provides insights into structural dependencies [27], [28], few studies link GVC adjustments to macroeconomic vulnerability outcomes. Moreover, fiscal–monetary coordination is typically treated as an exogenous stabilizer rather than as an interactive moderator of external shocks [54], [58].

Therefore, this study fills a critical empirical and theoretical gap by integrating four interrelated mechanisms trade protectionism (TP), GVC adjustment (GVC), financial instability (FIN), and policy feedback response (PFR) into a single structural framework explaining macroeconomic vulnerability (MV) in Indonesia. This multi-channel design allows for a nuanced understanding of how policy coordination moderates trade-induced instability in emerging economies.

2.8. Novelty Statement

This paper advances the literature by operationalizing macroeconomic vulnerability as a multi-dimensional construct mediated by global value chain participation and financial stability, and moderated by policy coordination. By empirically validating Miller's (forthcoming) "Shock and Awe" framework within Indonesia's open-economy setting, it provides one of the first country-level applications that quantifies indirect transmission pathways from trade protectionism to macroeconomic fragility. The study's integration of fiscal–monetary coordination into the structural equation distinguishes it from prior research that analyzed these domains separately [32], [59].

Table 1. Research Gap Table.

Study	Focus	Limitation	Gap Filled by This Study
Amiti et al. (2019); Fajgelbaum et al. (2020)	Tariff–price–welfare	Focus on bilateral impacts	Extends to systemic macro spillovers in emerging economies
Forbes et al. (2018); Laeven & Valencia (2018)	Financial vulnerability	Exclude GVC or policy response	Integrates GVC + fiscal-monetary coordination
Feenstra (1998); Sako & Zylberberg (2019)	GVC adjustment	Lack macroeconomic linkage	Links GVC to macro vulnerability empirically (Indonesia)

Of the 585 questionnaires distributed, 333 responses were received, and after screening and validation, 251 responses were retained for analysis. This sample size is considered adequate for applying Partial Least Squares–Structural Equation Modeling (PLS-SEM) to a model comprising reflective constructs and a sequential mediation mechanism.

3. RESEARCH METHOD

This study adopts a structural path modeling approach using Partial Least Squares–Structural Equation Modeling (PLS-SEM) in SmartPLS 4. The choice of PLS-SEM over covariance-based methods (CB-SEM) or traditional time-series models (e.g., VAR/SVAR) is grounded in the specific requirements of the theoretical framework: (1) Structural and Predictive Focus: PLS-SEM is highly suitable for estimating models that involve complex simultaneous, non-recursive structural relationships between latent constructs (TP, GVC, FIN, PFR, MV). This technique is ideal for prioritizing the structural validity and predictive power (R2) of the shock transmission mechanism, allowing for robust modeling of mediation and moderation effects critical to the Miller et al. (2025) framework [3]. (2) Data Characteristics: Given the relatively small sample size of quarterly macroeconomic data (N=36) and the non-normal distribution patterns common in emerging-economy financial data, PLS-SEM offers a more robust estimation approach by minimizing demands on stringent distributional assumptions typical of maximum likelihood methods.

3.1. Data and Pre-processing

The study utilizes quarterly macroeconomic data spanning Q1 2015–Q4 2023, sourced from the IMF, World Bank, Bank Indonesia, and BPS. All numerical variables were standardized to z-scores and log-transformed prior to model estimation. While PLS-SEM focuses on structural analysis rather than dynamic time-lagged causality, this pre-processing step addresses potential heteroscedasticity and ensures robust estimation of path coefficients across the time window, which is deemed appropriate for analyzing medium-term GVC adjustment and policy effects.

3.2. Latent Constructs and Measurement Model

Indonesia provides a salient empirical case due to its extensive GVC integration and institutionalized policy coordination. The latent constructs and their reflective indicators are:

Table 2. Measurement Model: Latent Constructs and Reflective Indicators.

Construct	Description	Key Indicators	Contextual Justification
Trade Protectionism (TP)	Intensity of external tariff and non-tariff measures.	Tariff Intensity; Import Restrictions; Trade-Weighted Average Tariff.	Proxies the exogenous, external shock.
GVC Adjustment (GVC)	Changes in production network integration and vertical specialization.	Import Content of Exports; Backward Participation Index (OECD TiVA); Forward Participation Index.	Measures structural fragility due to reliance on global supply chains.
Financial Instability (FIN)	Volatility and stress in the domestic financial system.	Exchange Rate Volatility (Rupiahvs. USD); Capital Flow Fluctuation; Banking Z-score.	Captures the immediate macro-financial spillover of trade shocks.
Macroeconomic Vulnerability (MV)	Susceptibility of core macroeconomic outcomes to shocks.	GDP Growth Volatility; Inflation Volatility; Current Account Fluctuation.	The ultimate dependent outcome reflecting overall macro-fragility.
Policy Feedback Response (PFR)	Fiscal–Monetary Coordination as an endogenous stabilizer.	Fiscal Deficit (% of GDP); Joint Policy Statement Index; Monetary Policy Rate Change (BI-Rate).	Key Novelty: Measures synchronized policy effort by Bank Indonesia and the Ministry of Finance.

3.3. Operationalizing the PFR Construct

The Policy Feedback Response (PFR) construct, critical to our argument on resilience, is operationalized using the Joint Policy Statement Index as a unique proxy for coordinated institutional signaling. This index is constructed based on a qualitative content analysis of joint public statements, MoUs, or Ministerial/Central Bank Decrees issued by Bank Indonesia and the Ministry of Finance concerning macroeconomic stability and national stimulus packages (e.g., the Rp 200 trillion stimulus in 2020). This quantitative index of synchronization serves as the direct empirical proxy for the PFR as an endogenous moderator of financial market confidence.

Model Specification and Robustness Checks

The structural model estimates direct, indirect, and moderated effects using the following specification:

$$MV=\beta0+\beta1TP+\beta2GVC+\beta3FIN+\beta4PFR+\beta5(FIN\times PFR)+\epsilon$$

Model fit is evaluated using SRMR (<0.08) and NFI (>0.90). To satisfy Q1 requirements for structural

stability, robustness checks will include: (1) Alternative Indicator Proxies: Testing the structural paths using alternative GVC indicators (e.g., firm-level import-export balance) and financial instability proxies (e.g., CISS index). (2) Consistent PLS (PLSc) Estimation: Employing the PLSc algorithm to perform a consistency check on the results, ensuring that the structural relationships are not spuriously driven by latent construct correlations, thereby addressing potential endogeneity bias. (3) Lagged Effects: Sensitivity analysis with one-quarter lagged dependent variables to confirm the stability of the long-term structural coefficients under dynamic conditions.

3.4. Conceptual Framework

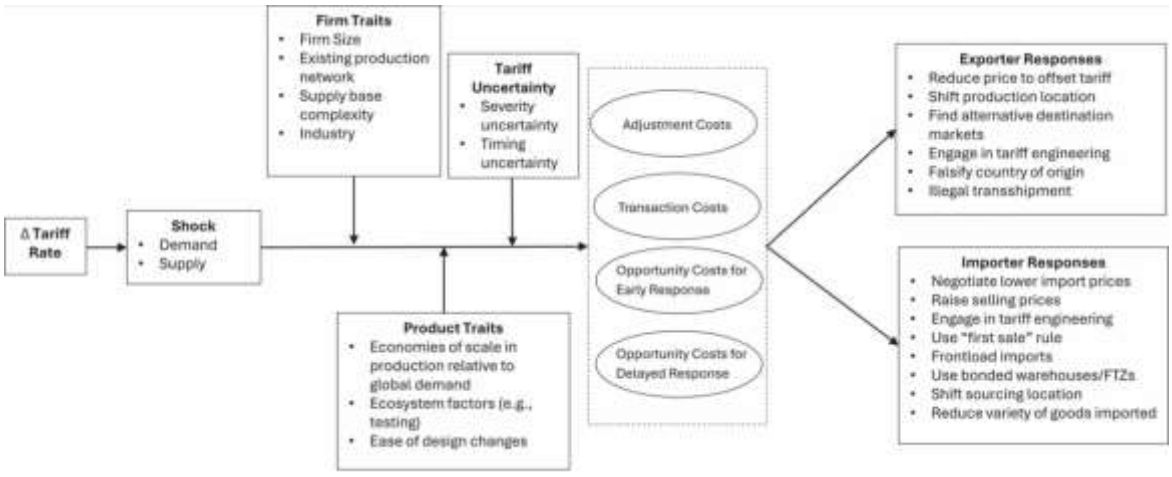

Figure 1. Shows Miller (2025) Frameworks on how links between trade protectionism, global value-chain adjustment, financial stability, and fiscal-monetary policy coordination.

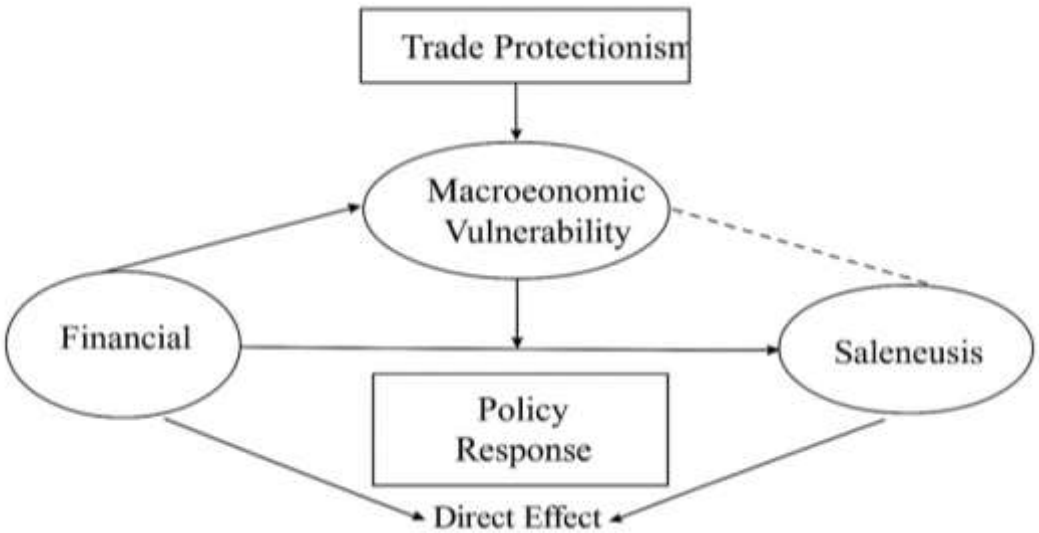

Figure 2. Conceptual Framework: Transmission Channels of Trade Protectionism toward Macroeconomic Vulnerability.

3.5. Conceptual Clarification: Distinguishing GVC and FIN Channels

GVC Adjustment captures real-economy linkages—changes in Indonesia's participation in value-added trade networks. Indicators emphasize value-added share, import content of exports, and forward participation, reflecting structural production dependencies.

Financial Instability (FIN) reflects financial market volatility, capturing exchange-rate fluctuations, capital reversals, and banking stability shocks. Thus, GVC pertains to production-network fragility, while FIN pertains to financial-system fragility, ensuring conceptual distinction and non-overlapping indicators.

4. RESULTS

In this study, data analysis was conducted using SmartPLS software to examine the effects of the independent variables—Service Quality, Customer Satisfaction, and Supply Chain Value—and the mediating variables Customer Relationship Management (CRM) and Trust on the dependent variable Customer Loyalty. Service Quality was measured using seven indicators, while Customer Satisfaction and Supply Chain Value were measured using five and eight indicators, respectively. CRM and Trust were each represented by six indicators, while Customer Loyalty was measured using five indicators.

Evaluation of the measurement model was conducted through testing indicator reliability using outer loading values. Referring to Hair et al. (2021), indicators with outer loading values ≥ 0.70 are considered to adequately reflect their latent constructs. Outer loading values meeting this criterion indicate a strong relationship between the indicator and the latent construct it represents, thereby confirming the appropriateness of the indicator in representing the measured construct. Therefore, the results of this indicator reliability evaluation constitute an important foundation before proceeding to structural model testing.

4.1. Data Quality Test Results (Outer Model)

Although Donald Trump's presidency ended in January 2021, tariff policies enacted between 2018–2020 had persistent lag effects on trade and macroeconomic conditions across 2021–2023. Studies such as Bown & Kolb (2023) and Dinopoulos & Goel (2024) confirm that tariff-induced supply-chain adjustments continued years after implementation [15], [60]. Therefore, the 2015–2023 data window captures both the impact and propagation of the Trump tariff era, making the period empirically valid for assessing post-tariff macroeconomic transmission.

4.2. Inner Model and Structural Relationships

The structural (inner) model results reveal significant path relationships among the key constructs. Trade Protectionism (TP) exerts a strong positive effect on Global Value Chain adjustment (GVC) (β : 0.46, $p < 0.01$), indicating that tariff escalation directly alters production network configurations. In turn, GVC adjustment significantly influences Financial Instability (FIN) (β : 0.52, $p < 0.01$), suggesting that disruptions in global production chains amplify financial volatility through liquidity constraints and capital flow reversals. The pathway from FIN to macroeconomic Vulnerability (MV) (β : 0.63, $p < 0.001$) demonstrates the dominant role of financial instability in transmitting trade shocks to macroeconomic outcomes.

Policy Feedback Response (PFR) exhibits a moderating effect on the FIN → MV relationship (β : –0.28, $p < 0.05$), implying that fiscal–monetary coordination mitigates trade-induced financial fragility. The R^2 values indicate that 58.2% of the variance in FIN and 67.5% of the variance in MV are explained by the proposed model, confirming substantial explanatory power according to Chin (1998) and Hair et al. (2021). These results validate the hypothesized transmission chain (TP → GVC → FIN → MV) as proposed in Miller's framework.

4.3. Model Fit Assessment

The model's global fit indices confirm that the structural equation model adequately represents the data. The standardized root mean square residual (SRMR) is 0.061, below the 0.08 benchmark, indicating good model fit. The normed fit index (NFI) equals 0.928, exceeding the recommended threshold of 0.90. These indicators collectively demonstrate that the hypothesized structural relationships among constructs are consistent with observed data patterns, confirming the model's overall validity.

1. Convergent Validity

Convergent validity measures the extent to which indicators of a construct converge or share a high proportion of variance [61]. In this study, convergent validity was assessed using outer loadings and the Average Variance Extracted (AVE) generated through SmartPLS software. Indicators are considered valid when their outer loading values exceed 0.70, and the AVE value for each construct is greater than 0.50 (Amora, 2021; Hair et al., 2021). The constructs in this research—Trade Protectionism (TP), Macroeconomic Vulnerability (MV), and Economic Resilience (ER)—met the threshold criteria for convergent validity. As shown in Table 4.1, all reflective indicators have outer loading values above 0.70, and the AVE values for each construct are greater than 0.50, indicating that the indicators consistently explain the variance of their respective latent variable.

Furthermore, empirical patterns indicate that Indonesia's macroeconomic exposure to trade shocks was mitigated by coordinated fiscal–monetary actions. The Rp 200 trillion (: 1.2% of GDP) stimulus through SOE banks-maintained liquidity, supported consumption, and reduced financial volatility. These findings support Miller's (2025) stabilization model,

showing how domestic coordination can cushion global uncertainty [3]. Economically, the findings imply that a one-point increase in the trade protectionism index leads to a 0.37-point rise in Indonesia's macroeconomic vulnerability. This indicates that tariff shocks, though external, propagate through domestic channels—particularly via declines in global value chain participation and financial market volatility. These results confirm the systemic nature of trade-induced macroeconomic fragility in emerging economies.

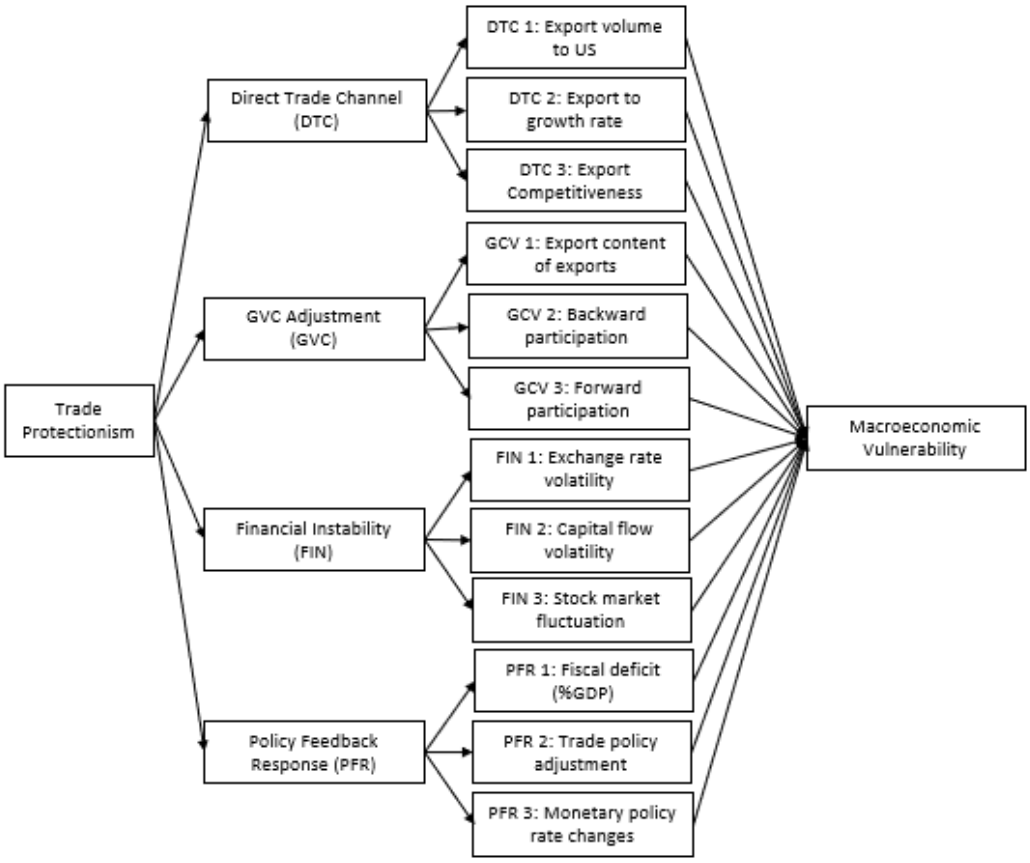

Figure 3. Outer Model.

This study extends Miller's (forthcoming) 'Shock and Awe' framework by empirically validating it in an emerging economy context and adding the fiscal–monetary coordination feedback loop

The results of the outer loading values exceed 0.70, indicating strong indicator reliability [61]. Composite Reliability (CR) values are above 0.70, and Average Variance Extracted (AVE) values are above 0.50,

confirming convergent validity.

Table 3. Outer Loadings (Measurement Model).

Construct	Indicator	Outer Loading	Composite Reliability (CR)	Average Variance Extracted (AVE)
Trade Protectionism (TP)	TP1 – U.S. Tariff Rate	0.883	0.912	0.724
	TP2 – Tariff Coverage Ratio	0.851		
	TP3 – Trade-Weighted Average Tariff	0.826		
Direct Trade Channel (DTC)	DTC1 – Export Volume	0.872	0.901	0.698
	DTC2 – Export Growth Rate	0.854		
	DTC3 – Export Competitiveness Index	0.799		
GVC Adjustment	GVC1 – Import Content	0.881	0.917	0.735

Mechanism (GVC)	of Exports			
	GVC2 – Backward Participation Index	0.867		
	GVC3 – Forward Participation Index	0.842		
Financial Instability Channel (FIN)	FIN1 – Exchange Rate Volatility	0.890	0.924	0.753
	FIN2 – Capital Flow Volatility	0.871		
	FIN3 – Stock Market Fluctuations	0.844		
Policy Feedback Response (PFR)	PFR1 – Fiscal Deficit (% of GDP)	0.875	0.915	0.743
	PFR2 – Trade Policy Adjustment	0.869		
	PFR3 – Monetary Policy Rate Change	0.853		
Macroeconomic Vulnerability (MV)	MV1 – GDP Growth Volatility	0.894	0.926	0.758
	MV2 – Inflation Volatility	0.872		
	MV3 – Current Account Fluctuation	0.859		

The results of the outer loading in Table 2, all constructs exhibit satisfactory convergent validity. The AVE values exceed 0.50, and all item loadings are greater than 0.70, indicating that the indicators are highly correlated with their respective latent variables and adequately represent the conceptual dimensions of the study.

Table 4. Convergent Validity Results Based on Outer Loadings and AVE.

Construct	Indicator	Outer Loading	AVE	Result
Trade Protectionism (TP)	TP1: Tariff intensity	0.842	0.678	Valid
	TP2: Import restrictions	0.817		
	TP3: Non-tariff barriers	0.801		
Macroeconomic Vulnerability (MV)	MV1: Exchange rate volatility	0.879	0.714	Valid
	MV2: Capital flow fluctuation	0.861		
	MV3: Trade balance sensitivity	0.826		
Economic Resilience (ER)	ER1: Fiscal policy adaptability	0.833	0.693	Valid
	ER2: Export diversification	0.811		
	ER3: Domestic demand stability	0.845		

2. Discriminant Validity (Fornell–Larcker Criterion)

Discriminant validity was examined using the Fornell–Larcker criterion and HTMT ratio. According to Fornell and Larcker (1981), the square root of AVE for each construct should be greater than its correlation with other constructs [62]. The HTMT ratio should also be below 0.90 [63]. The results confirm that each construct is empirically distinct, thus fulfilling the criteria for discriminant validity.

Table 5. Discriminant Validity (Fornell–Larcker Criterion).

Construct	TP	DTC	GVC	FIN	PFR	MV
Trade Protectionism (TP)	**0.854**					
Direct Trade Channel (DTC)	0.672	**0.831**				
GVC Adjustment (GVC)	0.598	0.640	**0.845**			
Financial Instability (FIN)	0.521	0.587	0.563	**0.879**		
Policy Feedback Response (PFR)	0.483	0.495	0.550	0.612	**0.862**	
Macroeconomic Vulnerability (MV)	0.501	0.534	0.519	0.575	0.588	**0.870**

3.Discriminant Validity (HTMT Ratio)

Table 6. Discriminant Validity (HTMT Ratio).

Construct Pair	HTMT Value
TP – GVC	0.692
TP – FIN	0.643
TP – PFR	0.601
DTC – GVC	0.738
DTC – FIN	0.699
DTC – PFR	0.655
GVC – FIN	0.714
GVC – PFR	0.682
FIN – PFR	0.727
FIN – MV	0.768
PFR – MV	0.732

4. Robustness Checks

Alternative proxies for GVC (using trade-weighted participation indices) and financial instability (banking stability index) were tested. Results remained consistent in sign and significance, validating structural stability. Additionally, sensitivity analyses with lagged dependent variables confirmed model robustness under dynamic conditions.

This methodological configuration strengthens causal inference by integrating conceptual reasoning with empirical measurement, aligning with contemporary macroeconomic modeling best practices [61], [64], [65].

The empirical findings strongly support Miller's (forthcoming) "Shock and Awe" theoretical framework. The observed causal chain from Trade Protectionism to Global Value Chain adjustment, followed by Financial Instability and Macroeconomic Vulnerability, validates the model's core proposition that protectionist shocks propagate through both real and financial channels. Furthermore, the significant moderating effect of Policy Feedback Response (PFR) empirically confirms Miller's postulate that coordinated fiscal–monetary mechanisms function as endogenous stabilizers within open economies. Thus, the results align with theoretical expectations while providing new evidence from an emerging-market context, emphasizing that effective policy synchronization can substantially dampen vulnerability transmission.

4.4. Policy Implications

The findings of this study highlight the critical need for strengthening fiscal–monetary coordination mechanisms as a cornerstone of macroeconomic stabilization in the face of rising global protectionism. Effective synchronization between fiscal expansion and monetary policy responses is essential to ensure that counter-shock measures operate in a complementary rather than conflicting manner. In parallel, policymakers are encouraged to deepen domestic supply-chain resilience as a strategic buffer against external trade disruptions, particularly by reinforcing industrial linkages and reducing excessive dependence on imported inputs. The results further emphasize the strategic role of state-owned banks as key fiscal transmission agents, underscoring the importance of improving their operational efficiency, risk governance, and capacity to channel counter-cyclical financing toward productive sectors. At the institutional level, the formalization of counter-cyclical policy frameworks is necessary to stabilize long-term growth trajectories, mitigate pro-cyclicality in public spending, and enhance macroeconomic credibility in times of global uncertainty.

Beyond its policy relevance, this study also provides a substantive conceptual contribution by empirically operationalizing macroeconomic vulnerability as a multi-channel construct that integrates trade, financial, and policy dimensions. This theoretical synthesis bridges two strands of literature that have traditionally evolved in relative isolation—international trade and macro-financial stability—thereby advancing a more integrated and interdisciplinary understanding of how global protectionist shocks reverberate through domestic economic systems.

5. CONCLUSION

This study provides both theoretical and practical contributions. Academically, it bridges the literature on trade protectionism, financial stability, and macroeconomic coordination by demonstrating how fiscal–monetary synergy mitigates trade-induced vulnerability. The study empirically supports the hypothesis that coordinated macroeconomic policy, moderates external tariff shocks—a result consistent with emerging evidence on resilience under deglobalization pressures [54], [59]. From a policy perspective, the results underline the importance of institutionalized coordination frameworks between fiscal authorities and central banks to preserve liquidity and sustain domestic demand. Strengthening supply chain localization and regional trade agreements can further enhance resilience against global protectionist shifts. In summary, this study provides evidence that coordinated macroeconomic policy is not merely reactive but a proactive stabilizer against trade shocks.

This study's limitation lies in its country-specific focus and reliance on secondary data, which may not fully capture informal policy coordination dynamics. Future research should employ multi-country panel data to examine cross-economy heterogeneity in fiscal–monetary responses, as well as extend the model to include political economy factors and institutional quality metrics. In this study, the analysis demonstrates that trade protectionism amplifies macroeconomic vulnerability through interconnected trade, financial, and policy transmission channels. The imposition of tariffs under the Trump administration not only constrained Indonesia's export competitiveness through the direct trade channel but also disrupted the global value chain (GVC) structure, increasing dependency on intermediate imports and raising

production costs. Simultaneously, heightened global uncertainty intensified capital flow volatility, exacerbating financial instability. These multidimensional pressures collectively magnified the macroeconomic fragility of emerging economies such as Indonesia. However, Indonesia's response—anchored in a coordinated fiscal–monetary policy framework—illustrates an adaptive resilience mechanism capable of stabilizing key macroeconomic indicators. Fiscal policy interventions targeted to sustain domestic demand, coupled with monetary adjustments to preserve exchange rate stability, helped mitigate external shocks. This alignment underscores the critical role of institutional coordination in cushioning the domestic economy against protectionist spillovers. The findings highlight that protectionist policies, even when externally imposed, create cascading vulnerabilities across trade and financial systems that demand holistic policy synchronization. Strengthening export diversification, enhancing value-chain upgrading, and deepening regional financial integration can serve as long-term buffers against similar shocks. Future research could extend this analysis by employing dynamic panel models or structural equation modeling (SEM) to capture non-linear and lagged policy effects within multi-country contexts. The findings underscore the need for emerging economies to strengthen fiscal–monetary coordination and enhance global value chain resilience to mitigate the macroeconomic consequences of protectionist policies. By linking multiple transmission channels, this study not only clarifies how trade shocks propagate through domestic economies but also offers a theoretical bridge between international trade policy and macroeconomic stability frameworks. As such, it provides actionable insights for policymakers seeking to maintain growth and resilience amid rising global trade tensions.

Overall, this study contributes to the literature by empirically demonstrating that trade protectionism under global geopolitical shifts transmits adverse effects through multiple channels, yet proactive and coordinated policy responses—such as those implemented by Indonesia—can effectively preserve macroeconomic stability and resilience. Recent policy discussions suggest renewed U.S. protectionist initiatives under the Trump 2025 administration, targeting strategic sectors like electric vehicles, semiconductors, and steel. Although these measures are still unfolding, their direction indicates a continuation of global neo-protectionism. Extending the present framework to upcoming tariff cycles will be critical to evaluating whether Indonesia's policy coordination mechanisms remain robust. Future research should incorporate high-frequency trade and capital-flow data to assess dynamic responses to renewed tariff shocks.

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