Deglobalization as Systemic Reconfiguration:
Double-layer Trade Network Analysis of 11 Countries (2000–2022)

Extended Abstract

This paper adopts Wallerstein's world-system theory to reinterpret deglobalization as a cyclical phase of systemic reconfiguration within the capitalist world-economy [1]. The study emphasizes long-run systemic rhythms of expansion and contraction, marked by hegemonic rise and decline, shifts in semi-peripheral roles, and crises that expose the vulnerability of peripheral states. From this perspective, deglobalization represents not an anomaly or breakdown of global capitalism but an endogenous adjustment process in which structural asymmetries are redistributed across layers of global production and trade.

To operationalize this theoretical framing, the study constructs a double-layer multiplex network of bilateral trade linkages among eleven countries (China, India, Indonesia, Japan, Korea, Malaysia, the Philippines, Singapore, Thailand, the United States, and Vietnam) between 2000 and 2022 from the WTIS database [2]. Two layers are defined: Layer T (Total Trade), which represents all traded goods, and Layer I (Intermediate Goods), which focuses on components and semi-finished products central to global value chains. Each node corresponds to a country, and directed weighted edges represent the share of a reporter's exports to a partner, normalized so that the sum of shares across partners equals one [3]. This design allows us to observe not absolute trade volumes but structural changes in relational dependence and diversification across countries.

Three hypotheses are tested. **H1**: During periods of hegemonic slowdown, semi-peripheral countries (e.g., Vietnam) experience rising network centrality as they capture flows reallocated away from the declining core. **H2**: Peripheral states are disproportionately vulnerable to global shocks such as the 2008–09 financial crisis and the 2020–21 COVID-19 pandemic, reflected in sharp contractions of link strengths and reduced network density. **H3**: The rise of a new hegemony is first visible in intermediate goods networks, where technological clustering and supply-chain dependencies emerge before realignment in total trade flows. These hypotheses derive directly from world-systems analysis and seek to link macro-historical theory with quantifiable network measures.

The results highlight several striking patterns. Most notably, **Vietnam's external/internal trade ratio (EIR)**—measuring exports to non-ASEAN partners relative to intra-ASEAN trade—has risen persistently and far exceeds that of other ASEAN members. In Total trade, Vietnam's EIR averaged 4.77 over 2000–2022 and surged to 8.62 in 2019–2022, while in Intermediate goods, the corresponding values were 3.36 and 3.56. This finding indicates that Vietnam has become structurally oriented toward extra-regional linkages, especially with major core economies, rather than relying on intra-ASEAN flows. Such a trajectory strongly supports **H1 (Figure 1)**, which posits that semi-peripheral countries ascend by leveraging external connections during hegemonic transition phases. Concerning **H3 (Figure 2)**, the difference is not statistically significant, but the fact that several key semi-peripheral countries—such as India, Indonesia, and Vietnam—lie above the reference line is theoretically important. The analysis of systemic shocks provides evidence consistent with **H2 (Figure 3)**. During the global financial crisis (2008–09), the Spearman correlation between total and intermediate eigenvector centralities fell significantly, from an average of 0.88 in the pre-crisis period to 0.82. This decline indicates a temporary decoupling of the two layers, with intermediate goods flows disrupted more severely than aggregate trade. Although correlations stabilized after 2013 and remained relatively resilient during the COVID-19

pandemic, the earlier decoupling underscores how shocks reconfigure inter-layer dynamics and amplify vulnerabilities of less diversified economies.

Taken together, these findings demonstrate that deglobalization is not a uniform retreat from globalization but rather a **layered restructuring of systemic relations**. The key contributions are threefold: (i) Vietnam exemplifies the **externalization strategy of the semi-periphery**, where outward-oriented linkages to core economies yield rising centrality despite regional integration lags. (ii) Global shocks trigger **temporary decoupling** of Total and Intermediate networks, revealing asymmetric resilience across layers. (iii) Shifts in intermediate goods networks often precede those in total trade. While not statistically significant overall, the position of India, Indonesia, and Vietnam above the y=x line suggests that intermediate networks serve as early indicators of hegemonic reconfiguration.

The multiplex approach enriches theories of international political economy by embedding deglobalization in a structural framework. It shows that the world-economy reorganizes not only by trade volume but also by spatial and functional linkages. Semi-peripheries reposition through external ties, while peripheries remain vulnerable. By using a double-layer design, this study reveals that reordering unfolds asymmetrically across trade domains.

References: [1] Immanuel Wallerstein. *World-Systems Analysis: An Introduction*. Duke University Press, 2004.

[2] The World Integrated Trade Solution database. https://wits.worldbank.org (accessed March 5th, 2025)

[3] Mark Newman. *Networks: An Introduction*. Oxford University Press, 2010.

Figure 1. Vietnam's External/Internal Trade Ratio (2000–2022). *Rising EIR highlights Vietnam's external linkage strategy within the semi-periphery.*
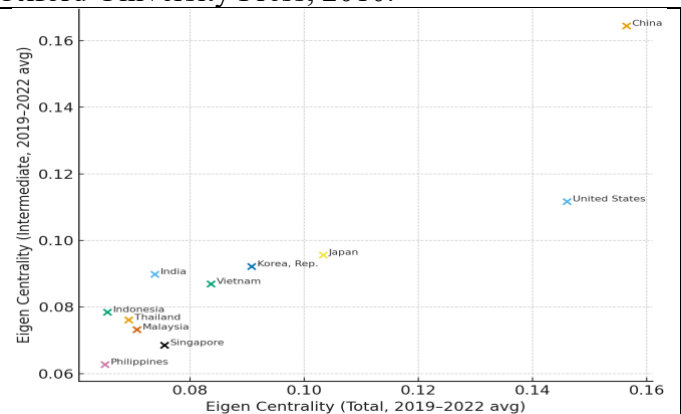

Figure 2. Double-layer Centrality Scatter (2019–2022 avg). *India, Indonesia, and Vietnam show stronger intermediate goods positions than in total trade, signaling hegemonic restructuring.*
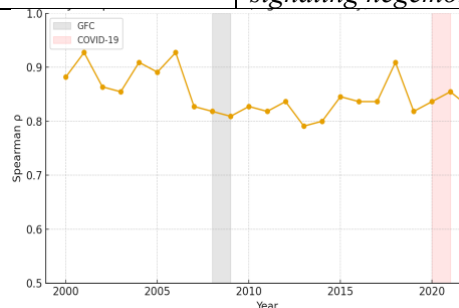

Figure 3. Cross-layer Spearman Correlation (2000–2022). *The correlation dropped during the Global Financial Crisis, showing vulnerability of peripheral economies.*

A discussion of the ethical considerations: This study uses only publicly available trade data and involves no sensitive or personal information. Structural categories such as 'core' or 'periphery' are treated as analytical concepts, not value judgments. The ethical aim is to highlight systemic inequalities and vulnerabilities in global trade, supporting more resilient and equitable policy discussions.